

Campbell Avenue | Odd Fellows Road



Lynchburg
VIRGINIA

LAND USE & CORRIDOR MASTER PLAN STUDY



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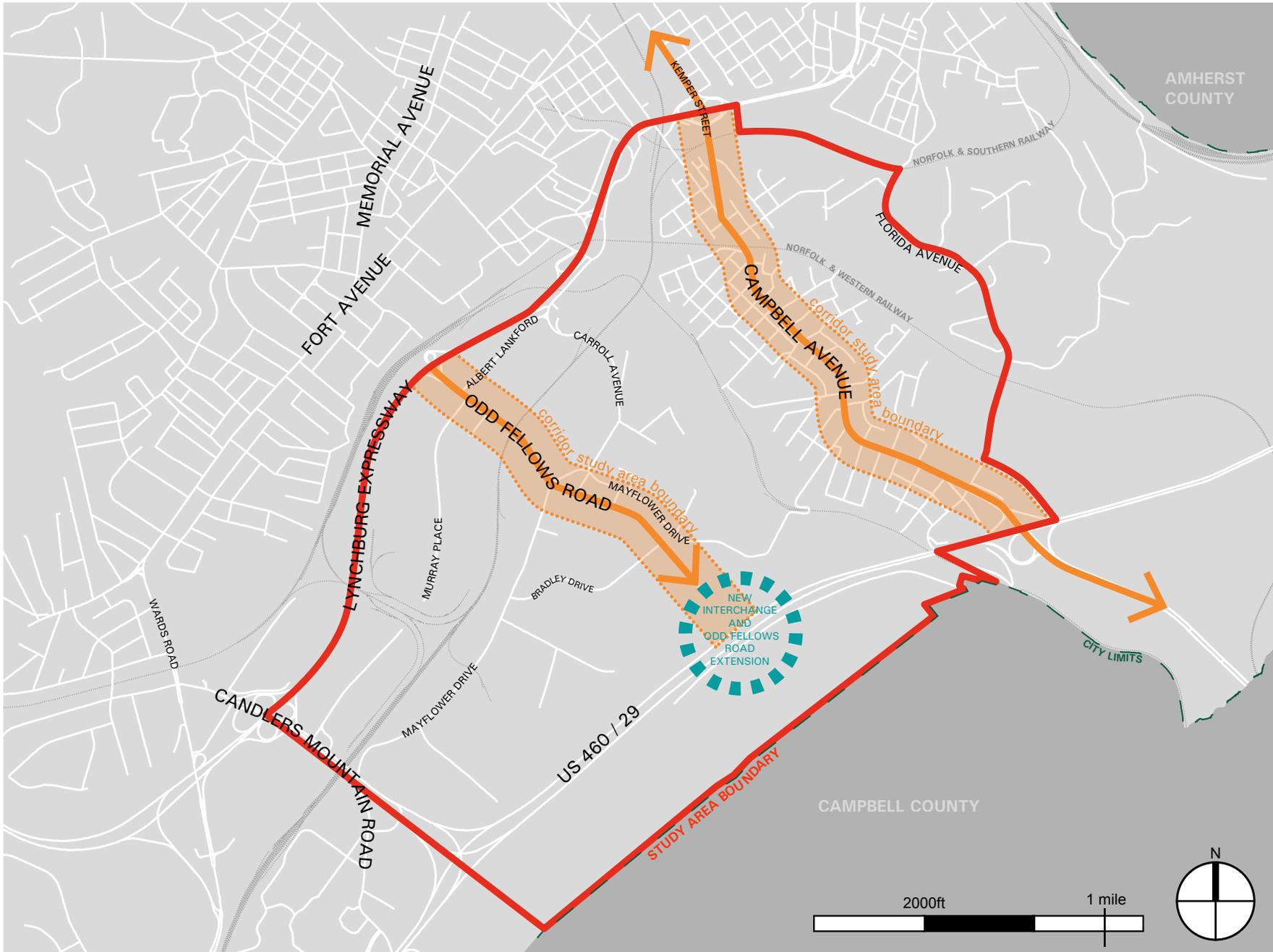
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STUDY AREA AND CORRIDOR BOUNDARY AND LOCATION MAP

1.0 Introduction

Campbell Avenue and Odd Fellows Road play vital multifaceted roles on the eastern side of Lynchburg. These roles range from connecting neighborhoods, to serving the First Lynchburg Industrial Park, and providing an important entrance to the larger City. As VDOT plans a new interchange at Odd Fellows Road and US 460/29, the City has a unique opportunity to assess what kind of functionality and form fits these corridors best for the future. Investing in street design and connectivity, reassessing current and future land use, and providing important public facilities will help the city use valuable resources more efficiently, improve opportunities for economic development, and enhance the quality of life for both area workers and residents.

1.1 Purpose

The purpose of this plan is to help implement the City's Comprehensive Plan and to provide a vision and blueprint for future growth and development of important residential and employment use areas on the east side of Lynchburg largely defined by two key corridors: Campbell Avenue and Odd Fellows Road. This plan meets and builds upon the Comprehensive Plan's goals for both the Campbell Avenue Corridor Study Area (Comp. Plan 4.13) and the First Lynchburg Industrial Park Employment Area (Comp Plan 4.23). The City's Comprehensive Plan sets an important base that this plan expands upon with greater detail and specific recommendations for the future.

This plan is the continuation of efforts from the City's Office of Economic Development to focus economic development in the area around the neighborhood's needs, to develop a Fairview Neighborhood Master Plan, and to foster business to business transactions within the study area. Meetings held in 2010 and 2011 at the Fairview Heights Community Center directly led to the initiation of this study and recommendations herein reflect those goals, along with much more.

Plan Boundaries. The study area for this project is generally defined as follows: The eastern boundary is defined as Florida Avenue northward from Campbell Avenue to the Norfolk Southern railroad tracks. The northern boundary of the study area is the Norfolk Southern railroad tracks westward from Florida Avenue to the Lynchburg Expressway. From that point, the western boundary follows the Lynchburg Expressway and then turns eastward along Candler's Mountain Road to US 460/29 and the City Limit beyond. From that point the boundary of the study area is the City Limit south and east of the US 29/460 Bypass, between Candler's Mountain Road and Campbell Avenue. The corridor master plans for both Campbell Avenue and Odd Fellows Road cover an area that extends approximately 500' on both sides from the center of the roadways.

1.2 Vision & Goals

Vision Statement. The vision to the right stems from conversations with stakeholders and community members, and represents a pragmatic look at how competing interests can find a common goal.

The Campbell Avenue and Odd
Fellows Road Area will be...

a place of attractive and vibrant city corridors and neighborhoods, offering a mix of residential, commercial, institutional, employment and open space uses, where one can travel throughout efficiently, safely and pleurably by car, truck, transit, bicycle, or on foot.

Goals. The following 6 goals outline distinct outcomes needed to achieve the vision for the Campbell Avenue / Odd Fellows Road Study Area.



POTENTIAL CAMPBELL AVENUE TREATMENT PER RECOMMENDATIONS MADE LATER IN THIS PLAN (SEE CHAPTER 3 AND 4)



POTENTIAL ROUNDABOUT TREATMENT AT ODD FELLOWS ROAD AND MURRAY PLACE PER RECOMMENDATIONS MADE LATER IN THIS PLAN (SEE CHAPTERS 3 AND 5)

1

To provide safe, efficient and highly-connected multi-modal transportation facilities and services along the Campbell Avenue and Odd Fellow Road corridors, and strengthen linkages to the adjoining neighborhoods.

2

To foster attractive and livable places for people to reside, shop, work, learn, play and travel through.

3

To coordinate community land uses and transportation facilities so that the design of transportation facilities complements community context and the communities are designed to enable transportation efficiency.

4

To enhance Campbell Avenue and establish Odd Fellows Road as important City gateways.

5

To take advantage of locational and other assets of the area to enhance economic development and create jobs.

6

To accomplish goals 1 – 5 through the cooperative plans and actions of the City of Lynchburg, Region 2000 Regional Commission, and the Virginia Department of Transportation (VDOT).

1.3 Planning Approach

This plan seeks to create a highly functional, resource efficient, and multimodal transportation network while fostering economic development, a livable community and attractive city gateways. Creators of this plan recognize that stakeholder and public input is vital to successful planning efforts. Thus, these recommendations reflect a combination of both important city planning principles and input from key stakeholders and the public. Principles and plan methodology are outlined here. Information on stakeholder and public meetings can be found in Chapter 1.4, Planning Process, and specific input gathered can be found in Chapter 3.1, Stakeholder and Public Input.

Plan Methodology. While both the Campbell Avenue and Odd Fellows Road corridors have unique conditions, they largely function as a pair. What happens on one dramatically affects the other. This situation led to creating a plan that looks holistically at the entire study area first and then zooms in on the corridors individually with two corridor master plans.

Area-Wide Plan. Chapter 3 sets the larger framework for the two master plans and tackles big picture issues of area growth, connectivity, land use, and transportation.

Master Plans. Chapters 4 and 5 detail how Campbell Avenue and Odd Fellows Road should grow into the future. They illustrate a combination of public and private investment and individualized design recommendations for each corridor.



THIS IMAGE, FROM SMARTGROWTHAMERICA.ORG, ILLUSTRATES HOW COMPLETE STREETS PRINCIPLES WERE APPLIED TO AN INTERSECTION IN CHARLOTTE, NC

Planning Principles. This plan employs three important planning principles described here. Each plays a key role in developing the vision and making pragmatic recommendations for the future.

1) Complete Streets. Under Complete Streets principles, all streets are designed to safely accommodate all modes of travel and people of all ages and abilities. This approach can increase safety, improve access for all income levels, enhance economic development and beautify a corridor. Design interventions change depending on the level and type of activity on a road, lending to a variety of successful types of Complete Streets. The main requirement is to ensure pedestrians, bicyclists, motorists and

transit riders of all ages and abilities are able to safely move along and across streets. Key facets and benefits of Complete Streets are:

- Employing Complete Streets is intended to be a gradual process and over time a city will develop into a well-connected network of streets for all users and abilities to many destinations
- Providing safe and convenient walking, bicycling and transit options leads reduces congestion, increasing the overall capacity of an area's transportation network
- Community health is improved through more options for physical activity in daily life and simultaneous improvements in air quality

- Complete Streets designs include safety improvements that aid in reducing crashes, particularly at pedestrian crossings
- For more information on Complete Streets see Appendix

2) Context Sensitive Solutions (CSS). This principle demands that transportation projects balance the needs of travelers and the interests of the community the project passes through. Complete Streets employs CSS, realizing there is no “one size fits all” solution, but rather seeks to address each project’s unique setting, stakeholders, and requirements. CSS is based on these strategies:

- Balance safety, mobility, community and environmental goals in all projects.
- Involve the public and stakeholders early and continuously.
- Use an interdisciplinary design team tailored to project need.
- Address all modes of travel.
- Apply flexibility inherent in design standards and guidelines.
- Incorporate aesthetics as an integral part of good design.

3) Coordinating transportation network with land use. This requires that the two be planned in tandem because how transportation and land use interact directly affects the shape and quality of life in a community. Doing this helps match appropriate city infrastructure stemming from Complete Streets and CSS interventions with forthcoming private investment to facilitate achieving the plan’s vision.



CONTEXT SENSITIVE SOLUTIONS TAKE A VARIETY OF FORMS IN THESE EXAMPLES FROM MARYLAND AND FLORIDA. THE IMPORANT TAKEAWAY IS THAT THE SOLUTION BALANCES ALL GOALS AND IS FLEXIBLE TO ITS SURROUNDINGS

1.4 Planning Process

Key Stakeholders. Under the sponsorship of the City’s Office of Economic Development (OED) and the direction of the City’s Department of Community Development, the study effort was guided by technical input from a group of key project stakeholders. The OED and Community Development held meetings with both the key stakeholder group and individual group representatives to gain vital technical input and gather a variety of perspectives on planning and corridor design for the study area.

Key Project Stakeholders

- Department of Communications and Marketing
- Department of Community Development
- Department of Parks and Recreation
- Department of Public Works
- Greater Lynchburg Transit Company (GLTC)
- Liberty University
- Office of Economic Development (OED)
- Region 2000
- Virginia Department of Transportation (VDOT)
- Virginia University-Lynchburg (VUL)

Public Meetings. In addition to meetings with the key stakeholders, a number of public events were held to give staff and planners an opportunity to hear ideas and concerns from the wider community of public stakeholders for consideration in the planning effort. Meetings for the area began in 2010, but the primary meetings influencing this plan were held over the course of a year at a variety of locations within the study area. Working supportively, VDOT and the City of Lynchburg used these meetings to develop their plans for the interchange design and this document simultaneously and arrive at solutions that fit together and meet the needs of all. *See Chapter 3 for information on input collected at public meetings.* Events leading to the development of this plan include:

December 2, 2010 – The Office of Economic Development and Department of Parks and Recreation held a luncheon with area business owners at the Fairview Heights Community Center on Campbell Avenue to discuss potential for Neighborhood Economic Development (NED) and gather community support for much needed repairs to the community center. A list of opportunities and challenges came out of small group discussions.

February 3, 2011 – A follow-up to the December 2 meeting was held at the Fairview Heights Community Center to solicit feedback from more business owners on economic development initiatives, potential for a neighborhood master plan, and business to business networking opportunities.

May 3, 2011 – A Business Appreciation Week Reception was held at the Fairview Heights Community Center to discuss the previous meetings and the next steps. These efforts then coincided with the July 2011 Governor’s announcement below.

July 2011 – Governor announced full funding for the Odd Fellows Road and US460/29 interchange project that had been in the works for over a decade and listed as third in City Council’s road improvement priority list.

September 6, 2011 – A meeting between the City of Lynchburg and VDOT staff about the interchange project initiated the cooperative effort between the City and VDOT to find the best alternative for the interchange design and coordinating that design with further planning efforts in the area.

November 15, 2011 – VDOT sponsored a Citizen Information Meeting at the City’s Information Technology Building. VDOT displayed early mapping and information on the study for the proposed interchange at Odd Fellows Road and US 460/29.

November 15, 2011 – Immediately following VDOT’s meeting, the City presented an introduction to this plan and conducted an interactive exercise using small groups of attendees to identify issues and invite ideas relevant to this broader document.

January 30, 2012 – Region 2000 sponsored and the City of Lynchburg conducted a forum at the Fairview Heights Community Center. This forum invited input on the Campbell Avenue Access Management Plan study, key findings of which were incorporated into the presentation.



FORUM GROUPS

May 7, 2012 – Region 2000 sponsored and the City of Lynchburg conducted a second forum at the Fairview Heights Community Center, inviting comments on early access management and corridor planning study findings, including the introduction of the “road diet” concept for the Campbell Avenue corridor.

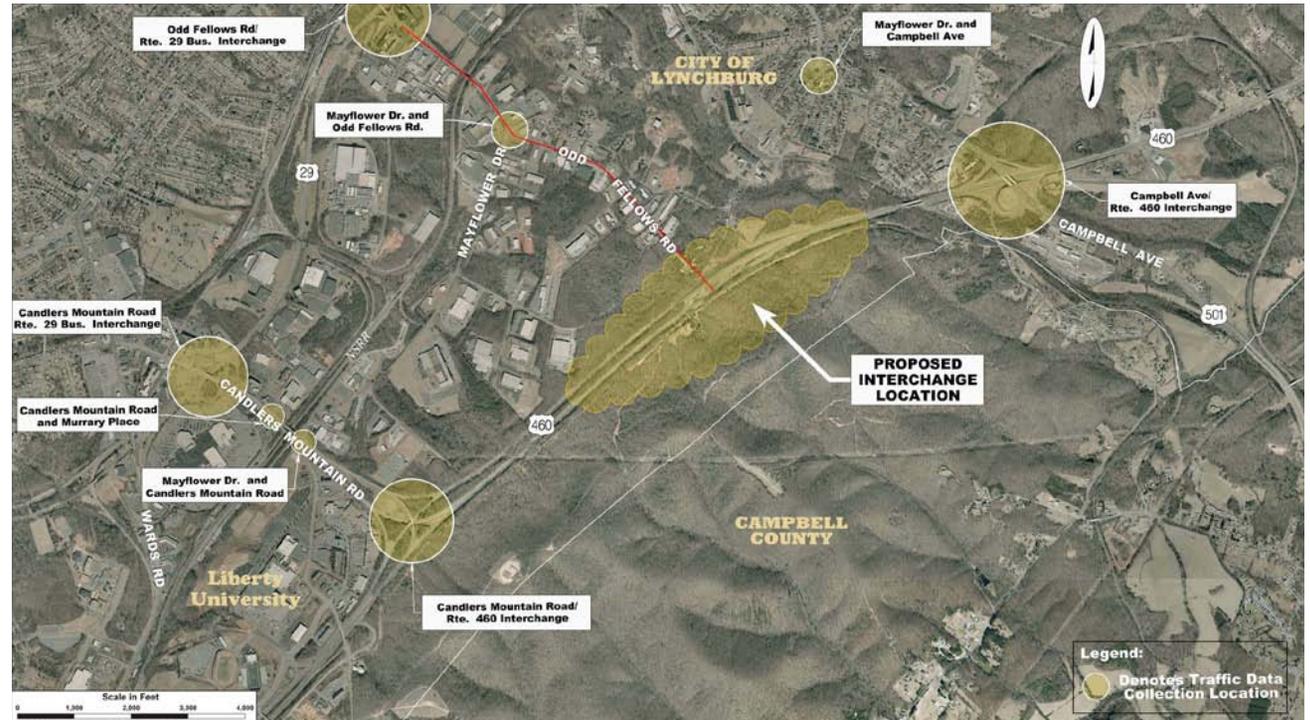
January 8, 2013 – VDOT sponsored a second Citizen Information Meeting at the City’s Information Technology Building. In this meeting VDOT presented preliminary plans for the proposed interchange at Odd Fellows Road and US 460/29. As part of this meeting, the City presented draft area-wide and key corridor concept plans, along with illustrative graphics for this document and invited public comment.

1.5 Companion Transportation Studies

Interchange Justification Report (IJR) and Preliminary Design Plans. RK&K Engineers conducted significant traffic analyses for Virginia Department of Transportation (VDOT) in late 2011 that influence the long range planning of both the Odd Fellows Road and Campbell Avenue corridors. The report makes design recommendations for the new interchange at Odd Fellows Road and US460/29, including extending Odd Fellows Road and capping the off ramps with single-lane roundabouts. The report also evaluates the interchange's impacts on adjacent roadway networks, finding that both Candler Mountain Road and Campbell Avenue will function more efficiently and safely. The project is funded from Governor's Bonds with a currently anticipated construction contract advertisement in July, 2015 and project completion in mid-2017. At the time of the Public Hearing (1/8/13), the Approved Estimate for the project is \$31,715,145.

Access Management Study (AMS). Engineering and Planning Resources (EPR) prepared this study for Region 2000 and the City of Lynchburg in June 2012 to provide a detailed assessment of traffic, safety and design conditions present within the Campbell Avenue corridor today, and to make recommendations for improving the safety and function of that roadway for the future. Key recommendations of the AMS include improving corridor function and safety through:

- Interim left turn lanes at unsafe intersections, particularly at Old Campbell/Kemper, Florida Avenue, and Mayflower Drive



VDOT PROJECT AREA MAP SHOWING EXTENSION OF ODD FELLOWS ROAD AND LOCATION OF NEW INTERCHANGE

- Selective driveway and curb-cut consolidation along commercial frontages, with the creation of parallel service drives connecting the rear areas of contiguous commercial frontage properties,
- Improved pedestrian facilities in the form of sidewalk improvements and the provision of safe pedestrian crossings at key intersections, especially at the Seabury Avenue and Fairview Avenue crossings serving Bass Elementary School,
- Creation of bicycle lanes along the corridor, and
- The long-range consideration of implementing a “road diet” treatment between new modern roundabouts at the existing intersections of

Old Campbell/Kemper and Florida Avenues. This proposed roadway configuration involves converting the currently undivided four lane roadway into three lanes made up of two travel lanes and a center left turn lane zone. The reduction of lanes allows the travelway and roadside elements to be reconfigured for new uses such as bicycle lanes, improved transit stop facilities, pedestrian crossing islands and medians with landscaped segments. The modern roundabouts provide dramatically improved safety in terms of reduced severe crashes at these key intersections, and offer the opportunity for creating imagable city and VUL gateway features within the center islands and perimeters of the roundabouts.

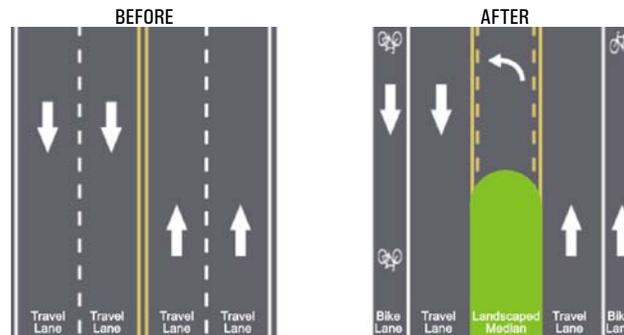
Campbell Avenue Cursory Lane Reduction

Analysis. Engineering Planning Resources (EPR) prepared a concept-level study for the City of Lynchburg in April 2012, testing the feasibility for a “road diet” for the Campbell Avenue Corridor based on the previous two studies and traffic projections. It found that a reduction in lanes was feasible and held numerous benefits for Campbell Avenue. Key findings include:

- Under signalized intersection scenarios, the key intersections (at Florida Avenue, Kemper/Old Campbell, and Mayflower Drive) will experience added congestion, but with no excessive queuing or failing levels of service. Further study by EPR found that roundabouts are feasible alternatives to signalized intersections on Campbell Avenue and improve traffic flow.
- The road diet allows for the construction of turn lanes, medians and bicycle lanes along the corridor.
- Careful consideration should be given to the location of turn lanes allowed on Campbell Avenue, since the intersecting street grid presents numerous opportunities for turning movements.
- Prior to beginning the design and construction phase of any lane reduction/road diet project(s), a more in depth traffic study must be performed to examine the street segments and major intersections along the impacted area in order to identify alternative roadway configurations and to examine potential impacts to adjacent circulation networks and private property access. This study should include a public involvement element to gather input on the study analyses and concepts from key corridor stakeholders and the general public.



RED ARROWS SHOW VEHICULAR CRASHES AT THE INTERSECTION OF CAMPBELL AVENUE/OLD CAMPBELL AVENUE AND KEMPER STREET (EPR'S ACCESS MANAGEMENT STUDY)



A ROAD DIET ON CAMPBELL AVENUE WOULD REDUCE THE NUMBER OF VEHICULAR TRAVEL LANES AND ALLOCATE ROADWAY SPACE FOR BIKE LANES AND TURNING LANES/GREEN MEDIAN



EXAMPLE OF MODERN ROUNDABOUT

2.0 Existing Conditions

Plan recommendations in later chapters are grounded by the existing conditions of the area today, summarized in this chapter. The study team conducted site reconnaissance, document review, and detailed mapping analysis (using GIS), with a focus on the two primary corridors to help inform their recommendations along with vital community and stakeholder input. They approached the study from two levels—the concept level, addressing area-wide and corridor-specific land use and transportation issues, and then at a more detailed, master plan level with specific design recommendations for the two corridors. This section looks at both the area-wide issues with circulation, land use, and zoning, and the specific conditions and character of the individual corridors.

2.1 Character

Study Area Conditions. The area covered in this plan encompasses a broad array of land uses and conditions—established residential neighborhoods, neighborhood serving commercial areas, industrial use, and new educational expansion from nearby Liberty University all coexist within close proximity of each other. Campbell Avenue and Odd Fellows Road provide the primary movement within and through the district. These roads are classified by VDOT standards as “urban minor arterials,” placing them on a secondary level, with medium length trips and mobility, and serving both uses directly adjacent to their path and carrying travelers to nearby destinations. Although Campbell and Odd Fellows maintain the same classification and functionality,



TYPICAL RESIDENTIAL SEGMENT OF CAMPBELL AVENUE



TYPICAL COMMERCIAL SEGMENT OF CAMPBELL AVENUE



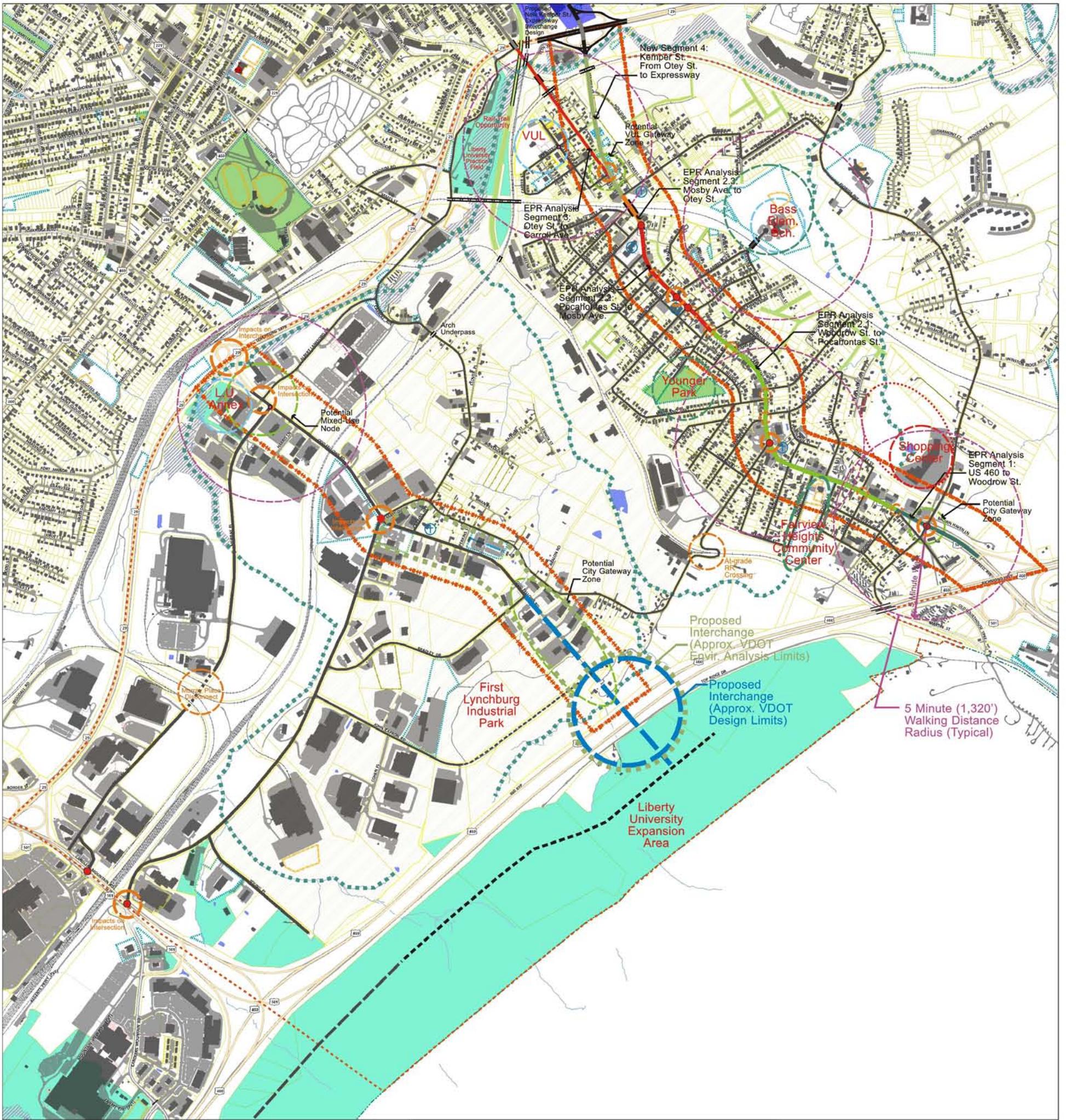
TYPICAL COMMERCIAL SEGMENT OF ODD FELLOWS ROAD



TYPICAL INDUSTRIAL SEGMENT OF ODD FELLOWS ROAD

the character of each differs significantly and demand individual treatments in the recommendations outlined in chapters 3-5.

On the page below is a map illustrating some of the key conditions found within the study area.



Legend

Study Area
Corporate Limit

Street Layers

- Highway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Railroads

Planimetrics

- Paved Parking
- Structures
- Sidewalk
- Paved Roadway
- Driveway

Parks & Recreation

- Athletic Area
- Parks & Rec Properties
- Parks

Study Corridors

- Odd Fellows Road Corridor Design Master Plan Study Limits
- Campbell Avenue Corridor Design Master Plan Study Limits

Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

Hydrology

- Streams
- Ponds / Detention Ponds
- 100 Year Flood Zone

Economic Zones

- Enterprise Zone

DISCLAIMER: THIS MAP IS A SUMMARY OF THE INFORMATION PROVIDED IN THE RECORDS AND IS NOT INTENDED TO BE USED AS A SUBSTITUTE FOR THE RECORDS. THE INFORMATION IS PROVIDED AS A CONVEYANCE OF RECORDS, INFORMATION, AND DATA OBTAINED FROM VARIOUS SOURCES. THE CITY OF LYNCHBURG IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ANY DAMAGE TO PERSONS OR PROPERTY.

Graphic Key:

- Schools
- Midtown Connector Project Area
- Crosswalks
- Church

Key:

- Signalized Intersection (Existing)
- Dangerous Intersection (Public Input)
- Intersection Spacing Issue
- Bridge Over Railroad
- Railroad Bridge/Trestle
- Potential Street Connection
- Potential Neighborhood Street/Trail Connection
- Potential Greenway Trail Opportunity

Date: 2/20/12

Summary of Key Study Area Conditions

Land Use & Corridor Master Plan Study
Campbell Avenue & Odd Fellows Road Area

Department of Community Development
Department of Economic Development

Mapping by GIS Division
Information Technology Department

symoetica
www.symoetica.net

Date: October 25, 2011
Projection: NAD 1983 Virginia State Plane South (Feet)
Scale: 1" = 500'
Note: For Planning Purposes only, not for construction.
Data Source: City of Lynchburg GIS Division

500 250 0 500 1,000 1,500 2,000 Feet



FOUR WIDE TRAVEL LANES ON CAMPBELL AVENUE



FAIRVIEW SQUARE STATION SHOPPING CENTER



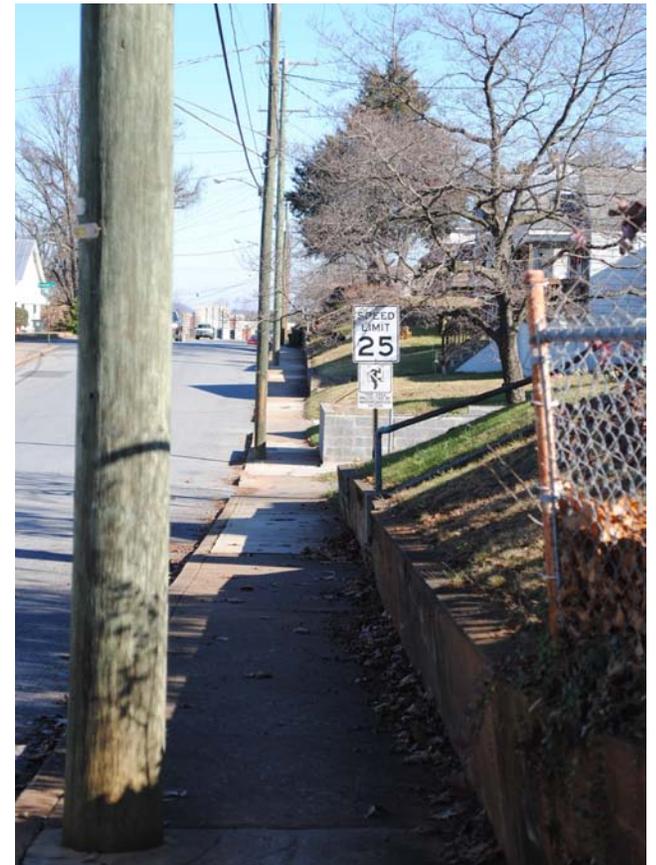
SIDEWALK ON CAMPBELL AVENUE OFTEN LACKS BUFFERS AND CROSSWALKS



CROSSWALK ON CAMPBELL AT SEABURY AVENUE



WILLIAM MARVIN BASS ELEMENTARY SCHOOL



SIDEWALK ON SEABURY AVENUE APPROACHING BASS ELEMENTARY SCHOOL



PASSING VUL CAMPUS AND APPROACHING INTERSECTION WITH KEMPER STREET AND OLD CAMPBELL AVENUE



HISTORIC HUMBLER HALL ON THE VUL CAMPUS

Campbell Avenue. The Campbell Avenue corridor is a traditional city gateway which has been widened over the years to its current four-lane configuration (two in each direction) in order to carry increased traffic volumes into and out of the city. As an older street, Campbell Avenue serves a wide variety of adjacent land uses, including residences, businesses, institutions and industry. The gradual widening of the street led to higher speeds, a greater volume of traffic, and issues with safety, functionality, and community image. In particular, sidewalks are narrow, discontinuous, and there is limited area behind the curbs for streetscape amenities. Pedestrian safety both walking along the corridor and crossing at limited opportunities with minimal provisions is a real concern. The old alignment of Campbell Avenue from the city core was altered by the extension of Kemper Street from the Expressway to approximately Edmunds Street, redirecting the major flow of traffic to the interchange at the Expressway. The configuration of the Kemper Street connector with Old Campbell Avenue has created significant traffic safety issues. The Campbell Avenue corridor segment studied here is approximately 2 miles long and contains 241 acres.



INTERSECTION OF OLD CAMPBELL AVENUE WITH KEMPER STREET CONNECTOR



UNEVEN SIDEWALK WITH MULTIPLE CURBCUTS ON CAMPBELL AVENUE AT CITGO STATION



SIDEWALK APPROACHING SUTTENFIELD MEMORIAL BRIDGE

Odd Fellows Road. The Odd Fellows Road corridor primarily serves the First Lynchburg Industrial Park Employment Area, an established industrial/employment area containing a wide range of uses from warehouses to industrial operations to state and federal government facilities. As a two lane facility with limited pedestrian facilities and a variety of right-of-way conditions, the roadway currently provides only a basic level of service for the surrounding uses. The proposed extension of this roadway to a new interchange at US 460/29 forms a new gateway to the city, holds potential to rejuvenate the employment area, and creates a unique identity for the area it serves. This corridor segment is approximately 1.5 miles long and contains 174 acres.

Connections. Currently there are two roadways connecting the two corridors: Mayflower Drive and Carroll Avenue. These are older two-lane roadways with significant alignment, width, and adjoining use issues. Mayflower Drive, the more heavily used connector, currently crosses an active rail line at-grade and carries truck traffic between the corridors. On the north side of the railway crossing, it connects to Campbell Avenue through a single family residential neighborhood. Mayflower Drive also provides a needed connection from the Odd Fellows corridor to Candler's Mountain Road, with its major commercial uses, and to the Liberty University campus. Both Mayflower and Carroll Avenue have wandering alignments, vertically and horizontally, providing an inefficient and circuitous route between the two corridors. Other significant roads within the study area include Murray Place and Albert Lankford Drive. Albert Lankford Drive is a spur from Carroll Avenue to Odd Fellows Road and holds enormous economic development potential. Murray Place is a dead end, wide industrial roadway, serving large scale



INTERSECTION OF ODD FELLOWS ROAD AND MAYFLOWER DRIVE

industrial uses with a rural shoulder treatment. It extends south from Odd Fellows Road and dead ends at the Norfolk & Southern Railway line. A second piece extends north from Candler's Mountain Road and stops on the southern side of that railway line.

Topography. Lynchburg's characteristic rolling hills affected the development of this area. The two primary corridors sit on the ridgelines and are separated by significant stream valleys defined by steep slopes. These valleys are barriers to completing an urban street grid and result in discontinuous streets along both major corridors. The valleys however, offer an opportunity: a long-range greenway trail system, making this a valuable asset.

Gateways. With the new Odd Fellows Road interchange, both corridors will serve as important gateways to the larger city. Campbell Avenue's gateway is that of an established residential neighborhood while Odd Fellows Road's is a significant employment area for the region.



ODD FELLOWS ROAD STREET FRONTAGE AT DMV PARKING LOT



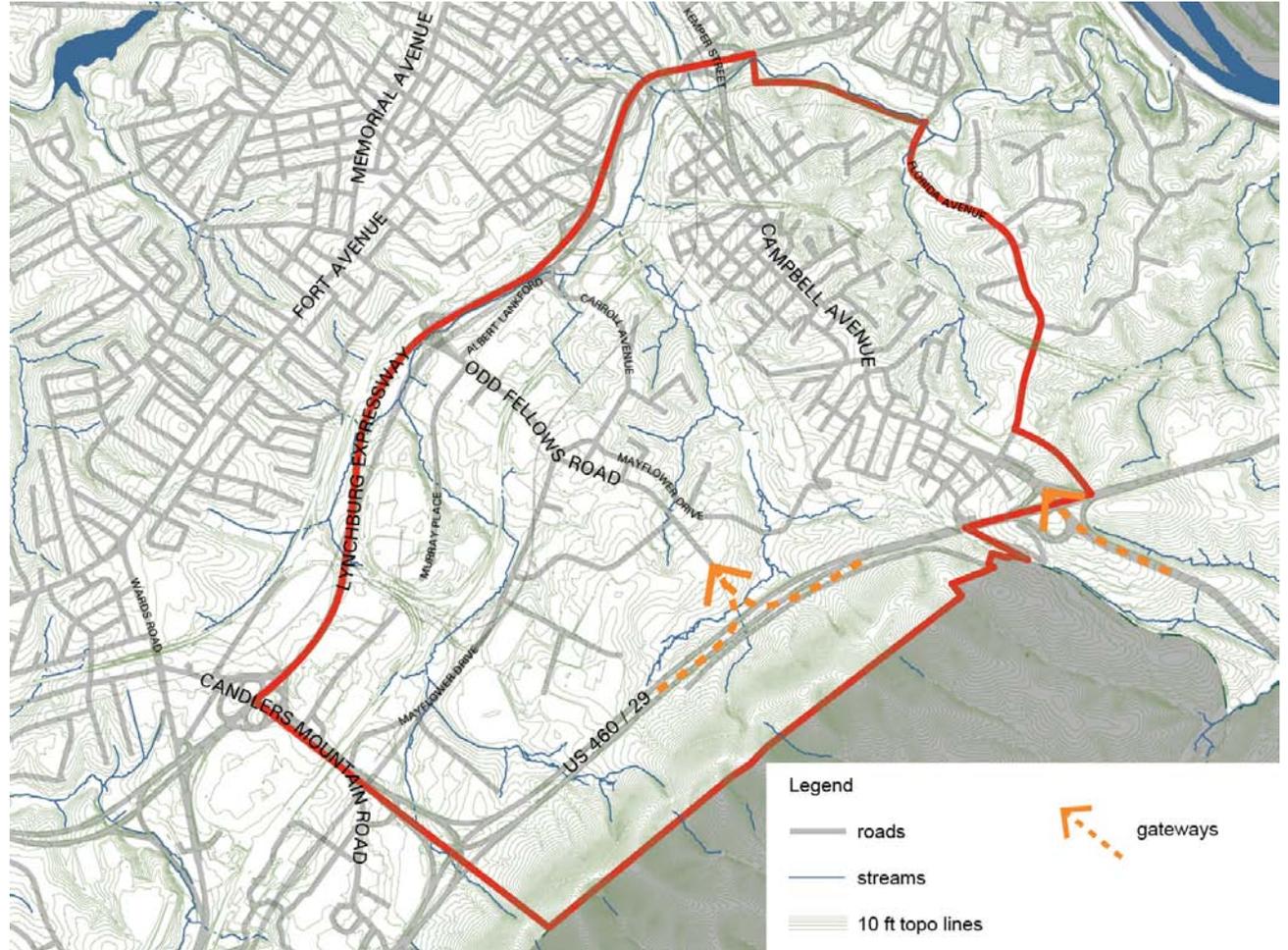
LYNCHBURG SHELTERED INDUSTRIES, A TYPICAL INDUSTRIAL USE IN THE ODD FELLOWS ROAD AREA



AT GRADE RAILROAD CROSSING ON MAYFLOWER DRIVE



TYPICAL VIEW ON MAYFLOWER DRIVE



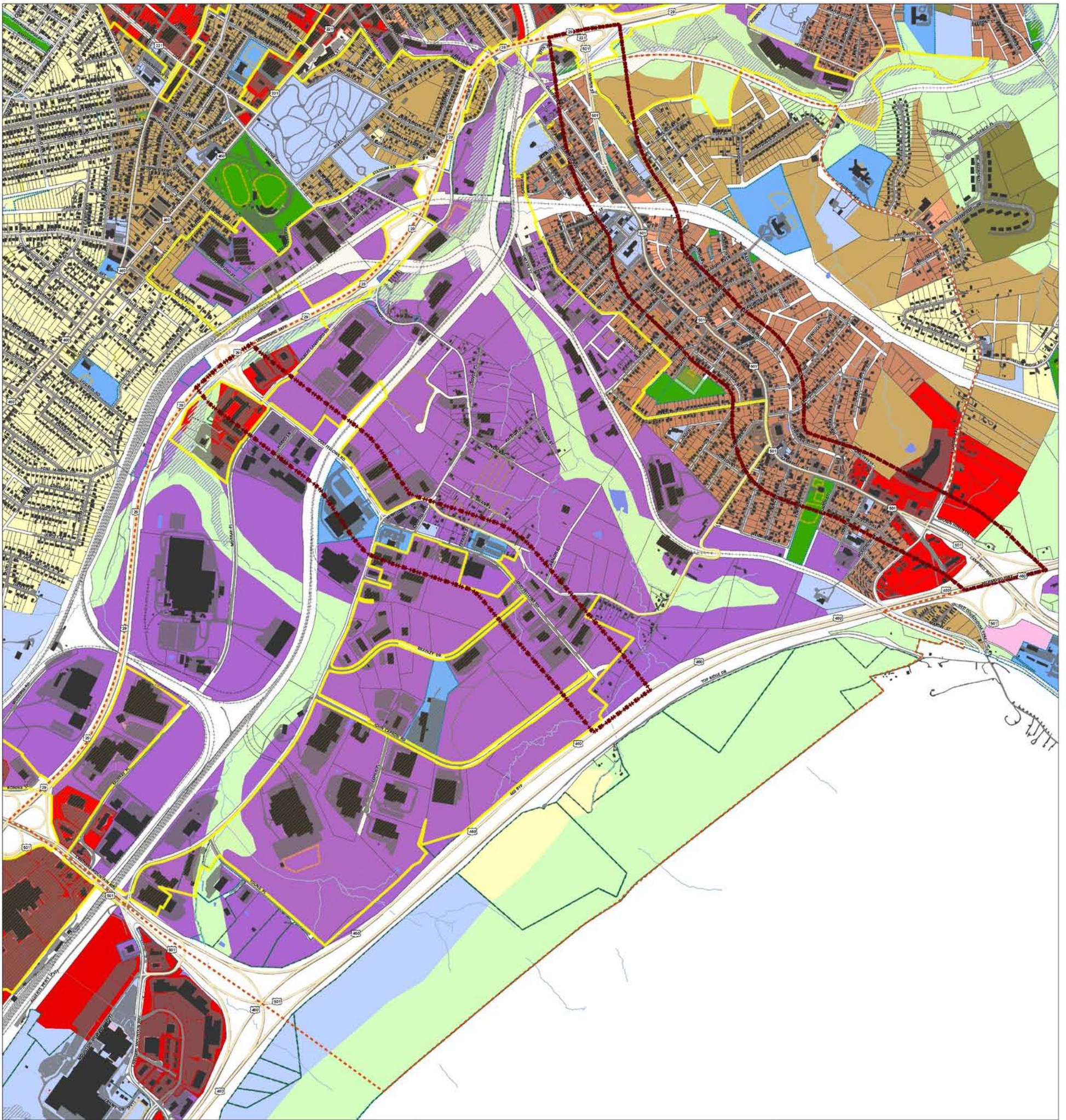
STREETS IN THE STUDY AREA TEND TO SIT ON RIDGES LENDING TO GOOD MOUNTAIN VIEWS, BUT THEIR CONNECTIVITY IS BROKEN BY STREAM VALLEYS

2.2 Land Use

The Future Land Use Map (FLUM) is a critical piece to the city's Comprehensive Plan. It helps guide decisions on how the city should grow and develop over a long period of time. Found here is an analysis of the current FLUM and Chapter 3 presents proposed changes to the FLUM.

Campbell Avenue. On Campbell Avenue, the future land use largely reflects the existing land use, as most land fronting on the corridor is built out. Residential and commercial land use is primarily low to medium density with a mix of older traditional buildings close to the street and newer buildings in a suburban style, set back from the street. Most commercial use on the corridor occurs in small pockets with neighborhood and community-level services, building type is both small infill and strip commercial. Fairview Square Station is the only shopping center within the study area, located just north of Campbell Avenue, on Florida Avenue. Expanded commercial development is planned for the vacant lands surrounding the shopping center. The primary institutional uses within the corridor are the Virginia University-Lynchburg (VUL), Bass Elementary, Fairview Heights Community Center, Younger Park and a number of churches, all scattered along Campbell Avenue.

Odd Fellows Road. Odd Fellows Road serves a large employment (industrial/warehouse) area, including the First Lynchburg Industrial Park, and an area of commercial use with hotels, restaurants, and office uses near its interchange on the Expressway. Public governmental uses along the corridor include offices and service centers for the United States Postal Service (USPS), Virginia Department of Motor Vehicles (DMV) and Virginia Employment Commission (VEC). A couple of low density residential areas are scattered along Mayflower Drive and Carroll Avenue. The FLUM indicates for the area a predominantly employment use, although some planned commercial use areas reflect existing commercial use along Odd Fellows Road at the Expressway and on Candler's Mountain Road at Murray Place. On Liberty University property east of US 460/29, the current FLUM calls for predominantly resource conservation uses, along with some low density residential and institutional uses.



Legend

Street Layers

- Highway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Railroads

Planimetrics

- Paved Parking
- Structures
- Sidewalk
- Paved Roadway
- Driveway

Parks & Recreation

- Athletic Area
- Parks & Rec Properties
- Parks

Study Corridors

- Odd Fellows Road Corridor Design Master Plan Study Limits
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Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

Hydrology

- Streams
- Ponds / Detention Ponds
- 100 Year Flood Zone

Graphic Key:

- Enterprise Zone
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Regional Commercial
- Employment 1
- Employment 2
- Office
- Institution
- Downtown
- Public Use
- Public Parks
- Resource Conservation

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Future Land Use

Land Use & Corridor Master Plan Study

Campbell Avenue & Odd Fellows Road Area

Department of Community Development
Department of Economic Development

Mapping by GIS Division
Information Technology Department

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Date: October 25, 2011
Projection: NAD 1983 Virginia State Plane South (Feet)
Scale: 1" = 500'
Note: For Planning Purposes only; not for construction.
Data Source: City of Lynchburg GIS Division

500 250 0 500 1,000 1,500 2,000 Feet

2.3 Zoning

Zones Found in the Campbell Avenue Corridor:

“B-1” (Limited Business): Located in areas limited to frontage on the west side of the corridor from Valley Fasteners to Kent Street, and on the east side of Powhatan Street between Texas and Georgia Avenues.

“B-2” (Local Neighborhood Business): Located on the north side of the corridor between Easley Avenue and the Suttentfield Bridge.

“B-3” (Community Business): Prevalent at a number of locations along the corridor, including the intersection of Campbell and Florida Avenues, around the Mayflower Drive and Maryland Avenue intersections, and isolated locations along the frontage.

“B-5” (General Business): Occurs primarily at the intersection of Campbell and Florida Avenues, and extends along the corridor’s east side to Texas Avenue.

“I-2” (Light Industrial): In this instance, the current land use does not reflect the existing zoning designation. An area of I-2 zoning is present along the railroad right-of-way at the north end of the corridor. One sub-area occurs on both sides of old Campbell Avenue between Garfield and Tazewell Avenues; this area is subdivided into small residential lots and features some scattered residences. The other, larger sub-area, extends from the Tazewell Avenue right-of-way eastward across Kemper Street to the Lodge Street alignment extended to the railroad tracks. This area is undeveloped.

“R-2” (Low-Medium Density Single Family Residential): Only a small area of R-2 zoning is present within the study area; it is located along Gilmore Circle, a built-out single family neighborhood.

“R-3” (Medium Density Two-Family Residential): This is the predominant residential zoning along the Campbell corridor and within the study area generally. The developed areas with this designation feature single family detached dwellings.

“R-4” (Medium-High Density Multi-Family Residential): Only a small area of R-4 zoning is present within the study area; it is located between old Campbell Avenue and Kemper Street south of the Expressway.

The main campus of Virginia University-Lynchburg (VUL) is designated as a local historic overlay zone known as the Virginia University of Lynchburg Historic District. The current zoning for the properties within the district is R-3 (Medium Density Two-Family Residential) is not altered by the historic district designation.

Zones found in the Odd Fellows Road Corridor:

“B-3” (Community Business): This zoning designation is limited to a single parcel on the east side of the corridor just north of the intersecting railroad right-of-way.

“B-5” (General Business): This zoning occurs on both sides of the corridor at Albert Lankford Drive, Murray Place and Harris Lane; existing development within this district includes hotel, restaurant

and general business uses. Two smaller areas of B-5 zoning exists on the east side of the corridor between the Mayflower Drive and Carroll Avenue intersections, and at the Murray Place intersection with Candler’s Mountain road.

“I-2” (Light Industrial): I-2 zoning occurs in a broad swath along the east side of the corridor between Albert Lankford Drive and a stream valley just north of Avalon Road. A single parcel at the interchange between Candler’s Mountain Road and the US 460/29 bypass is also designated I-2.

“I-3” (Heavy Industrial): By far this is the most prevalent zoning within the Odd Fellows Road corridor, extending from the railroad paralleling the east side of the corridor to Candler’s Mountain Road. Existing development within this zone varies from large industrial operations along Murray Place to moderately large industries along the Mayflower Drive and Odd Fellows Road corridors, including the area known as the First Lynchburg Industrial Park. Significant undeveloped parcels also exist within this part of the study area.

Zoning for Liberty University land east of US40/29 consists of R-C (Conservation), R-2 (Low-Medium Density Single-Family Residential), and B-3 (Community Business). The newly created I-2 Institutional Zoning may be applied in the future.



Legend

Study Area
Corporate Limit

Street Layers

- Highway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Railroads

Planimetrics

- Paved Parking
- Structures
- Sidewalk
- Paved Roadway
- Driveway

Parks & Recreation

- Athletic Area
- Parks & Rec Properties
- Parks

Study Corridors

- Odd Fellows Road Corridor Design Master Plan Study Limits
- Campbell Avenue Corridor Design Master Plan Study Limits

Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

Hydrology

- Streams
- Ponds / Detention Ponds
- 100 Year Flood Zone

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Graphic Key:

- Conditional Use Permit
- Zoning Variance

Zoning

- B-1 = Limited Business
- B-2 = Local Neighborhood Business
- B-3 = Community Business
- B-4 = Central Business
- B-5 = General Business
- B-6 = Riverfront Business
- I-1 = Restricted Industrial
- I-2 = Light Industrial
- I-3 = Heavy Industrial
- R-1 = Low Density Single-Family Residential
- R-2 = Low-Medium Density Single-Family Residential
- R-3 = Medium Density Two-Family Residential
- R-4 = Medium-High Density Multi-Family Residential
- R-5 = High Density Multi-Family Residential
- R-C = Conservation

Existing Zoning

Land Use & Corridor Master Plan Study

Campbell Avenue & Odd Fellows Road Area

Department of Community Development
Department of Economic Development

Mapping by GIS Division
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CREATING COMMUNITIES
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3.0 Area-Wide Plan

This chapter presents feedback collected from two public meetings during this plan's development and then proposes recommendations that address or build upon that important public input. These area-wide recommendations apply a holistic approach to achieving the vision on page 6 of this plan. Looking at the broad, "big picture," also sets the appropriate context for the more detailed master plans in Chapters 4 and 5.

3.1 Stakeholder & Public Input

Input from key stakeholders and the wider community directly influenced the goals and recommendations made in this plan. Below are comments gathered from the two public meetings specifically held for this plan (meeting details can be found Chapter 1.4)

November 15, 2011, Public Charette at the City Information Technology Building. Attendees were divided into small groups to brainstorm ideas and discuss issues

Group 1

1. Odd Fellows Road interchange will open economic development; however, an introduction of a service road is essential (Campbell to Candler Mountain Road – north side).
2. Extend Mayflower Drive through to John Capron Road and add connection near Quarles along Mayflower to protect residences.
3. Provide bike lanes along Campbell Avenue.
4. Improve access for land development along both sides of US 460.
5. Create a gateway atmosphere along Campbell Avenue and improve pedestrian access to allow connectivity (e.g. school crossings).
6. Provide a timeline, right-of-way needs, and impact to business for the Odd Fellows Road interchange

Group 2

1. On-ramps at Odd Fellows Road/Expressway interchange need access lanes.
2. Improve Odd Fellows Road as needed for new traffic and business access.
3. New interchange is opportunity to stimulate growth in business park.
4. Sidewalks are needed along Odd Fellows Road, due to student foot traffic.
5. Opportunity for new civic center with interchange access.

Group 3

1. Odd Fellows Road should feature 4-lanes with center turn lane.
2. Move interchange further west on US 460 (Extending John Capron Road --- simpler access point, closer to industry).
3. Need stoplights at Albert Lankford and Bradley.
4. Need sidewalks ("Complete Streets"), but no bicycles on Odd Fellows to Expressway and Mayflower to Candler Mountain Road.
5. Thorough corridor impact study --- cut-through traffic & environmental issues.

Group 4

1. Lessen congestion on Mayflower Drive and Candler Mountain Road.
2. New business development opportunities.
3. Concern over access to existing businesses.
4. Create a more "community-feel" along Campbell. Slow traffic. Stabilize businesses.
5. More options for travel.

January 10, 2013 Public Forum at Bass Elementary School. Comments were gathered from the whole audience based on different facets of the plan discussed in the presentation. Responses to the comments can be found in parentheses immediately following the comment.

Corridor Design:

- In regard to the timing of potential improvements, the City study team stated that the Odd Fellows Road interchange will be constructed first, then Campbell Avenue improvement design and construction will be undertaken in phases.
- Campbell Avenue was the “forgotten gateway” into the city.
- What type of trees? No Bradford Pears. (The City’s arborist and horticulturalist will provide guidance on the selection of street tree and median plant selections).
- What about power lines? Will you underground? Look at underground lines crossing street. (Overhead electric power and communications lines will be consolidated on one side of the street on higher poles; minor service lines crossing the street will be consolidated and placed underground as is feasible).
- Distance of connector road to existing residences. Noise? (The current alignment of the proposed corridor connector road linking Campbell Avenue to Odd Fellows Road is conceptual; the final alignment will be determined at the time of preliminary and final roadway design. At that time, the impacts on surrounding properties will be evaluated and the roadway design will be refined to minimize those impacts).

Transportation/Traffic/Transit:

- Residential access right in/out. (Where a median is proposed on Campbell Avenue during the design

phase, selected frontage parcels will feature right-in/right out vehicle movements).

- New parallel to 460 is very important and should be a priority. (This comment refers to the proposed corridor connector road linking Campbell Avenue to Odd Fellows Road).
- Are we considering new signals? (Signalization needs will be reevaluated during roadway design; proposed roundabouts at Florida Avenue and Edmunds Street will not require signalization. The current corridor master plan does not call for the removal of the existing traffic signals at Mayflower Drive, Fairview Avenue, Seabury Avenue or Mosby Avenue).
- Consider how side street left turns are made. (Dedicated left turn lanes will be provided according to the corridor master plan, but the specific locations and designs will be developed during the roadway improvements design phase).
- What is a “two-step” turn opportunity? (Under the road diet concept, the center turn lane (zone) allows a person to make a safer “two-step” left turn at a number of locations along the corridor. You would pull left out of your driveway and stop in the (safe) center turn lane, then complete the “two-step” left turn movement by entering the (left-bound) travel lane).

Land Use/Overall Plan:

- Why now? (The City’s comprehensive plan calls for study of Campbell Avenue as a gateway to the City; the advent of a new interchange at Odd Fellows Road and US 460/29 creates the need for the update of the comprehensive plan for that corridor as well. The proximity of the two corridors requires an update of the comprehensive plan for the broader area containing these two important corridors).
- Do connector road before Campbell Avenue road

diet? How funded? (The current approach for the timing of the connector road is for construction after the Odd Fellows Road interchange and attendant roadway improvements and after the construction of a modern roundabout at Florida Avenue).

- Implementation schedule! (The implementation priorities will be developed as part of the final study report).
- Plan is great. Construction into area. (Construction of improvements will be completed in phases per the implementation strategy; construction impacts will be mitigated as part of the design and engineering effort for each phase).
- Residential conservation area – what is it? (The residential conservation area is an overlay zone atop existing established residential enclaves within the Odd Fellows Road corridor; the intent is to mitigate negative impacts of roadway development on those enclaves).
- Very informative.

Safe Routes to School:

- Kids are so small – visibility. (Major crosswalk and sidewalk improvements proposed for safe pedestrian access to Bass Elementary School will be designed to accommodate school children; visibility of the crossings will be a primary criterion for these improvements).

3.2 Concept Plan

The proposed VDOT interchange at Odd Fellows Road and US 460/29 makes other improvements both necessary and possible. The area will see new growth and different travel patterns in the future. Odd Fellows Road will see major upgrading, while Campbell Avenue has the unique potential for a “road diet,” described more in depth in Chapter 4. In addition to existing conditions, other area wide issues include:

- connectivity and accessibility of all transit modes
- an aging, underutilized employment area
- current broad direction prescribed for this area’s growth
- image of two key city gateways and traditional neighborhoods.

The concept plan, Future Land Use Map (FLUM), and transportation plan in the following pages tackle these issues by:

- Enhancing connectivity for all transportation modes, including pedestrian, bicycle, vehicle (cars & trucks) and bus transit specifically with:
 - New and improved sidewalks, pedestrian crossings, bicycle lanes, multi-use facilities, and greenway trails
 - Enhanced public transportation facilities
 - New roadway linkages, both enhancing connectivity and opening up new parcels for employment use
- Installing roundabouts, both easing the flow of traffic and creating key moments along the corridor with placemaking potential
- Making the area attractive and creating an identity that will attract employment uses such as advanced manufacturing / distribution

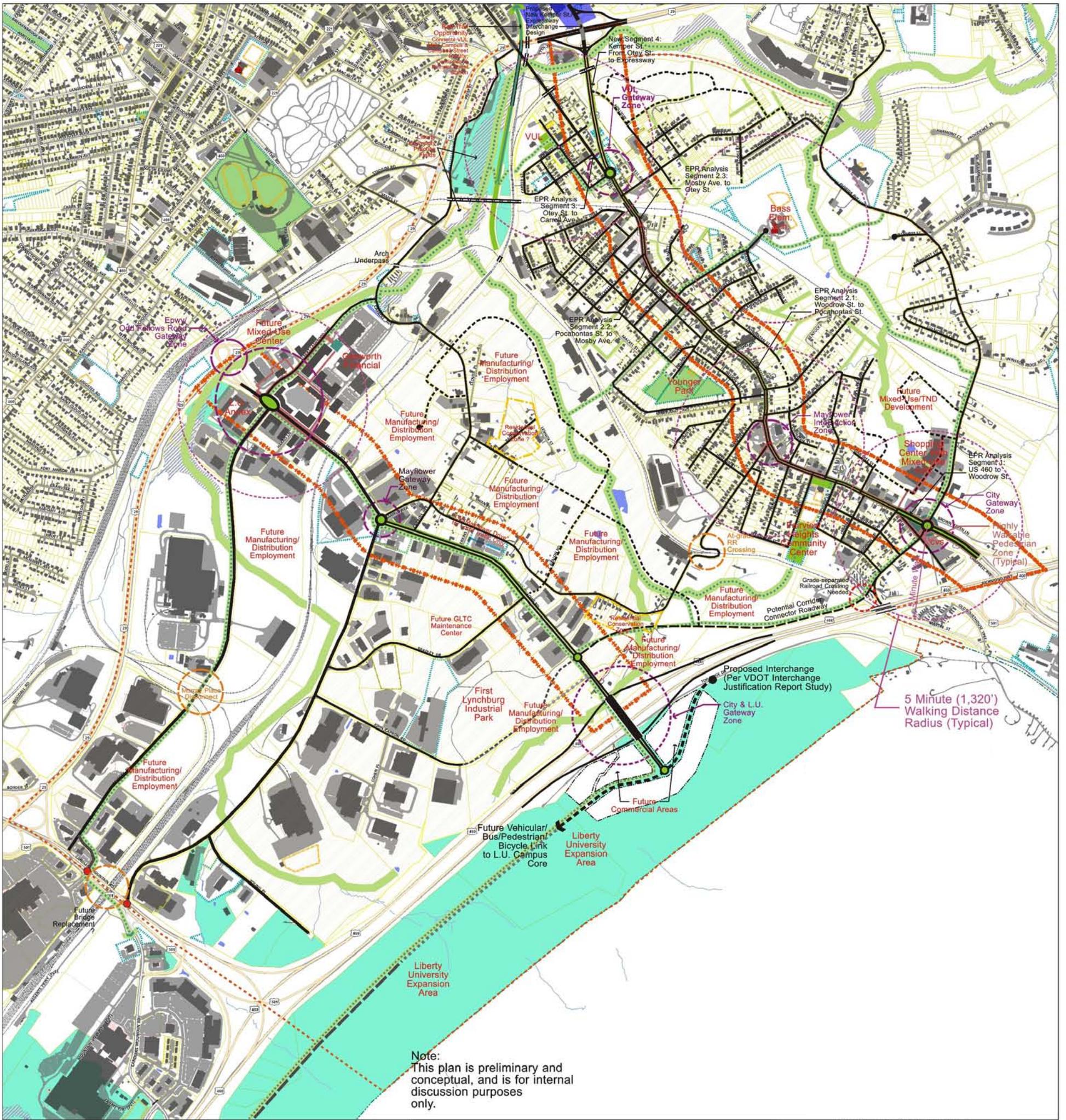
- Identifying opportunities for rail service to industrial parcels
- Refining the FLUM, discussed in Chapter 2, and proposing new mixed-use development at potential small infill sites and larger areas for walkable mixed-use cluster areas
- Providing special roadway and landscape elements which act as amenities in improving the city gateway image of both key corridors
- Creating a new community streetscape, park and/or recreational facilities as public amenities.

Roundabouts. The plan proposes a total of six modern roundabouts throughout the area that improve intersection safety, ease the flow of traffic, and create key moments along the corridors with placemaking potential. *All roundabouts will accommodate large trucks as well as standard automobiles, by providing a central “truck apron.” The truck apron will surround the center island and be differentiated from the automobile travelway by both a slightly higher elevation (lip) and a distinctively colored concrete surface.* Automobiles and smaller trucks will use the defined (asphalt) circular travel lane surrounding the truck apron. Larger trucks will be able to mount the apron and easily navigate the roundabout. More information on each of the proposed roundabouts can be found in chapters 4 and 5.

Gateways. Campbell Avenue is a traditional entrance to the city from the east, but over years of treatment as solely a vehicular corridor, has developed the need for a facelift. Both the proposed road diet and roundabouts provide opportunities to improve the image of the corridor and the city as a whole. Likewise, Odd Fellows Road is on the verge of being a new eastern entrance to the city and major access point for businesses. It will have similar opportunities to brand itself as a new major employment use gateway.

Extended Road Network. Dashed black lines on the concept plan mark a potential extended road network that would disperse traffic over a large street grid and open up new parcels for industrial development. Within this extended network is a new connector street, with integrated pedestrian/bicycle facilities, proposed parallel to the US 460/29 corridor. This new connector extends from the proposed Florida Avenue roundabout on Campbell Avenue to a realigned John Capron Road at a proposed roundabout on the extended Odd Fellows Road, relieving Mayflower Drive of heavy use and opening up new parcels for development.

Page 27 shows the full Concept Plan and pages 28 and 29 show closer looks at Campbell Avenue and Odd Fellows Road.



Note:
This plan is preliminary and conceptual, and is for internal discussion purposes only.

Legend

- Study Area
- Corporate Limit

Street Layers

- Highway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Railroads

Planimetrics

- Paved Parking
- Structures
- Sidewalk
- Paved Roadway
- Driveway

Parks & Recreation

- Athletic Area
- Parks & Rec Properties
- Parks

Study Corridors

- Odd Fellows Road Corridor Design Master Plan Study Limits
- Campbell Avenue Corridor Design Master Plan Study Limits

Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

Hydrology

- Streams
- Ponds / Detention Ponds
- 100 Year Flood Zone

Economic Zones

- Enterprise Zone

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Graphic Key:

- Schools
- Midtown Connector Project Area
- Crosswalks
- Church
- Highly Walkable Pedestrian Zone (Typical)
- Proposed New Streetscape Segment with Center Median/Left-Turn Lane (Typical)

Key:

- Signalized Intersection To Remain
- Proposed Modern Roundabout
- Proposed Right In - Right Out Intersection
- Potential Street Connection
- Potential Neighborhood Street/Trail Connection
- Potential Greenway Trail Opportunity
- Bridge Over Railroad
- Railroad Bridge/Trestle

Date:
4/16/12
5/29/12 Revised
6/15/12 Revised
8/7/12 Revised
11/2/12 Revised

Draft Study Area & Corridors Concept Plan

Land Use & Corridor Master Plan Study

Campbell Avenue & Odd Fellows Road Area

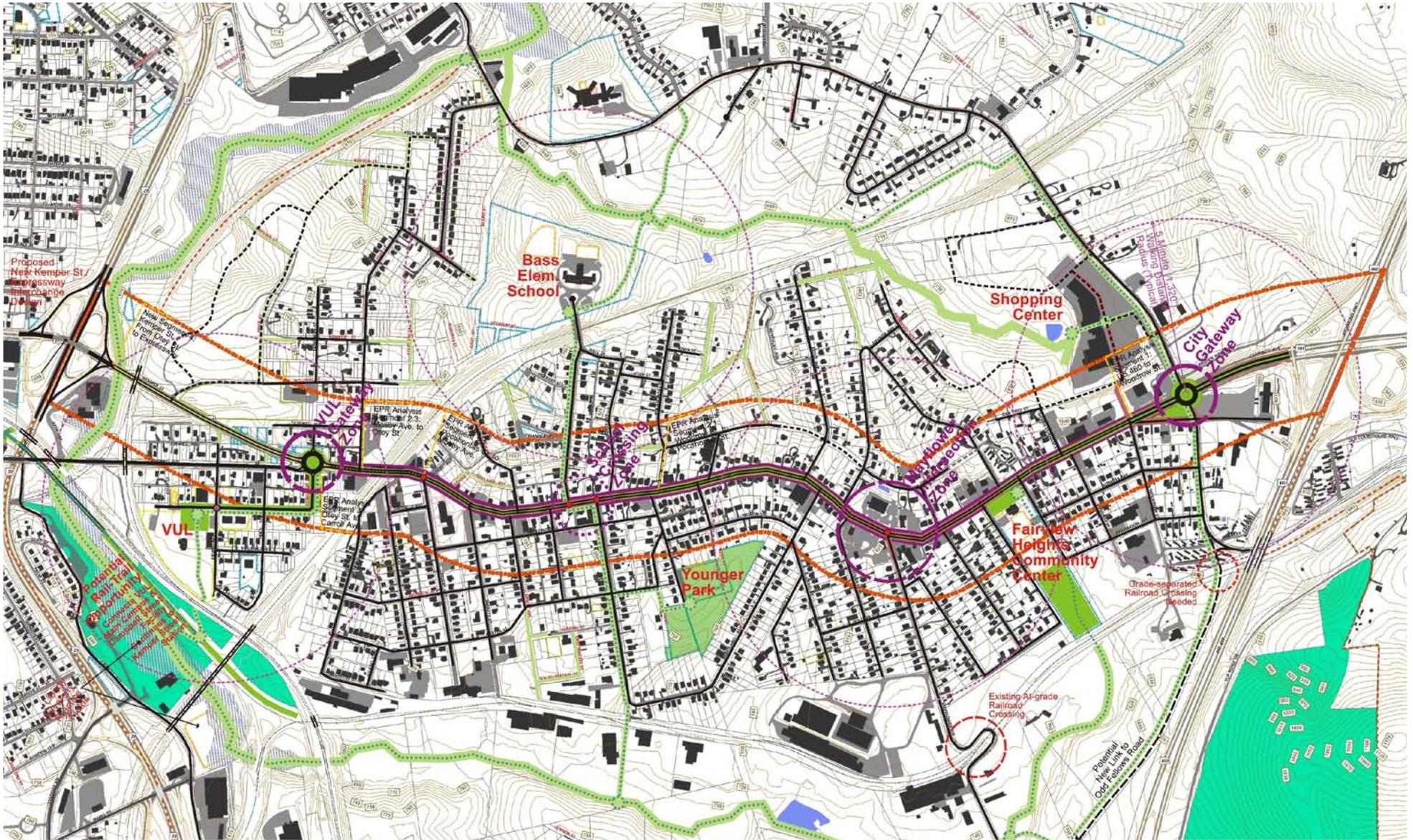
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Department of Economic Development

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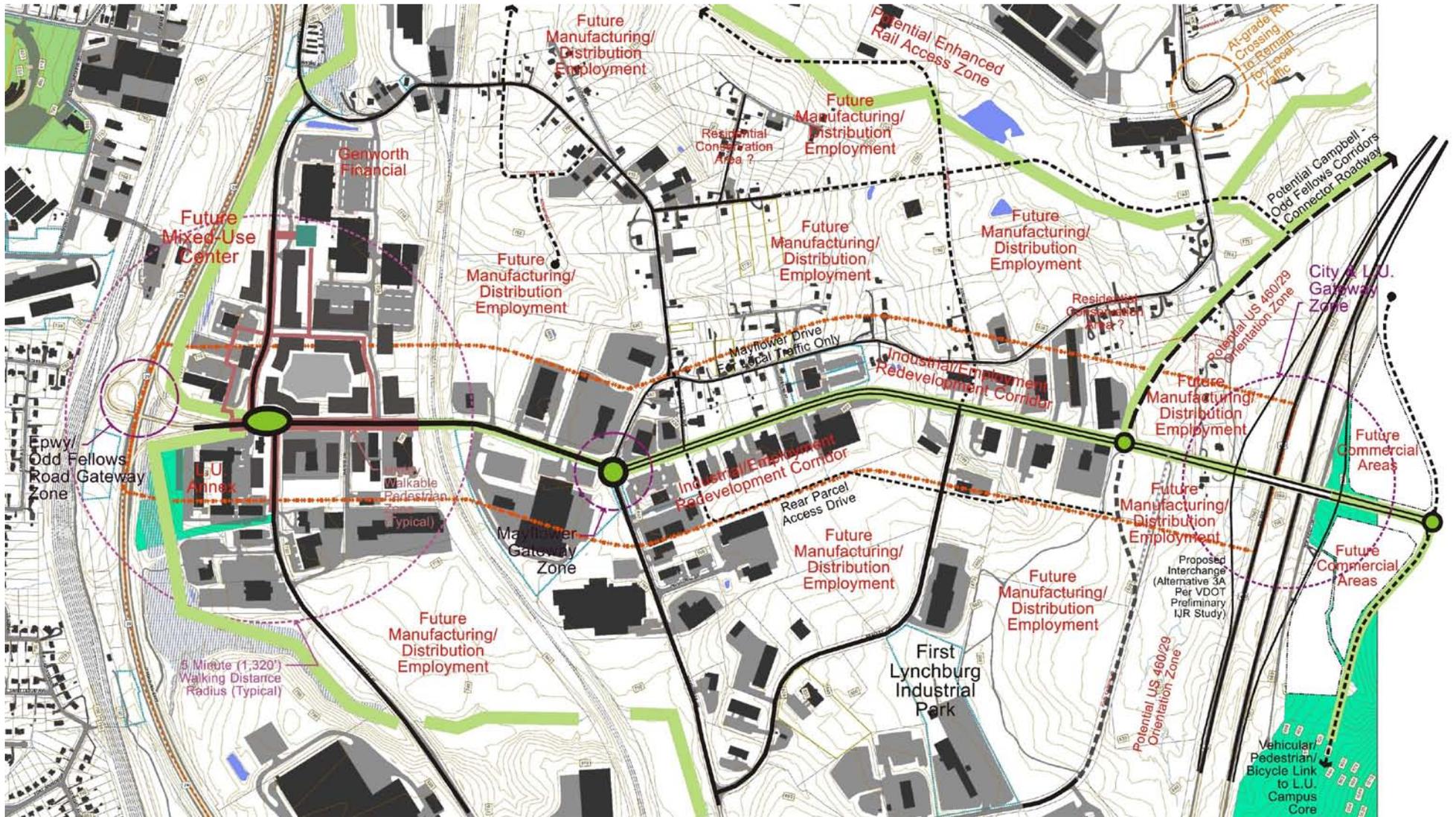
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500 250 0 500 1,000 1,500 2,000 Feet



3.1 ZOOM IN OF CONCEPT PLAN AT CAMPBELL AVENUE



3.2 ZOOM IN OF CONCEPT PLAN AT ODD FELLOWS ROAD

3.3 Future Land Use Map (FLUM)

The FLUM helps guide public and private development throughout the city and is the basis for rezoning and conditional use permit recommendations. The following section proposes refinements to the existing FLUM from Comprehensive Plan, found in Chapter 2.2 of this document.

Mixed-Use Development. The proposed changes to the FLUM center around promoting mixed use development with a new future land use designation and applying it in two different forms—1) large mixed-use centers and 2) smaller scale, integrated into the existing commercial fabric along Campbell Avenue. Mixed-use designation allows a parcel of land to be used for multiple purposes within the same building or area. Often residential use is held in the upper floors of buildings, while the first floor is used for retail or offices. It is an efficient use of land and promotes walkable, healthy, active communities. New Urbanist and neo-traditional design principles should be applied to these areas, generally shaping buildings as close to the street with parking in the rear and generating highly walkable areas with enhanced sidewalks and crosswalks.

Major Centers. The map below highlights two major mixed-use/TND centers—one at Campbell Avenue and Florida Avenue (the current Fairview Square Station shopping center), and the other at the intersection of Odd Fellows Road and Albert Lankford/Murray Place, encompassing the Liberty University Annex and the Genworth Financial campus. Complementing the exiting uses, commercial, office, residential, and institutional use infill are all recommended for these major centers of mixed use.

Infill. Areas along Campbell Avenue currently zoned B-1 “Limited Business,” B-3 “Community Business” and B-5 “General Business” should be designated for mixed use on the FLUM. This designation will help shape the businesses along Campbell Avenue and encourage walkable design complementary to the streetscape improvements.

Employment Land Use. The new interchange and potential new street grid will strengthen the First Lynchburg Industrial Park. New employment uses for the area should be encouraged, including advanced manufacturing / distribution.

Community Commercial Area at New Interchange. New land opened for development by the extension of Odd Fellows Road should be designated as “Community Commercial” on the Future Land Use Map to encourage commercial use for both highway services and potentially students on a new piece of Liberty University’s campus. Uses could include gas stations, hotels, and restaurants.

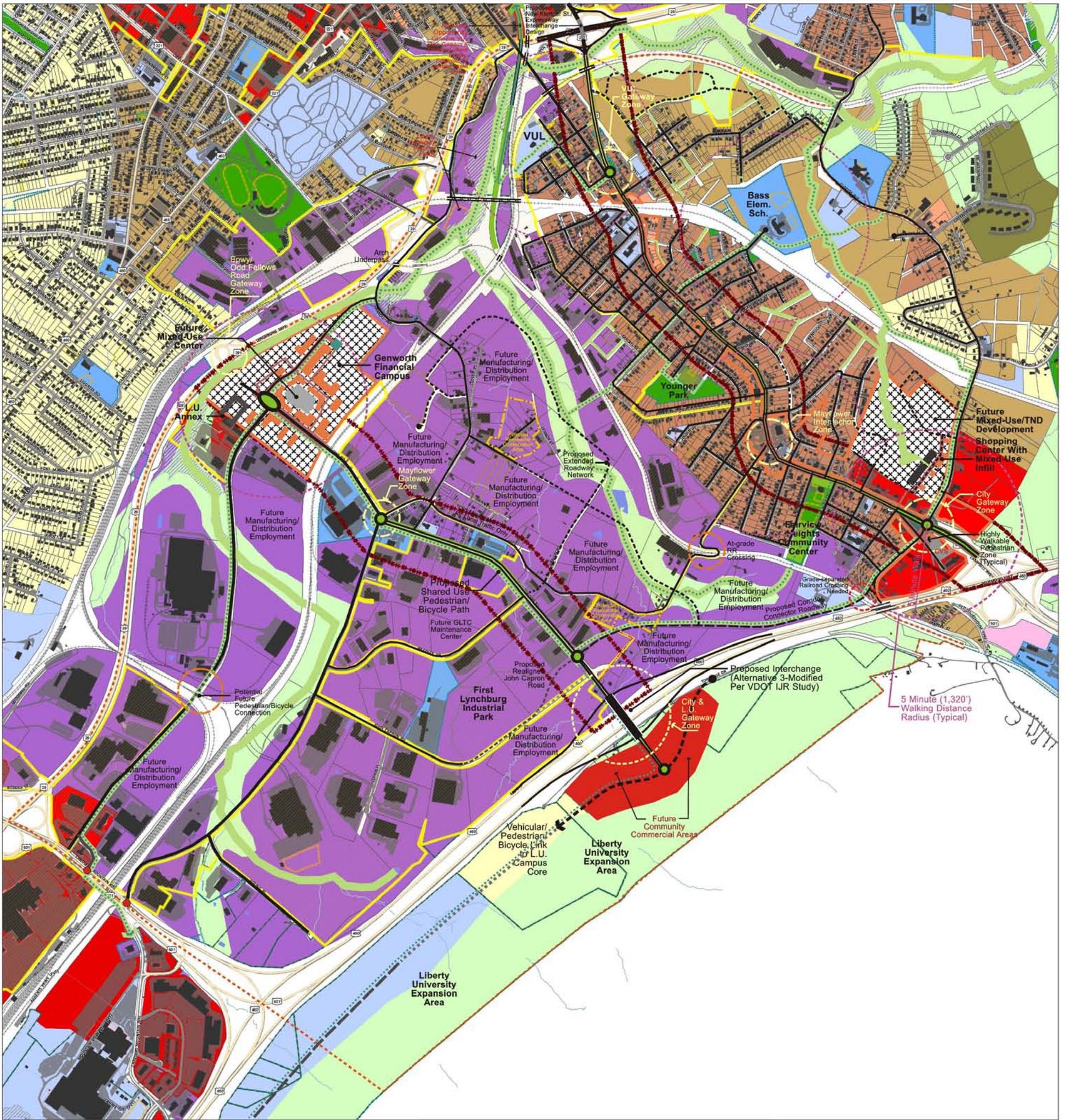
Neighborhoods Zoned Industrial. Some established neighborhoods in the Odd Fellows Road area are currently zoned for industrial use. These areas should be considered for “Traditional Residential” designation when the FLUM is revised as part of the Comprehensive Plan update currently underway.



EXAMPLE OF A MIXED USE CENTER



SKETCH OF HOW MIXED USE INFILL CAN FIT WITHIN EXISTING BUSINESSES AT CAMPBELL AVENUE AND MAYFLOWER DRIVE



Legend

Street Layers

- Highway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Railroads

Planimetrics

- Paved Parking
- Structures
- Sidewalk
- Paved Roadway
- Driveway

Parks & Recreation

- Athletic Area
- Parks & Rec Properties
- Parks

Study Corridors

- Odd Fellows Road Corridor Design Master Plan Study Limits
- Campbell Avenue Corridor Design Master Plan Study Limits

Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

Hydrology

- Streams
- Ponds / Detention Ponds
- 100 Year Flood Zone

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Graphic Key:

- Enterprise Zone
- Traditional Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Neighborhood Commercial
- Community Commercial
- Regional Commercial
- Employment 1
- Employment 2
- Office
- Institution
- Downtown
- Public Use
- Public Parks
- Resource Conservation
- Major Mixed Use Area
- Mixed Use Corridor Overlay Area

Key:

- Signalized Intersection To Remain
- Proposed Modern Roundabout
- Proposed Right In - Right Out Intersection
- Potential Street Connection
- Potential Neighborhood Street/Trail Connection
- Potential Shared Use Path/Greenway Trail Opportunity
- Bridge Over Railroad
- Railroad Bridge/Trestle

Date: 1/25/13

Draft Study Area Future Land Use Map & Thoroughfare Network Land Use & Corridor Master Plan Study

Campbell Avenue & Odd Fellows Road Area

Department of Community Development
Department of Economic Development

Mapping by GIS Division
Information Technology Department

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3.4 Pedestrian, Bicycle, & Transportation Plan

The vision statement on page 6 specifically emphasizes multimodality and calls for the efficient, safe, and enjoyable use of the area by all travel modes: foot, bike, transit, truck or car. The following area-wide recommendations outline vital changes needed to achieve the vision.

Pedestrian Facilities. Streetscaping and roadway design efforts all contain new and improved sidewalks with street trees, more visible crosswalks, and new pedestrian signalization to help improve walkability and the overall pedestrian experience of the area. Improved bicycle and transit facilities below also encourage pedestrians and multimodal travel.

Bicycle Facilities. The Bicycle/Pedestrian Plan contains a system of on and off-road facilities to encourage biking. Both corridors incorporate bicycle facilities into their design—Campbell Avenue can accommodate bike lanes with its road diet, but as Odd Fellows Road will handle major truck traffic, a separated, shared use path along its southern side avoids any conflict. Other road facilities include sharrows (example page 39) for Murray Place and Albert Lankford, where bikes share the road with vehicles, and a continuation of the shared use path on the new connector roadway to Campbell Avenue and on Top Ridge Road, connecting to Liberty University's main campus. The greenway trail system provides further bike facilities.

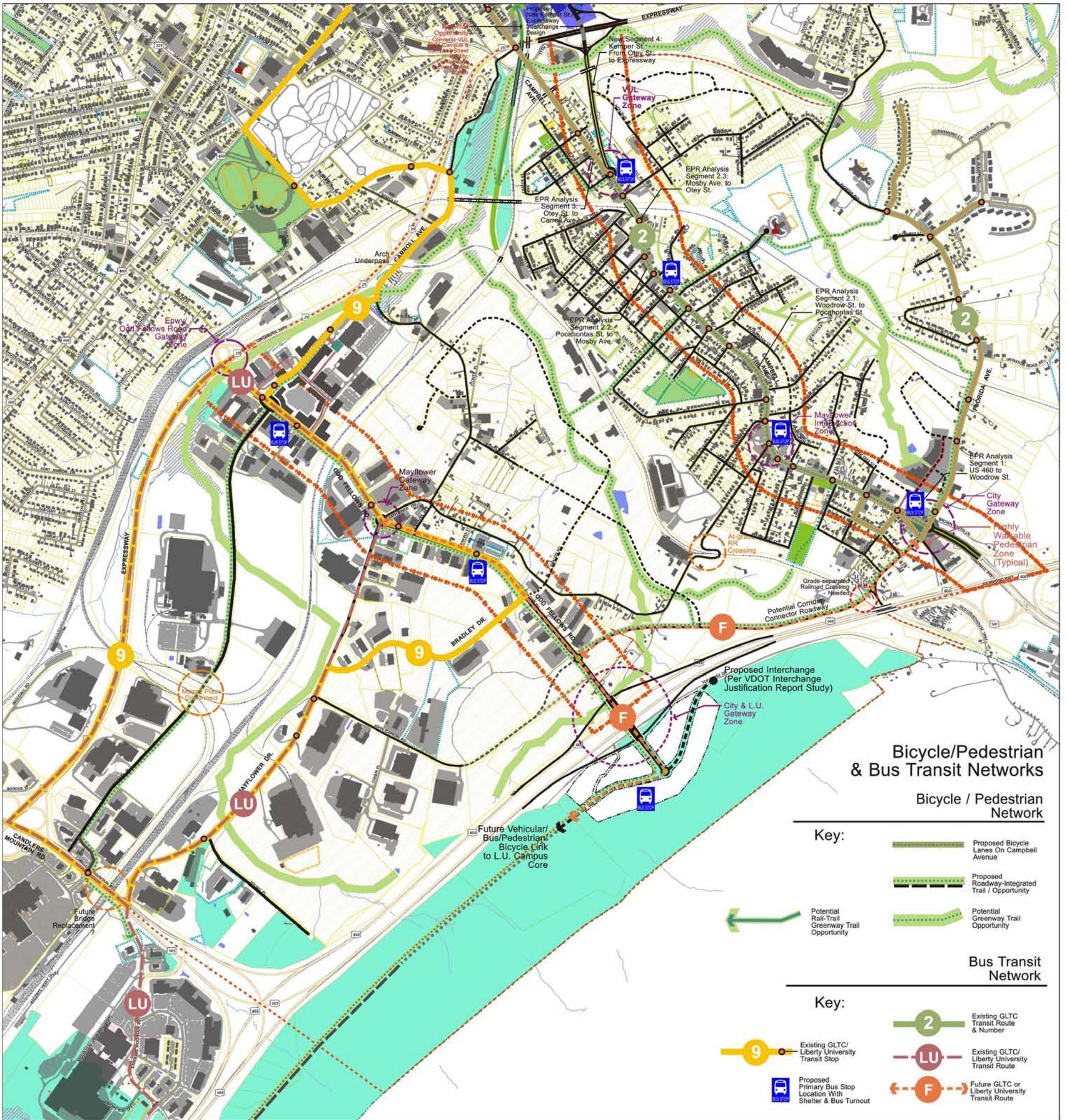
Greenway Trail System. The greenway trail system provides a non-vehicular travel network for bikers and pedestrians throughout the study area for both recreation and transportation. These greenways lie in the FLUM's "resource conservation areas" along the area's stream valleys, and on abandoned railroad right-of-way. The system also has extensions to key community destinations, such as the Kemper Street Amtrak Station, and the bike and sidewalk facilities on the two corridors, tying the greenways to the larger transportation system and network of Complete Streets.

Bus Turn-outs. With the help of the Greater Lynchburg Transit Company (GLTC) and Region2000, seven major transit stop zones along the corridors were identified by mapping ridership data and existing GLTC and Liberty University bus routes. Each major bus transit stop should contain bus turn out lanes to avoid disrupting traffic and transit shelters to accommodate and encourage a higher volume of riders at these areas. Turn-out lanes are feasible within both corridors' proposed roadway designs, and the stops are spaced at increments no less than 1500 feet, per GLTC spacing standards. Additionally, numerous small transit stops are located at convenient locations between major stops. The major transit stops are identified in the map below with a bus icon, while minor stops are identified with a circle along the existing bus routes.

New Transit Routes. Currently the study area is served by three primary bus transit routes: Campbell Avenue is served by GLTC Route 2, while the Odd Fellows Road area is served by GLTC Route 9. In conjunction with GLTC, Liberty University also provides bus service linking the Liberty University student housing complex on Odd Fellows Road to the main campus with a route along Odd Fellows Road, Mayflower Drive and the Expressway. The new interchange at Odd Fellows Road and US 460/29 creates an opportunity for a future transit link along Odd Fellows Road extended to the main Liberty University Campus. The proposed new corridor connector road can also provide a future bus transit route linking the Campbell Avenue and Odd Fellows Road corridors.



EXAMPLE OF BUS TURN-OUT, WHERE BUSES DO NOT BLOCK THE FLOW OF TRAFFIC WHILE LOADING PASSENGERS



Bicycle / Pedestrian Network

- Key:**
- Proposed Bicycle Lanes On Campbell Avenue
 - Proposed Roadway-Integrated Trail / Opportunity
 - Potential Rail-Trail Greenway Trail Opportunity
 - Potential Greenway Trail Opportunity

Bus Transit Network

- Key:**
- Existing GLTC Transit Route & Number
 - Existing GLTC/Liberty University Transit Stop
 - Existing GLTC/Liberty University Transit Route
 - Proposed Primary Bus Stop Location With Shelter & Bus Turnout
 - Future GLTC or Liberty University Transit Route

Legend

Study Area	Athletic Area	Ponds / Detention Ponds
Corporate Limit	Parks & Rec Properties	100 Year Flood Zone
Highway	Parks	
Major Arterial	Odd Fellows Road Corridor Design Master Plan Study Limits	
Minor Arterial	Campbell Avenue Corridor Design Master Plan Study Limits	
Collector		
Local		
Railroads		
Paved Parking	City Property	Enterprise Zone
Structures	State & National Historic Districts / V-UL	
Sidewalk	Parcel Area	
Paved Roadway	Liberty University Lands	
Driveway	Public Properties	

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4.0 Campbell Avenue Master Plan

This chapter presents a more detailed look at how Campbell Avenue should transform over time. Once the new interchange at Odd Fellows Road and US 460/29 and the Odd Fellows Road improvements are completed, Campbell Avenue can begin making its transformation. The proposed road diet and streetscaping described here will revive a community and encourage new investment. The master plan, illustrations, and images shown in this chapter give a progressive blueprint for Campbell Avenue to follow and grow into.

4.1 Road Diet & Master Plan Components

The transportation studies in Chapter 1.5 found that the new Odd Fellows Road interchange will reduce traffic on Campbell Avenue. The “road diet” described on page 13 calls to reduce Campbell Avenue from two vehicular travel lanes in each direction down to one in each direction with a center turn lane. Maintaining unnecessary travel lanes is impractical, especially when vacating lanes presents a unique opportunity to transform Campbell Avenue into the kind of place described in the vision on page 6. The reclaimed space can be rededicated for wider sidewalks, transit facilities, street trees, bike lanes, and a center median. In addition to being able to rededicate space for new uses, road diets dramatically improve vehicular safety by reducing the number of rear-end and side-swipe crashes, improving speed limit compliance, thus decreasing crash severity. Pedestrians and cyclists also have increased safety benefits from the reduction in vehicular speed and the provision of their new facilities described in this chapter.



SKETCH ILLUSTRATING HOW CAMPBELL AVENUE COULD TRANSFORM INTO A STREET THAT SERVES BOTH A NEIGHBORHOOD AND CITY

Center Median and Turning Lane. The new road configuration allows for a turning lane at key intersections with high levels of left turns and for a landscaped median when the turning lane is unnecessary. The median provides a number of benefits: it offers a refuge area for pedestrians crossing Campbell Avenue, helps calm traffic through an area of largely residential and neighborhood retail use, and adds an aesthetic appeal with the increased vegetation.

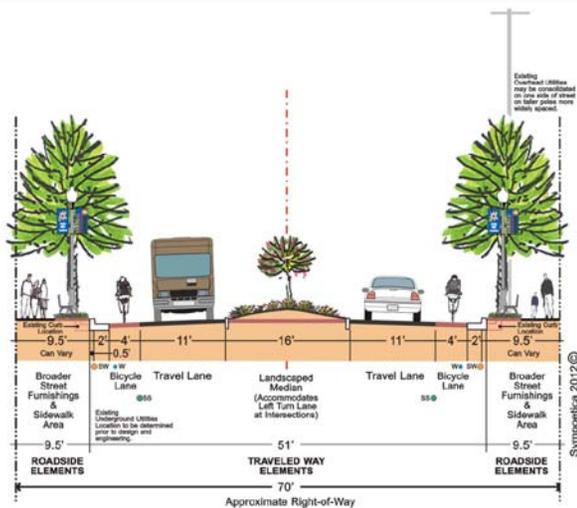
Right of Way. Campbell Avenue contains varying amounts of public right-of-way in which the road diet and other improvements can be constructed. The three scenarios below cover how the plan recommendations should be handled within existing right-of-way.



EXAMPLE OF POSSIBLE MEDIAN/TURNING LANE DIVIDER FROM CHARLOTTE, NC



EXAMPLE OF A POSSIBLE URBAN/STRUCTURAL MEDIAN FROM BUFFALO, NY

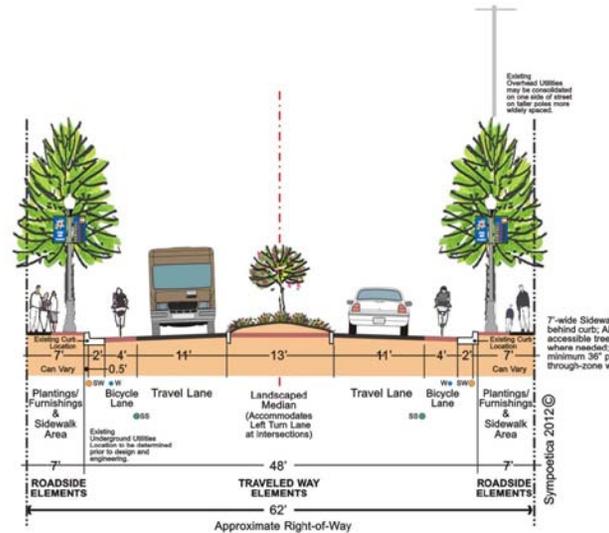


“Road Diet” Concept Illustration

Campbell Avenue

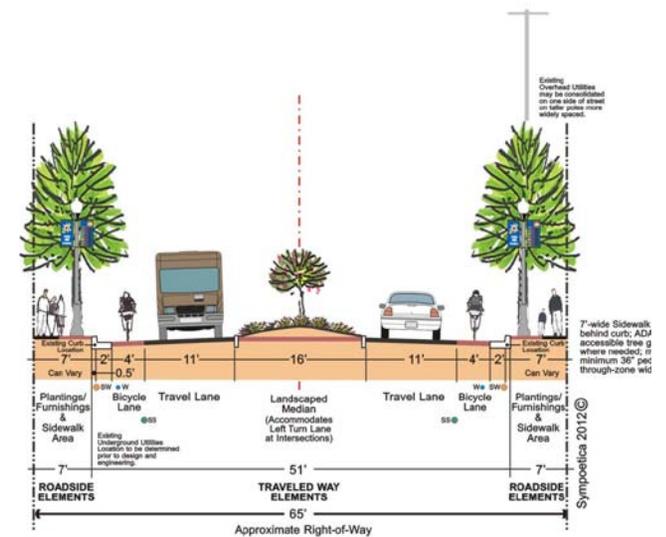
Note: This graphic is for illustrative purposes only. Actual cross-sectional treatment can vary to reflect specific field conditions. All dimensions are approximate.

Broad Right-Of-Way Condition



Note: This graphic is for illustrative purposes only. Actual cross-sectional treatment can vary to reflect specific field conditions. All dimensions are approximate.

Most Narrow Right-Of-Way Condition



Note: This graphic is for illustrative purposes only. Actual cross-sectional treatment can vary to reflect specific field conditions. All dimensions are approximate.

Narrow Right-Of-Way Condition

AVAILABLE RIGHT-OF-WAY VARIES ALONG CAMPBELL AVENUE, THESE THREE CROSS SECTIONS ILLUSTRATE HOW THE ROAD CONFIGURATION WILL VARY WITH AVAILABLE SPACE

Roundabouts. Specific details on roundabout design are in Chapter 3. The Campbell Avenue master plan shows two new roundabouts for the corridor:

- **City Gateway:** The Florida Avenue / Campbell Avenue intersection is a major gateway for visitors traveling into the larger city from US 460/29. A roundabout at this location provides an iconic entrance for visitors entering the city.
- **VUL Gateway:** A roundabout at Kemper Street / Old Campbell Avenue both reduces traffic conflicts at a highly dangerous intersection, and provides a gateway for Virginia University-Lynchburg (VUL). The greenspace surrounding the roundabout is an opportunity to highlight VUL's presence with an institutional lawn with great mountain views over the city.



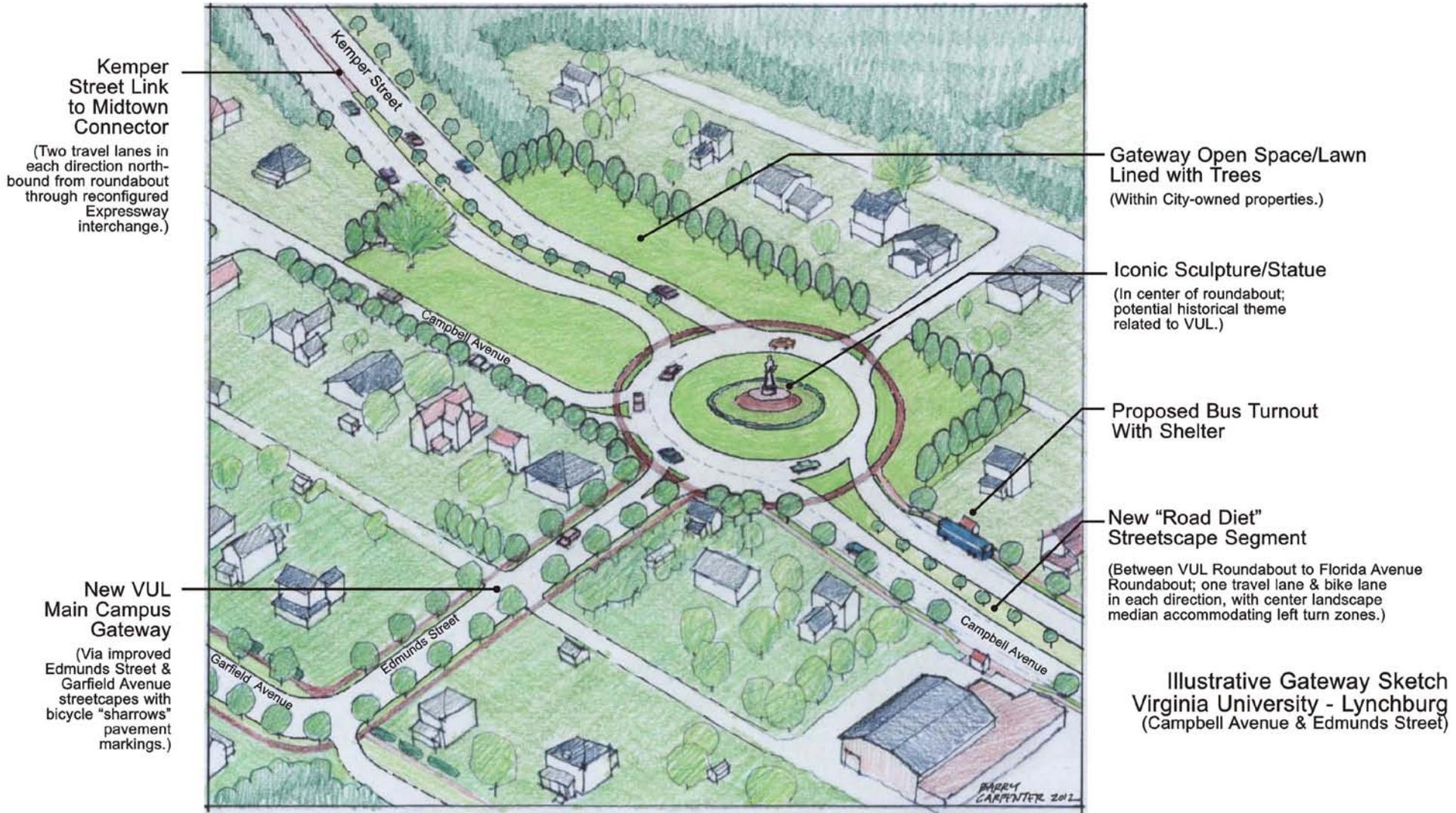
NORTHBOUND LOOK TOWARDS THE BLUE RIDGE MOUNTAINS AT THE VUL GATEWAY ROUNDABOUT



EXAMPLE OF ROUNDABOUT WITH PEDESTRIAN CONNECTIONS AND TRUCK APRON DESCRIBED IN CHAPTER 3



CITY GATEWAY ROUNDABOUT AT FLORIDA AVENUE



Note: November 28, 2012

This is an illustrative graphic in support of land use and concept planning only. It is not intended to represent the actual final location or design of proposed roundabout and roadway improvements.



VUL ROUNDABOUT AT EDMUNDS STREET

Sidewalks and Crosswalks. Current sidewalks along Campbell Avenue are narrow, deteriorating, missing crossing opportunities, and often lack a buffer placing pedestrians directly next to fast-moving traffic. This master plan dedicates space for wider sidewalks, a pedestrian buffer with street trees, and proposes new or enhanced signalized pedestrian crossings at Seabury Avenue, Fairview Avenue, and Mayflower Drive. Crosswalks would be added across all side streets, making walking along Campbell safe. Seabury and Fairview Avenue should have enhanced pedestrian connections as they lead to key existing and proposed walkable community facilities: Bass Elementary, a spur from the greenway system and Younger Park as indicated on the master plan.

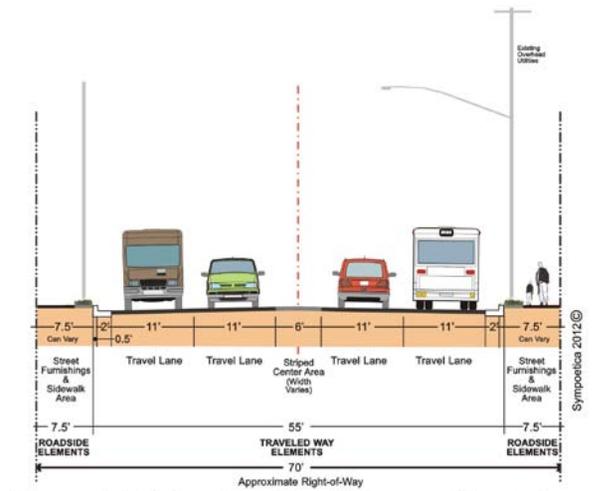
Bike Lanes. The master plan and illustrative cross sections show including four foot bike lanes on each side of Campbell Avenue. Bike lanes provide a healthy, cost-effective and safe option for traveling to destinations on Campbell Avenue. These lanes tie into the planned area wide greenway system and are one big step towards Complete Streets. This plan recommends a dark red colored surface for the bike lanes to clearly delineate the space for cyclists, encouraging cars not to use the space and helping cyclists feel comfortable traveling with vehicular traffic.



TYPICAL VUL GATEWAY STREETScape TREATMENT



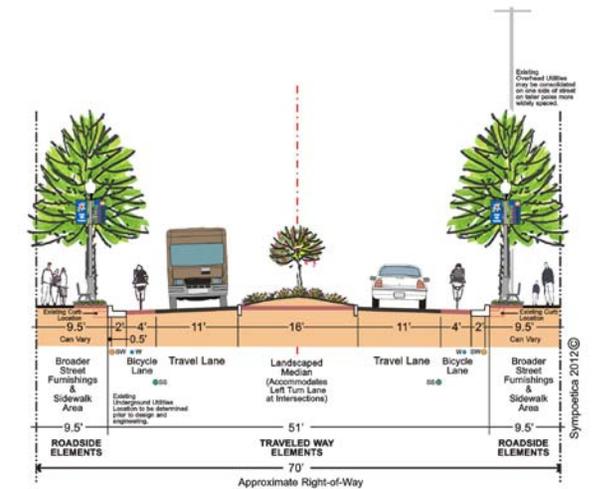
SAFE PEDESTRIAN CROSSING TREATMENT AT SEABURY AVENUE



“General Existing Conditions” Concept Illustration

Campbell Avenue

Note: This graphic is for illustrative purposes only. Actual cross-sectional treatment can vary to reflect specific field conditions. All dimensions are approximate.



“Road Diet” Concept Illustration

Campbell Avenue

Note: This graphic is for illustrative purposes only. Actual cross-sectional treatment can vary to reflect specific field conditions. All dimensions are approximate.

Greenway Connections. The master plan shows a number of connections from Campbell Avenue to the area-wide greenway system described in Chapter 3. Trails to the Fairview Heights Community Center, Fairview Avenue with historic Younger Park, and Bass Elementary School reach important public facilities. The plan also shows options for tying the trail system to VUL, aiding both neighborhood and student accessibility and connecting VUL buildings to each other.

Rail-Trail Connection. An abandoned railway line near VUL, presents an opportunity for a rail-trail, connecting Campbell Avenue to Kemper Street Station, the region's Amtrak Station, and the larger network of City trails.

Paper Streets. "Paper Streets" exist where the City of Lynchburg owns right-of-way, but an actual street was never constructed for a variety of reasons. A number of these exist in the Campbell Avenue area. The master plan suggests that one way to take advantage of this public asset is to create a "neighborhood street / trail connection." These could simply become trails to aid walkability in the neighborhood.

New Neighborhood Streets. Dashed black lines on the master plan indicate an extended neighborhood street network that will allow for new development and help vehicular connectivity, reducing demand on Campbell Avenue. These streets should continue the existing network of neighborhood streets and contain on-street parking, sidewalks, and street trees wherever possible.

Fairview Square Station. This area off of Florida Avenue is the site of one of the proposed mixed-use centers described in Chapter 3. The master plan suggests how infill buildings could be used on the site in a suburban retrofit and shows a new pedestrian/bicycle link from Campbell Avenue at Woodrow Street. The greenway system could tie in at this point and extending the street grid here would open existing commercially-zoned land for new development.

Infill. Buildings shown in orange on the master plan illustrate how and where new mixed use buildings can be used on the corridor. New buildings should be located close to the street with parking in the rear of the building and located at intersections and where the enhanced transit stops are located.



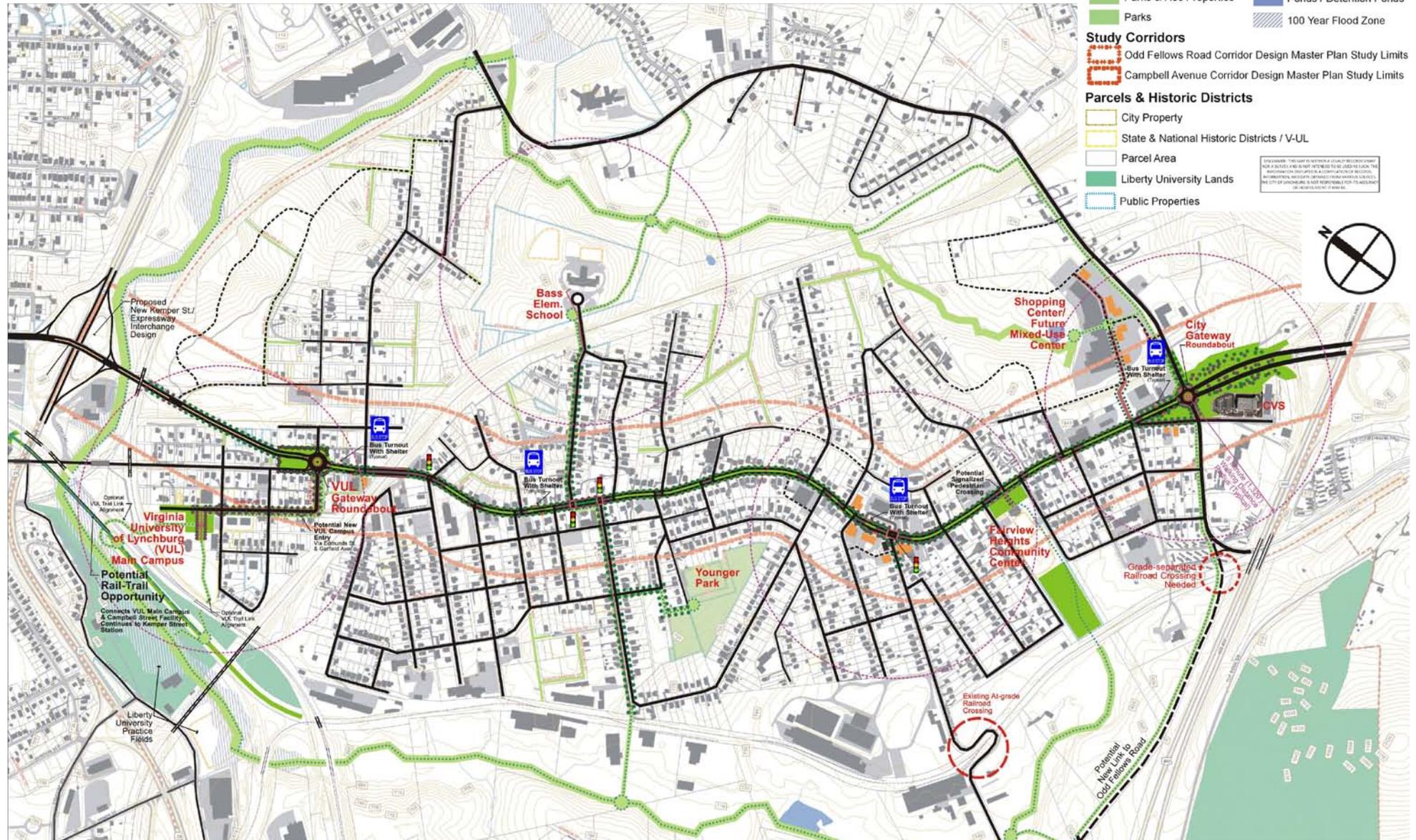
FORMER RAILWAY LAND IS OFTEN CONVERTED TO TRAILS AS WAS DONE WITH THE BLACKWATER CREEK TRAIL IN LYNCHBURG



A SHARROW CONTAINS THE ABOVE PAVEMENT MARKING, ASKING VEHICLES AND CYCLIST TO SHARE PAVEMENT SPACE

4.2 Master Plan

This page shows the master plan for all of Campbell Avenue. The following pages break the corridor down into three segments for further detail.



Legend

- Study Area
- Corporate Limit

Parks & Recreation	Hydrology
Athletic Area	Streams
Parks & Rec Properties	Ponds / Detention Ponds
Parks	100 Year Flood Zone

Study Corridors

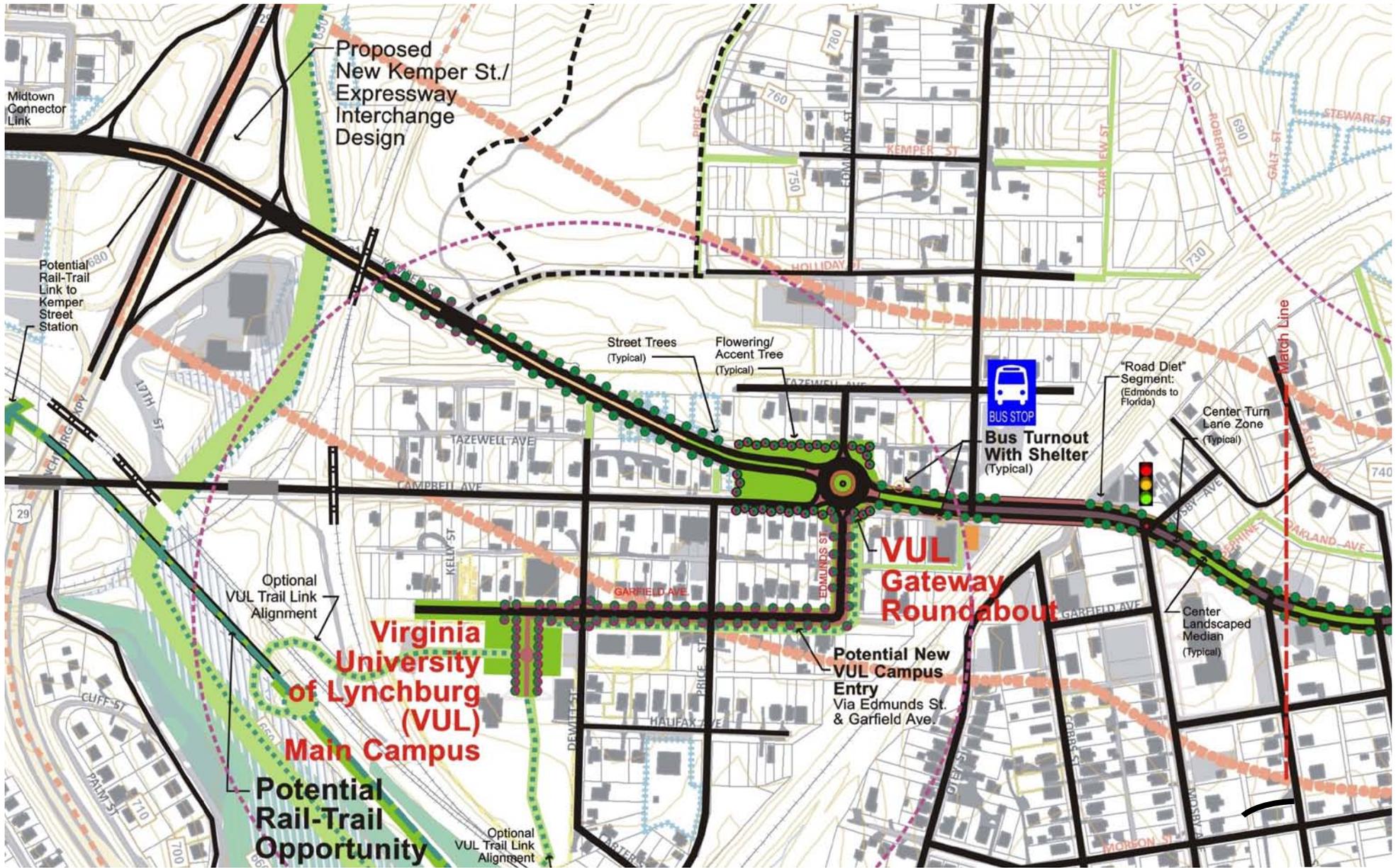
- Odd Fellows Road Corridor Design Master Plan Study Limits
- Campbell Avenue Corridor Design Master Plan Study Limits

Parcels & Historic Districts

- City Property
- State & National Historic Districts / V-UL
- Parcel Area
- Liberty University Lands
- Public Properties

ENGINEER: THIS MAP IS SETTING A QUALITY RECORD DRAWING FOR A STUDY. THE CLIENT AND USER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE DATA AND THE USER SHALL BE RESPONSIBLE FOR ITS USE. THE CITY OF LYNCHBURG IS NOT RESPONSIBLE FOR ITS LIABILITY OR MERCHANTABILITY.

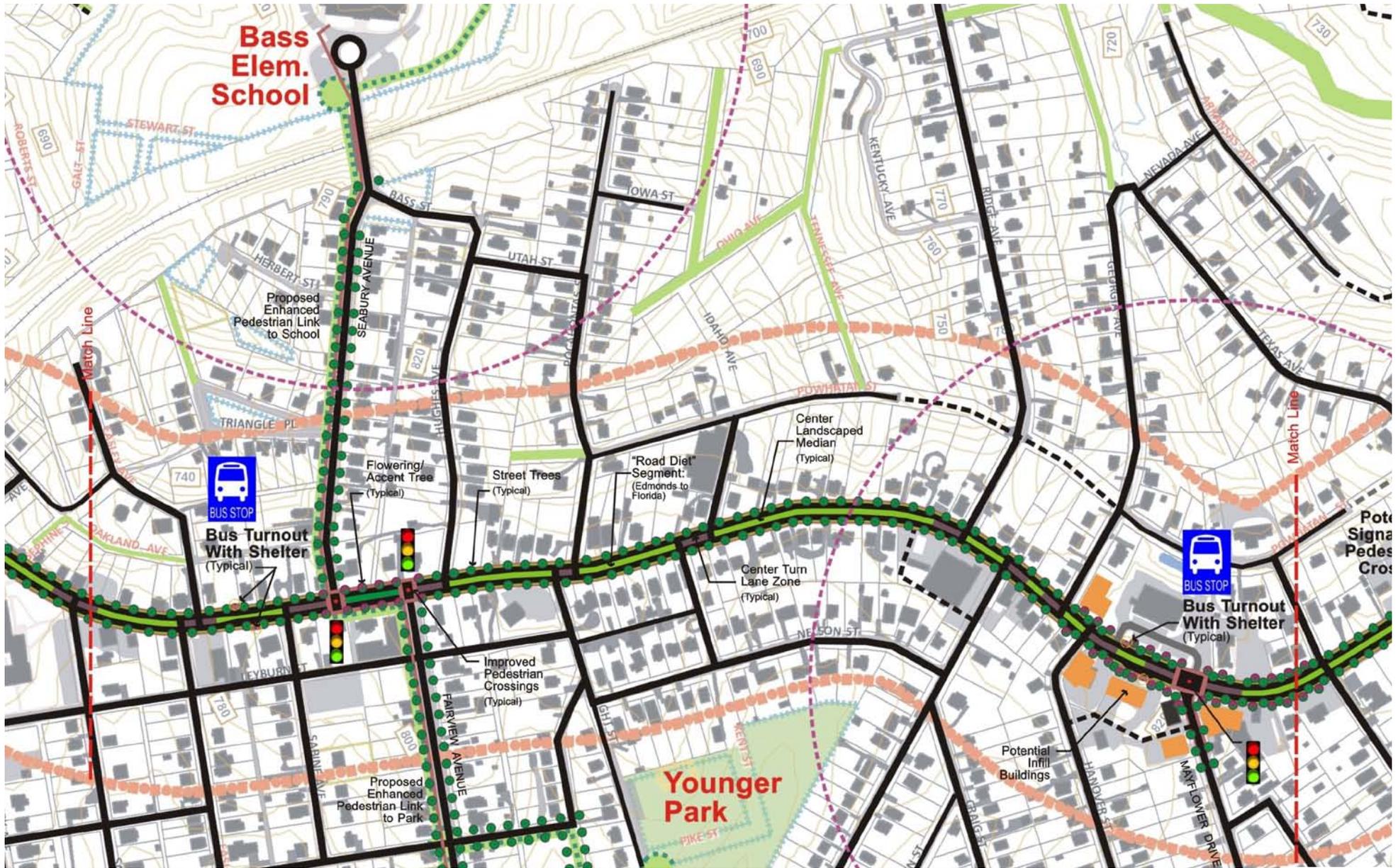
ENTIRE CAMPBELL AVENUE MASTER PLAN



NORTHERN SEGMENT CAMPBELL AVENUE CORRIDOR DESIGN MASTER PLAN

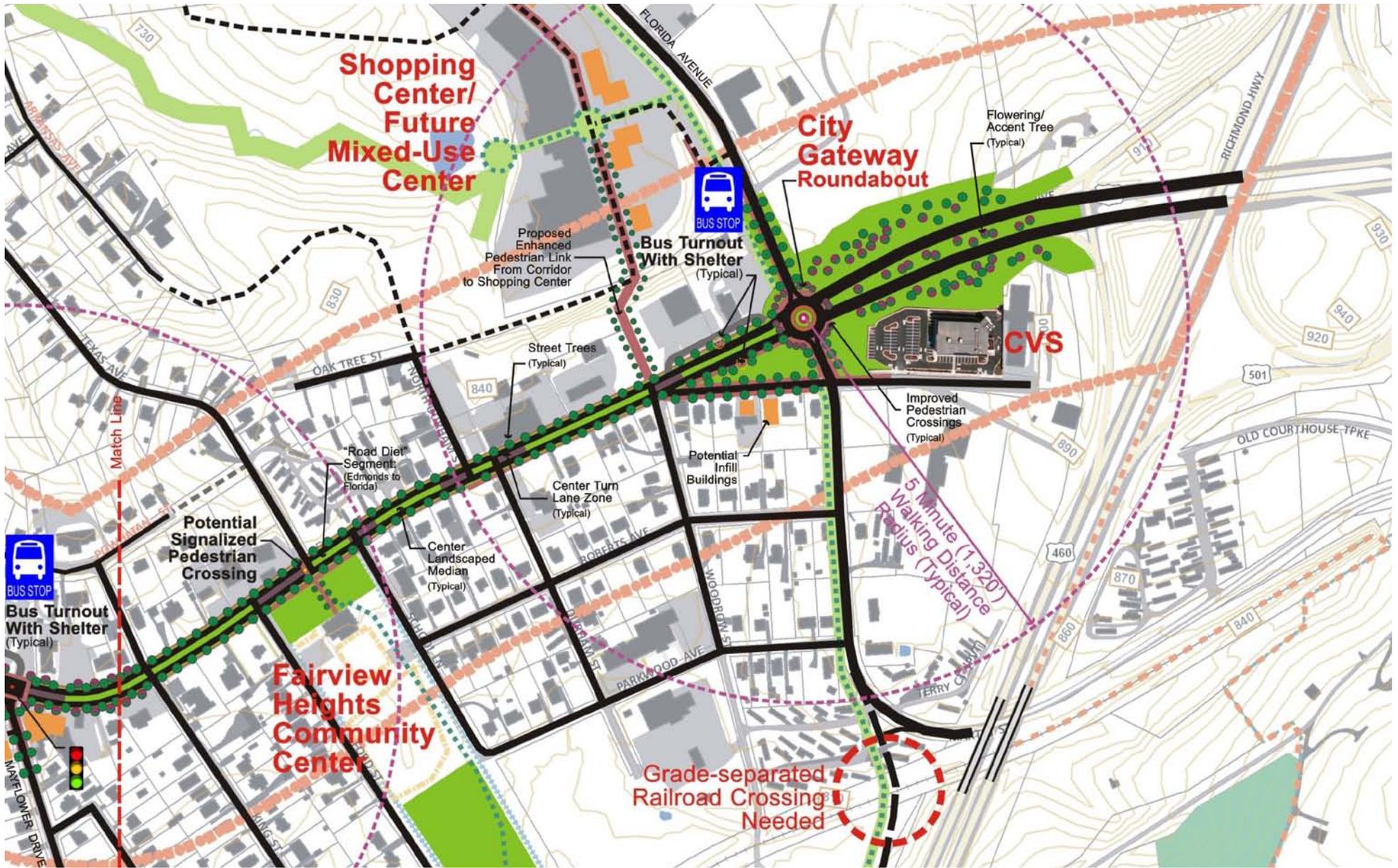
ORANGE SEGMENT OF LINE SHOWS LOCATION OF IMAGE ON CAMPBELL AVENUE





CENTRAL SEGMENT CAMPBELL AVENUE CORRIDOR DESIGN MASTER PLAN





SOUTHERN SEGMENT CAMPBELL AVENUE CORRIDOR DESIGN MASTER PLAN

ORANGE SEGMENT OF LINE SHOWS LOCATION OF IMAGE ON CAMPBELL AVENUE



4.3 Furnishings

Public furniture not only provides relatively basic public amenities but also helps define a city and neighborhood's character. The selection on this page reflects both the desired character for Campbell Avenue and the importance of cost effectiveness. See Chapter 5.3 for information on bike racks and banners.



STREET LIGHTS	
Manufacture	Holophone
Item #	Washington / North Yorkshire
Description	Acrylic Washington Postlite SS Luminaire on a North Yorkshire Decorative Aluminum Post
Color	Black

NOTES: PEDESTRIAN LIGHTS SHOULD ALTERNATE WITH THE SPACING OF STREET TREES. TALLER ROADWAY LIGHTING POLES SHOULD BE PLACED AT WIDER INTERVALS AND CAN ALSO BE USED FOR ATTACHING LOWER PEDESTRIAN LIGHTS



TRASH RECEPTACLES	
Manufacture	Victor Stanley
Item #	S-42
Description	Ironsites Series 36-Gallon Litter Receptacle with Black Plastic Liner & S-2 Dome Lid
Color	Black

NOTES: BUS SHELTERS, BENCHES, BIKE RACKS AND TRASH RECEPTACLES SHOULD BE CLUSTERED AT EACH OF THE DESIGNATED TRANSIT STOPS



BUS SHELTER	
Manufacture	Brasco International
Item #	Techline-TL710
Description	Powder Coated Aluminum Structure, Standing Seam Hip Roof
Color	Black Green – RAL 6012 Copper Penny

NOTES: BUS SHELTERS, BENCHES, BIKE RACKS AND TRASH RECEPTACLES SHOULD BE CLUSTERED AT EACH OF THE DESIGNATED TRANSIT STOPS



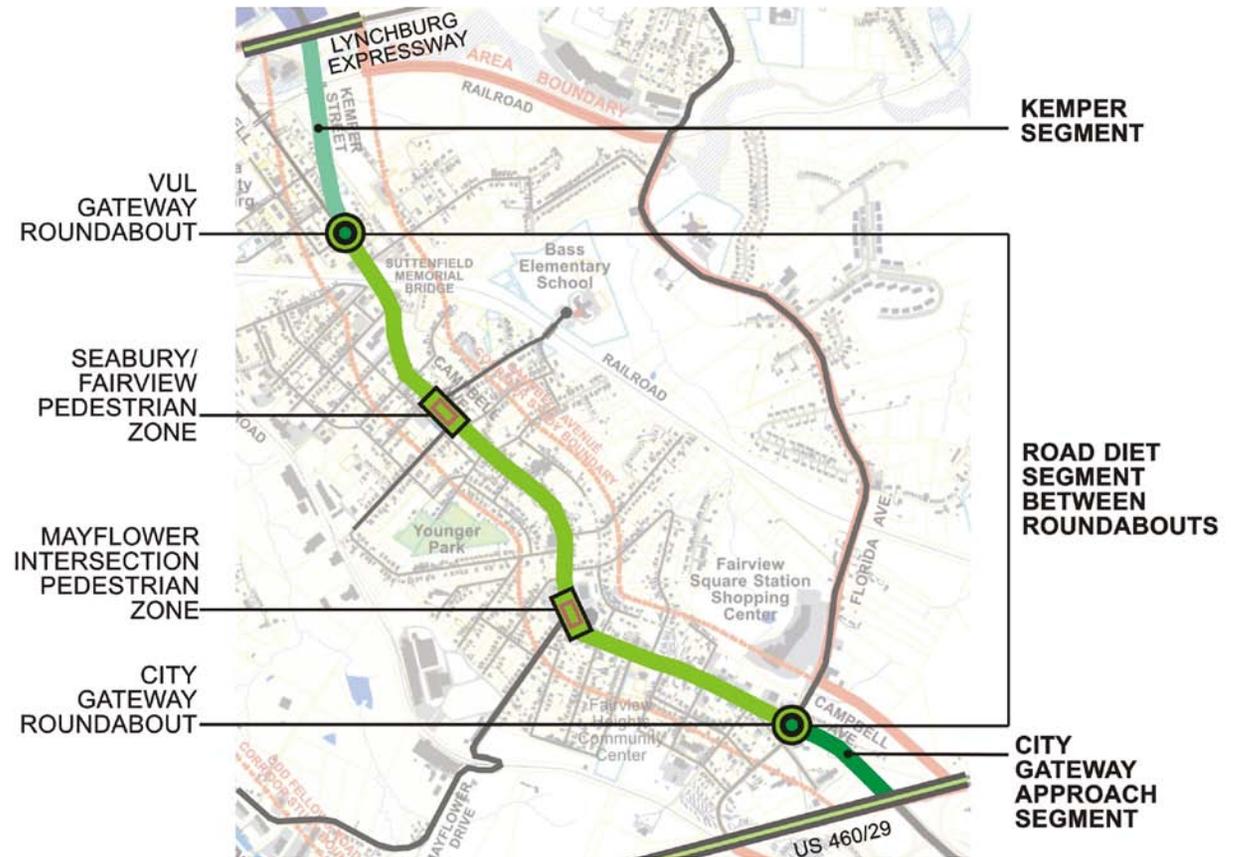
BENCHES	
Manufacture	WAUSAU Tile
Item #	MF2203-8
Description	73" x 26" x 34" Flat Steel Straight Back Bench W/Center Arm Rest
Color	Black

NOTES: BUS SHELTERS, BENCHES, BIKE RACKS AND TRASH RECEPTACLES SHOULD BE CLUSTERED AT EACH OF THE DESIGNATED TRANSIT STOPS

4.4 Landscaping

Thoughtfully designed streetscape plantings can provide structure and distinctive character to the urban roadway environment while providing needed shade and environmental benefits to the neighborhoods and districts served.

The proposed theme for streetscape plantings along the Campbell Avenue corridor is one of an urban street which is both a primary City gateway and a local-serving collector for neighboring residential and business uses. In this regard, the key characteristics are unifying and defining the corridor visually, and creating a high quality complete street environment. To this end, the landscape elements within the center median and roadside zones typically are to be arranged in an orderly, more formal fashion, with the plantings reinforcing the roadway's functions; however, the city gateway segment between US 460/29 and Florida Avenue should feature a more informal, parkway landscape treatment. Special attention should be paid to the landscape design for the key pedestrian zones at the Mayflower Drive intersection and the pedestrian crossing zone between Seabury and Fairview Avenues. The accompanying map and table offer more specific landscape character guidance for the key streetscape elements of this street; here the entire corridor is described as a series of unique segments, roundabouts and intersections.



NOTE:
FINAL STREETSCAPE
PLANTINGS TO BE
DETERMINED BY
CITY ARBORIST AND
HORTICULTURALIST IN
CONSULTATION WITH
CITY PLANNER.

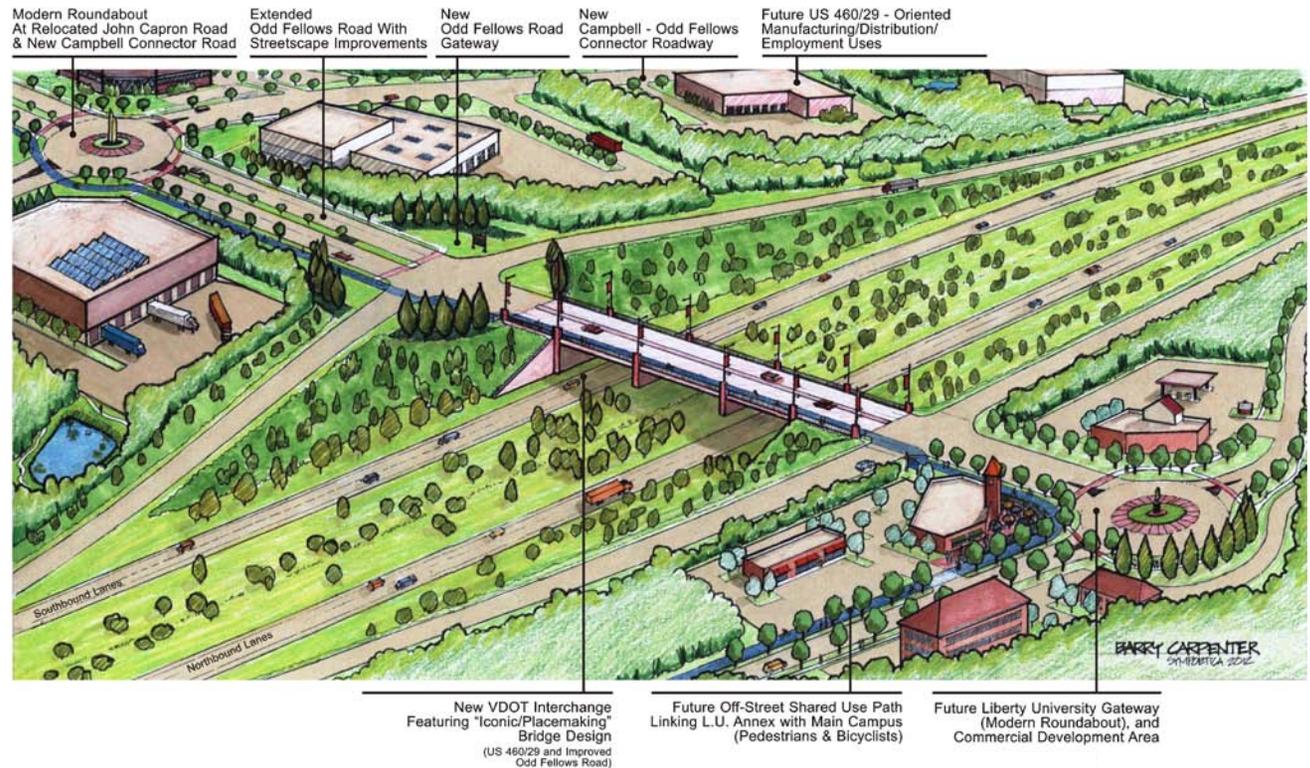
	Kemper Segment	Road Diet Segment	City Gateway Approach Segment	Roundabouts	Special Pedestrian Zones/Intersections
Street Trees:					
Function	Corridor Definition	Corridor Definition Alignment Reinforcement Pedestrian Safety	Corridor Definition	Spatial Definition Placemaking	Pedestrian Safety Placemaking
Planting Pattern	Regular Spacing Opposing Both Sides Maintain Existing Wooded Edge	Regular Spacing Opposing / Both Sides Adjust Spacing for curves & curb cuts	Informal Pattern Parkway Treatment Naturalistic Clusters	Regular Spacing Opposing/Both Sides Flower & Leaf color attributes	Regular Spacing Opposing/Both Sides Flower & Leaf color attributes
Mature Crown Spread	Intermediate (35'-50')	Narrow (20'-35')	Intermediate (35'-50') to Wide (50'-75')	Narrow (20'-35')	Very Narrow (> 20')
Mature Height	Varies by Species	Varies by Species Maintain Min. 10' Clearance from Overhead Lines	Varies by Species	Varies by Species	Varies by Species Maintain Min. 10' Clearance from Overhead Lines
Spacing	30'-50'	20'-40'	40'-80' (Clusters)	Varies by geometry of roundabout	Varies by geometry of intersection
Median/Center Island Plantings					
Ornamental/Flowering Trees	Yes	Yes	Yes	Yes	Yes
Low Shrubs	No	No	Yes	Yes	No
Ground Covers	No	No	No	Yes	Yes
Lawn	Yes	Yes	Yes	Yes	Yes

5.0 Odd Fellows Road Master Plan

This chapter illustrates how Odd Fellows Road can be redesigned with the planned extension and new interchange at US 460/29 in order to attract new use and accommodate new traffic along the corridor. The interchange design and street extension will transform Odd Fellows Road and create an important new gateway to a major (and growing) employment area. This master plan shows how to develop this “new” Odd Fellows Road to meet the vision on page 6 and help attract important new investment.

5.1 Extension & Master Plan Components

VDOT’s preliminary designs for the new interchange connect US 460/29 north by extending existing Odd Fellows Road and south to Top Ridge Road within Liberty University property. The Odd Fellows Road connection will draw new levels of traffic, making upgrades to the existing roadway necessary. Upgrades include the addition of curb and gutter and two (12’) travel lanes to accommodate all types of vehicles, particularly large trucks serving area industrial use. A center median with flowering trees and colorful groundcover plantings will provide a high quality image, giving the area an identity, and act as a traffic control element within the traveled way. Outside of the travelway, within right-of-way, a street furnishings zone will accommodate new directional signage, street trees, and street and roadway lighting. Behind the furnishings zone, new sidewalks and transit stop facilities promote additional modes of transit and serve more local users. On the south side of the new street, a major shared use path can accommodate both



5.0 ILLUSTRATIVE SKETCH OF THE ODD FELLOWS ROAD US 460/29 INTERCHANGE. ROUNDABOUTS MANAGE TRAFFIC AND PROVIDE GATEWAYS TO NEW DEVELOPMENT

pedestrians and bicyclists. A number of illustrative cross-sections display how this configuration can work with the variable right-of-way on Odd Fellows Road.



ROUNDAABOUT AT ALBERT LANKFORD DRIVE / MURRAY PLACE

Roundabouts. This master plan shows four new roundabouts for the Odd Fellows Road corridor. They act as safer and iconic alternatives to signalized intersections and will be designed to accommodate large trucks. More information for roundabout design can be found in Chapter 3. Each roundabout serves a unique purpose:

- **Albert Lankford Drive and Murray Place:** This large roundabout will be oval in shape to accommodate the current alignments of these two streets. The roundabout will be the focal element for future mixed-use development in the surrounding area.

- **Mayflower Drive:** A major roundabout is proposed at this key intersection as it will help handle left turns more efficiently.
- **John Capron Road (Realigned):** John Capron Road will be realigned to meet the proposed connector road linking Odd Fellows Road north to Campbell Avenue. This realignment is advantageous in that it moves the current John Capron intersection on Odd Fellows further from the ramps at the new US 460/29 interchange.
- **Top Ridge Road:** This roundabout will act as a major gateway to Liberty University campus and serve as a focal element for a proposed cluster of new retail, restaurant and lodging uses.

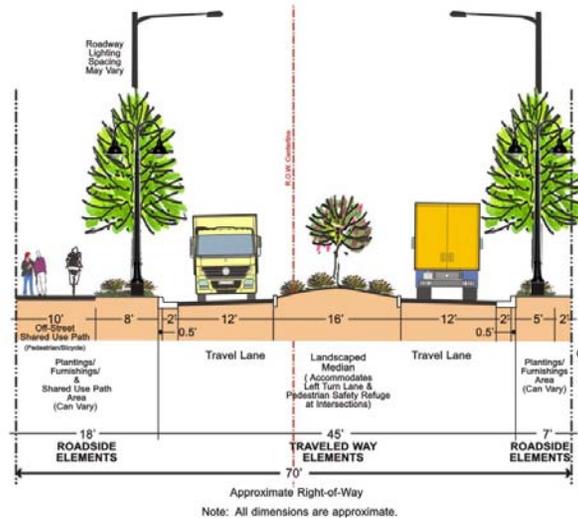


ROUNDAABOUT DESIGNED TO HANDLE PEDESTRIAN, VEHICULAR, AND TRUCK TRAFFIC

Shared Use Path. The corridor plan shows a 10 foot shared use path from a new roundabout proposed at Albert Lankford Drive and Murray Place south along Odd Fellows Road to the new roundabout on Liberty University (LU) property. The path links LU off-campus housing and proposed mixed use development in the Albert Lankford area to the new LU roundabout and potential campus growth area at the terminus of Odd Fellows Road. The path can then extend south to connect to the main campus via an improved Top Ridge Road.

Bridge Replacement. Due to structural issues, the existing railroad bridge overpass between Mayflower Drive and Murray Place will need to be replaced. When this routine replacement occurs, the new facility should accommodate wider travel lanes, a pedestrian sidewalk on the northeast side, and the shared use path on the southwest.

New Roads. Black dashed lines on the master plan mark a new grid of streets around Odd Fellows Road. These new streets open land for new employment uses. They should be designed as industrial park roads with curb and gutter, planting strips, pedestrian and bicycle facilities, and possible on street parking.



Future Roadway Concept / Illustrative Cross-Section



EXAMPLE OF SHARED USE PATH



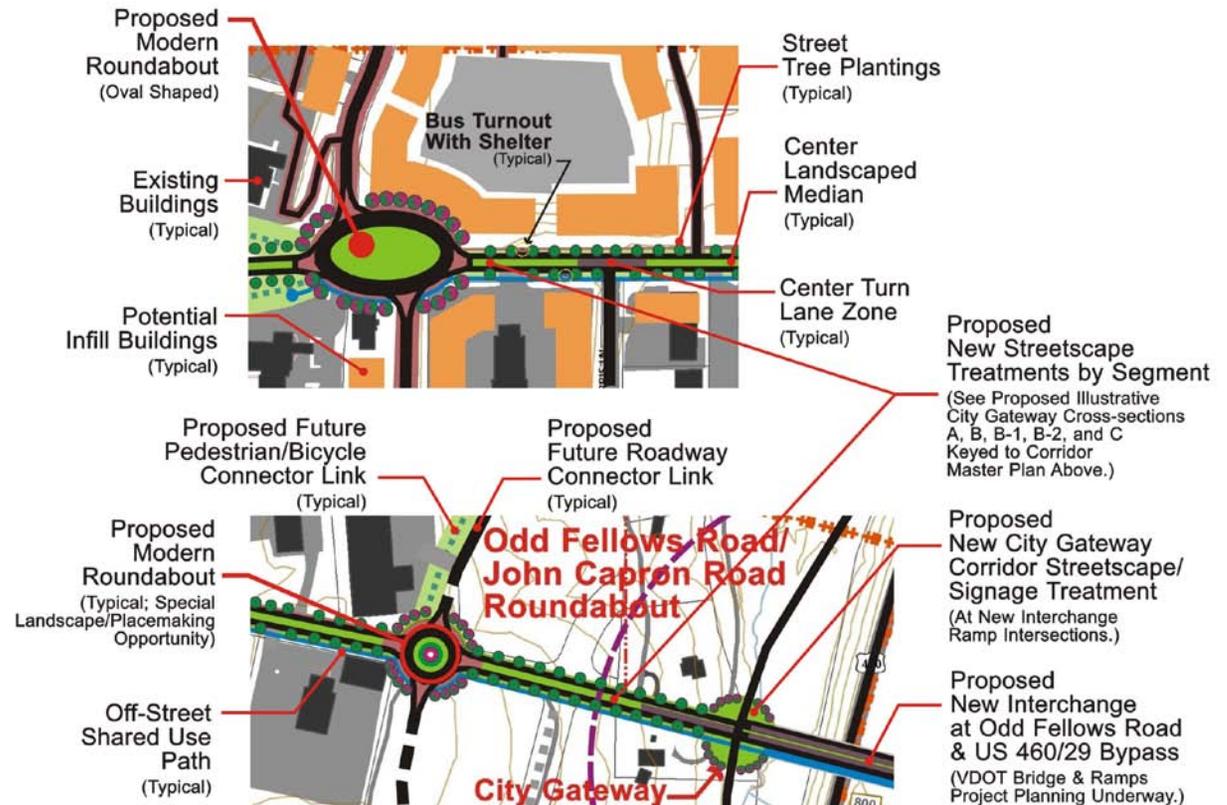
INDUSTRIAL PARK WITH LANDSCAPING

Wayfinding. Wayfinding signage for the area will give the corridor a new identity as a major employment area and help with navigation to large scale destinations.

Mixed-Use Center. The master plan shows a major mixed-use center around the Albert Lankford / Murray Place roundabout, where many of the surrounding properties are owned either by Genworth Financial or Liberty University, both growing entities. New employment and student housing infill development should complement and support the existing retail, restaurant, employment and student housing uses, particularly those which are currently zoned for non-residential uses. Buildings should 1) be compact low- and mid-rise with retail, restaurant and service uses on the street level, 2) place parking in the rear in landscaped surface lots or tucked under the new buildings when compatible with the landform, 3) be “built to the sidewalk,” and 4) feature “permeable” building fronts (no blank walls). The architectural styles may vary but the scale, massing and setbacks of the primary infill structures should be compatible with one another; buildings should have vertically distinct components, such as a “base level” on the street, a middle set of 2 to 3 floors above, and a clear “top” such as a cornice line or articulated parapet wall. Pedestrian walks, plazas, street trees, furnishings and other amenities should be incorporated into the streetscape design, with all blocks connected by safe street crossings. Bicyclists will be afforded easy access to the shared use path link to the Liberty University campus as well as to bicycle parking facilities. Unified master plans with sets of guidelines governing design and implementation are recommended for large area infill projects.

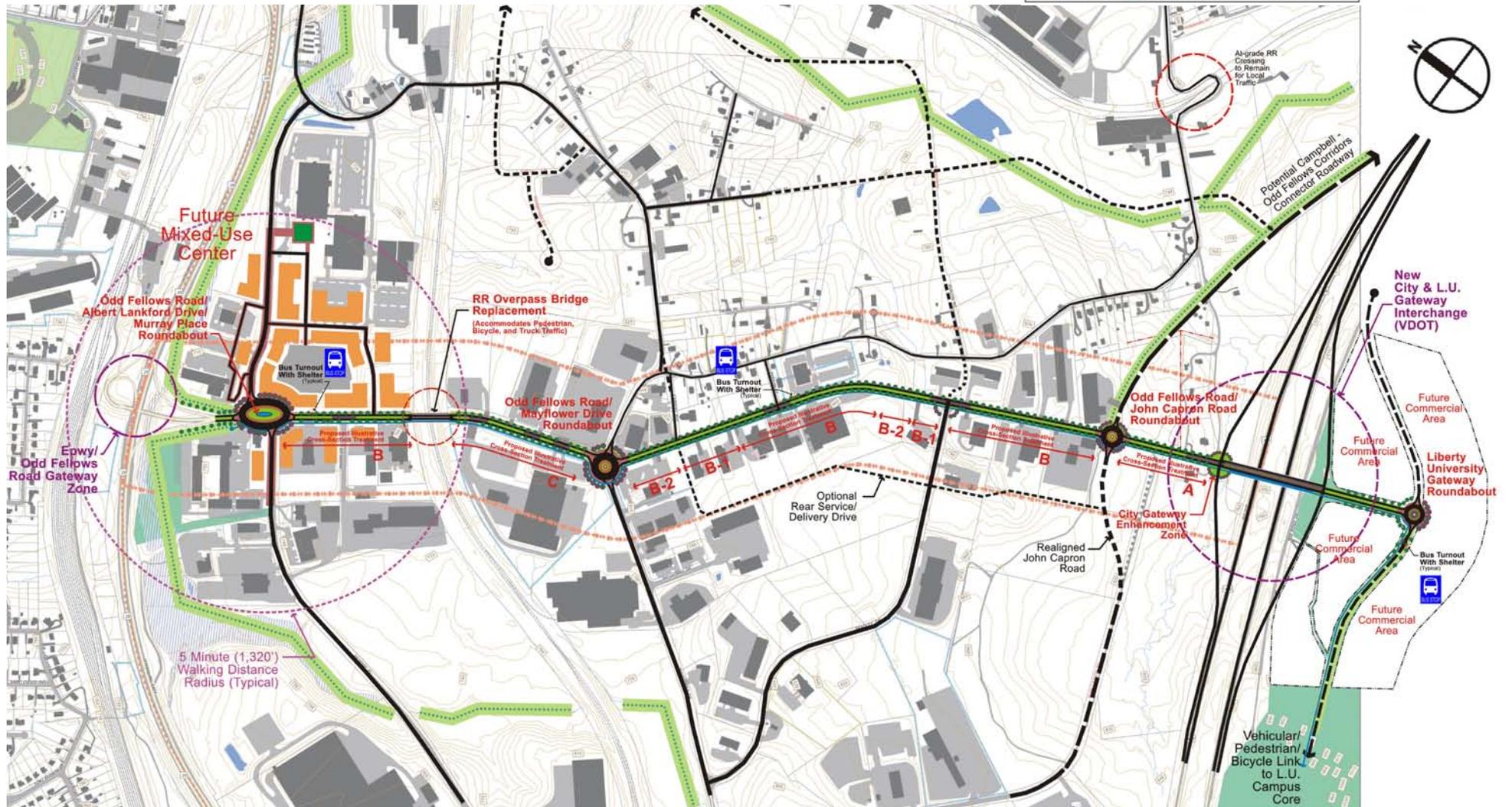


EXAMPLE OF POTENTIAL WAYFINDING FOR ODD FELLOWS ROAD



5.2 Master Plan

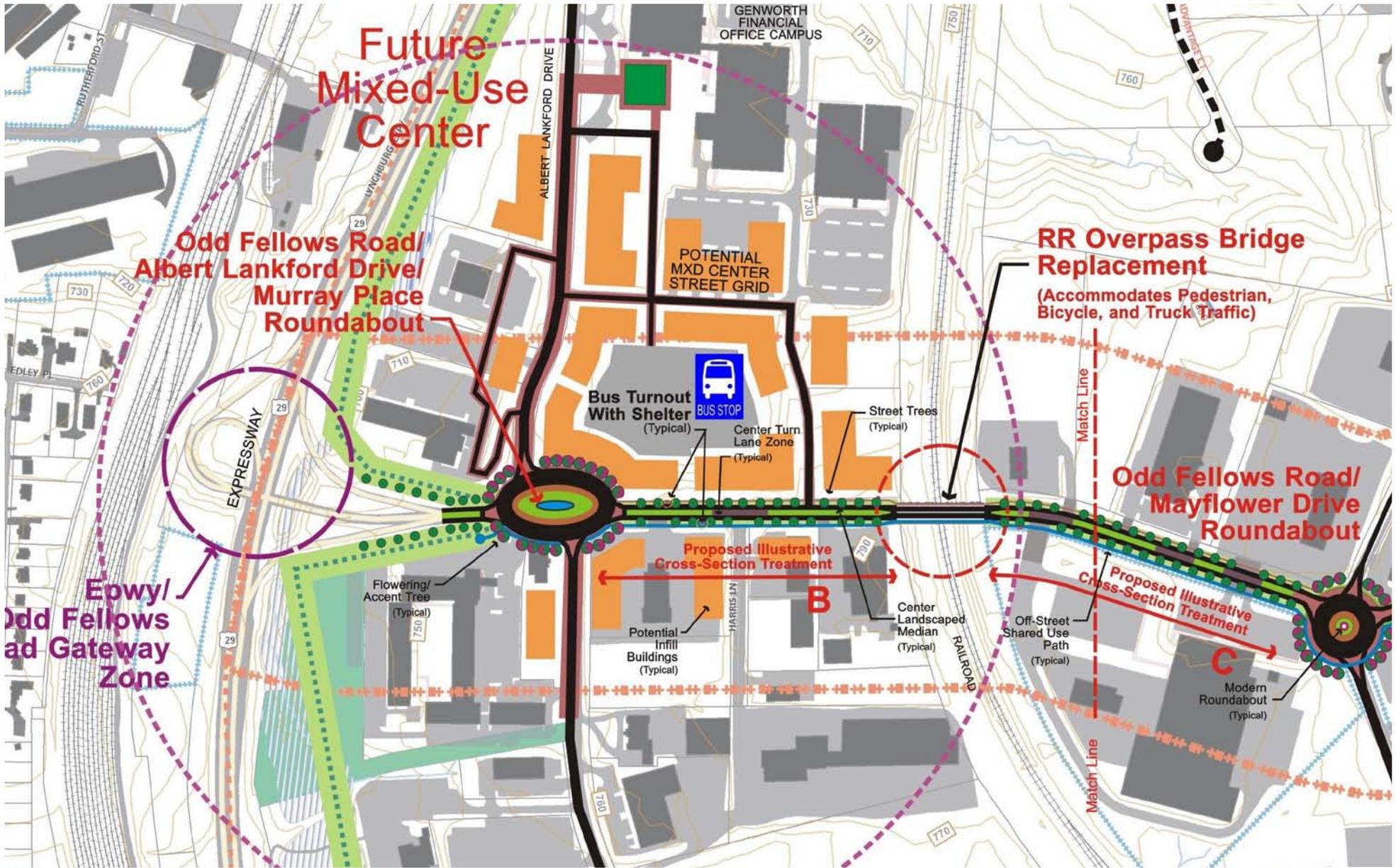
The following page shows the entire Odd Fellows Road master plan and the pages immediately following break the area down into three segments.



Legend			Key:
Street Layers	Parks & Recreation	Hydrology	--- Potential Street Connection
Highway	Athletic Area	Streams	--- Potential Neighborhood Street/Trail Connection
Major Arterial	Parks & Rec Properties	Ponds / Detention Ponds	--- Potential Greenway Trail Opportunity
Minor Arterial	Parks	100 Year Flood Zone	--- Bridge Over Railroad
Collector			--- Railroad Bridge/Trestle
Local			
Railroads			
Planimetrics	Study Corridors	Parcels & Historic Districts	
Paved Parking	Odd Fellows Road Corridor Design Master Plan Study Limits	City Property	
Structures	Campbell Avenue Corridor Design Master Plan Study Limits	State & National Historic Districts / V-UL	
Sidewalk		Parcel Area	
Paved Roadway		Liberty University Lands	
Driveway		Public Properties	

Date:
8/30/12
10/22/12 Rev
11/2/12 Rev
11/29/12 Rev

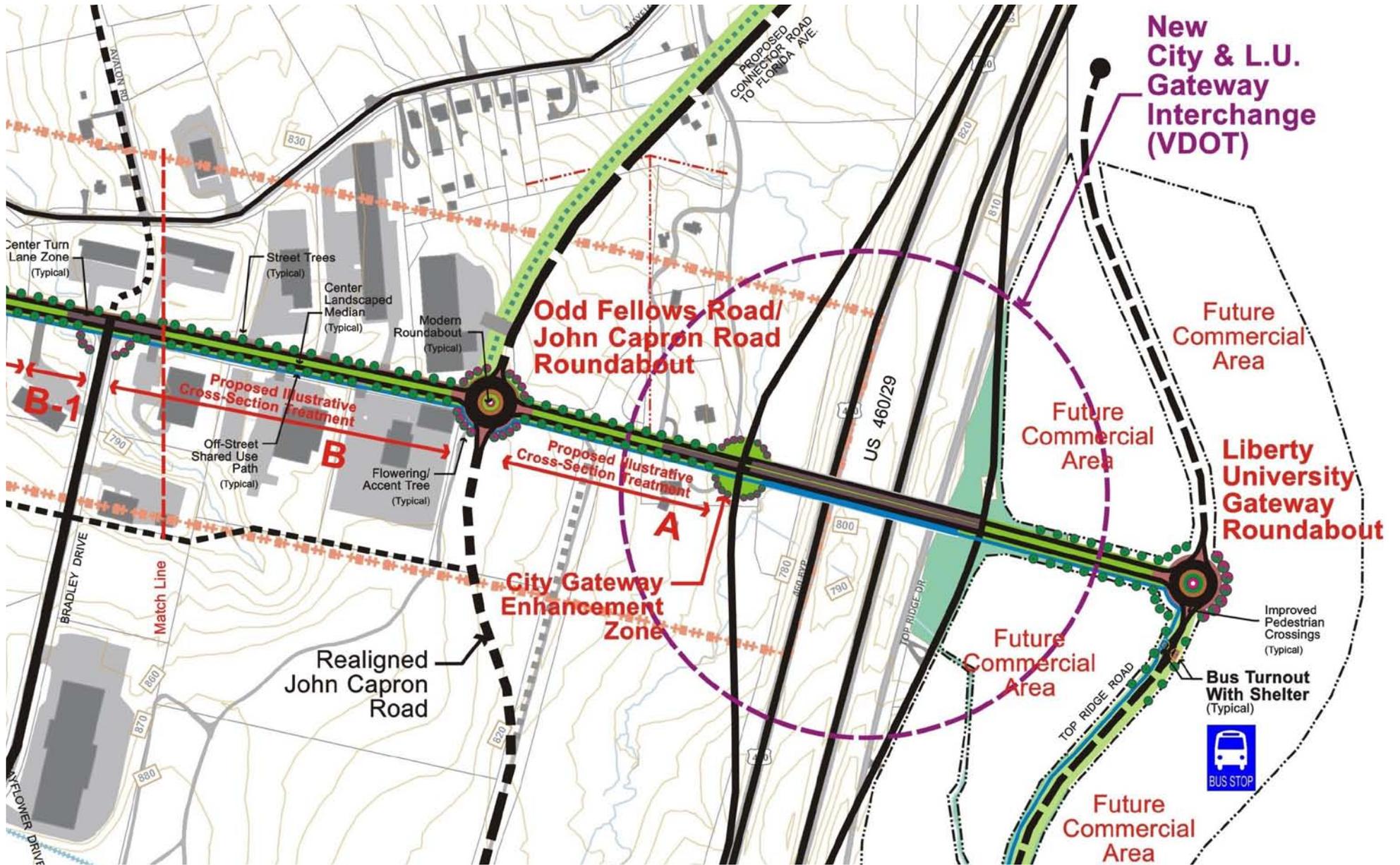
ODD FELLOWS ROAD MASTER PLAN



ODD FELLOWS ROAD MASTER PLAN, NORTHERN SEGMENT

ORANGE SEGMENT OF LINE SHOWS LOCATION OF IMAGE ON ODD FELLOWS ROAD



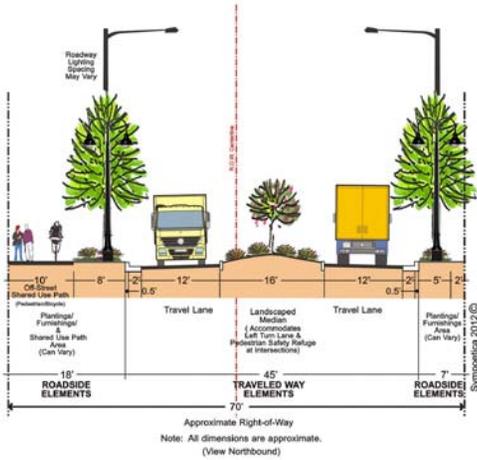


ODD FELLOWS ROAD MASTER PLAN, SOUTHERN SEGMENT

ORANGE SEGMENT OF LINE SHOWS LOCATION OF IMAGE ON ODD FELLOWS ROAD



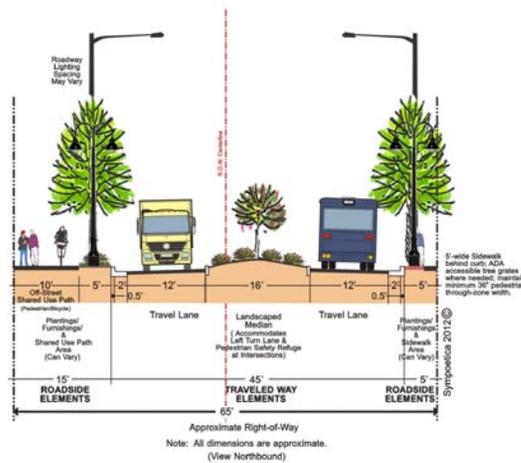
A City Gateway Segment A



KEY FEATURES:

1. A 16'-wide landscaped median with left turn capacity and pedestrian refuge.
2. Two 12'-wide travel lanes.
3. A 10'-wide off-street shared-use path (west side) in lieu of on-street bicycle lanes; no sidewalk on east side in this segment.
4. Opportunity for street trees, lighting & signage within right-of-way.
5. Right-of-way may vary. This option illustrates a 70'-wide R.O.W.

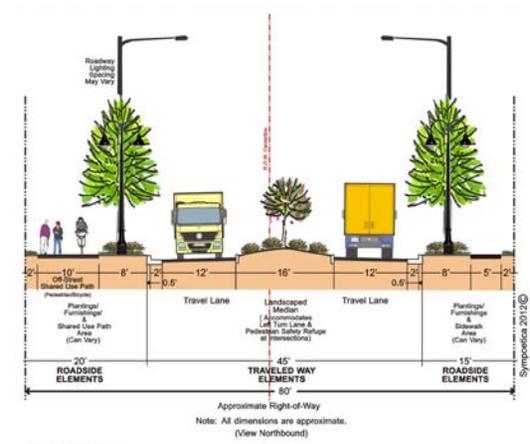
B-1 City Gateway Segment B-1



KEY FEATURES:

1. A 16'-wide landscaped median with left turn capacity and pedestrian refuge.
2. Two 12'-wide travel lanes.
3. A 10'-wide off-street shared-use path (west side) in lieu of on-street bicycle lanes; 5'-wide sidewalk/furnishings zone on east side featuring tree grates flush with sidewalk and 36" minimum sidewalk clearance.
4. Opportunity for street trees, lighting & signage within right-of-way.
5. Right-of-way may vary. This option illustrates a 65'-wide R.O.W.

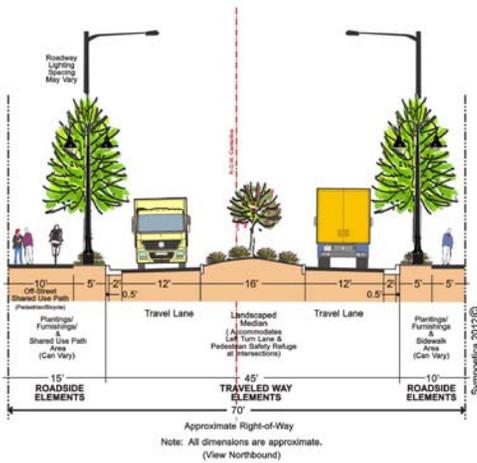
C City Gateway Segment C



KEY FEATURES:

1. A 16'-wide landscaped median with left turn capacity and pedestrian refuge.
2. Two 12'-wide travel lanes.
3. A 10'-wide off-street shared-use path (west side) in lieu of on-street bicycle lanes; A 5'-wide sidewalk on east side in this segment.
4. Opportunity for street trees, lighting & signage within right-of-way.
5. Right-of-way may vary. This option illustrates an 80'-wide R.O.W.

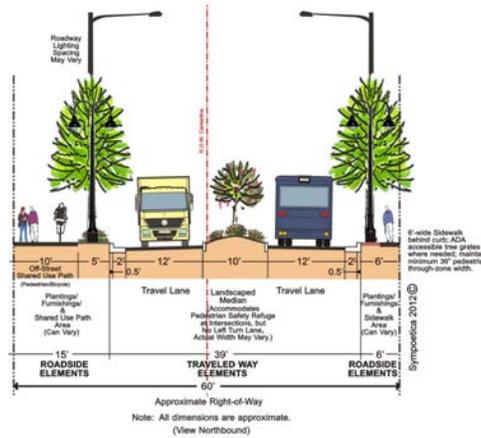
B City Gateway Segment B



KEY FEATURES:

1. A 16'-wide landscaped median with left turn capacity and pedestrian refuge.
2. Two 12'-wide travel lanes.
3. A 10'-wide off-street shared-use path (west side) in lieu of on-street bicycle lanes; 5'-wide sidewalk on east side.
4. Opportunity for street trees, lighting & signage within right-of-way.
5. Right-of-way may vary. This option illustrates a 70'-wide R.O.W.

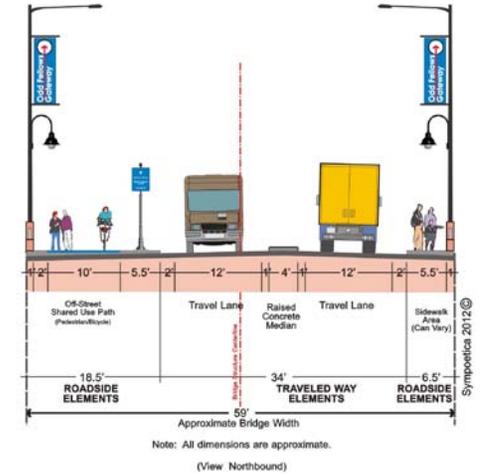
B-2 City Gateway Segment B-2



KEY FEATURES:

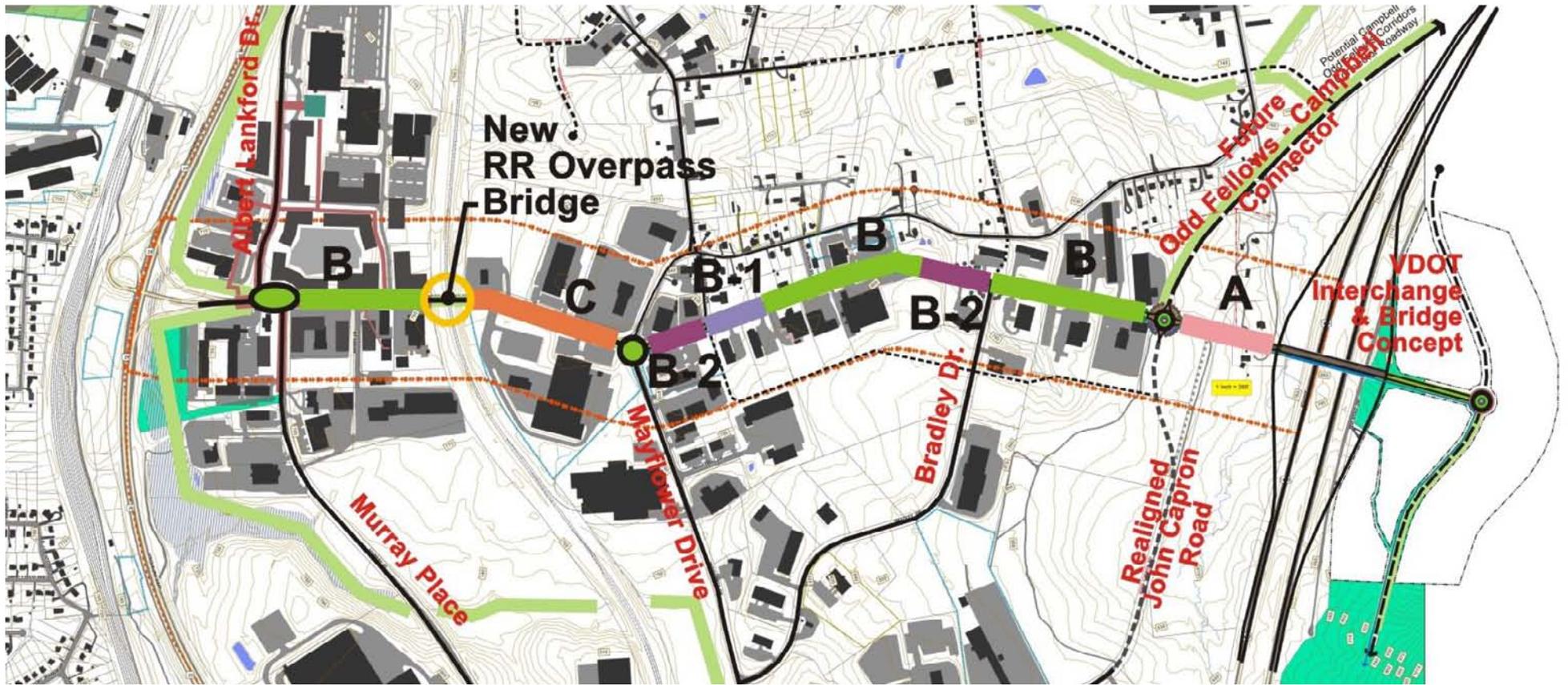
1. A variable width landscaped median of (10' maximum width) with pedestrian refuge, but no left turn lane.
2. Two 12'-wide travel lanes.
3. A 10'-wide off-street shared-use path (west side) in lieu of on-street bicycle lanes; 6'-wide sidewalk/furnishings zone on east side featuring tree grates flush with sidewalk and 36" minimum sidewalk clearance.
4. Opportunity for street trees, lighting & signage within right-of-way.
5. Right-of-way may vary. This option illustrates a 60'-wide R.O.W. condition.
6. Note that northbound traffic from the intersection at Bradley Drive will need to travel around the proposed roundabout at Mayflower Drive, then proceed southbound in order to make turns into properties on the west side of Odd Fellows Road in this segment.

RR Bridge Railroad Overpass Bridge Concept



KEY FEATURES:

1. 12'-wide travel lanes (2) with 4'-wide raised concrete median.
2. Off-street shared-use path (west side) in lieu of on-street bicycle lanes within broader raised concrete zone which accommodates "safety" and signage zones. Bridge features crash-tested ornamental railing with view-through capability.
3. 5.5'-wide sidewalk on east side.
4. Overhead roadway and pedestrian lighting on ornamental poles; accommodates placemaking banners on light poles.
5. Approximate bridge width is 68'. Can be accommodated within existing right-of-way.



SECTION LOCATION MAP: SEGMENT LABEL DENOTES WHICH CROSS SECTION FROM THE PREVIOUS PAGE SHOULD BE USED

5.3 Furnishings

Odd Fellows Road trash receptacles, benches, and bus shelters should be the same as on Campbell Avenue, however street lights vary as this is a newer area of the city. Bike racks should be included on both corridors, especially at major destinations. Banners can be included to highlight an area's identity. Bollards may be necessary to protect pedestrian zones. *See Chapter 4.3 for information on trash receptacles, benches and bus shelters for Odd Fellows Road.*



BIKE RACKS

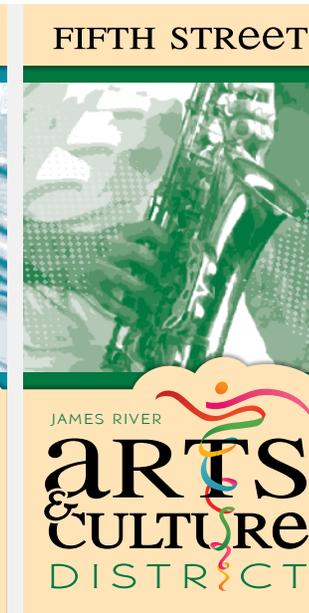
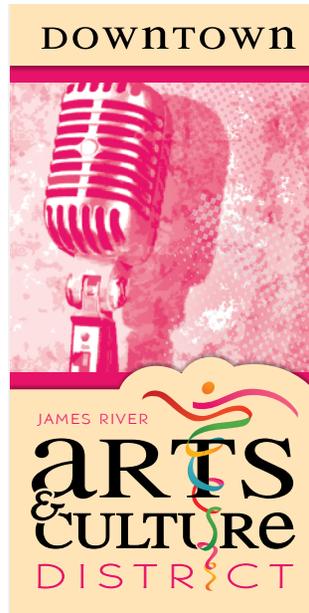
Both sites should use bike racks similar to these to promote the use of the bike lanes along Campbell Avenue to a variety of destinations. These designs are the most efficient for bicycle storage and can be placed one at a time or expanded for larger bicycle parking areas.



STREET LIGHTS

Manufacture	Holophane
Item #	Hallbrook Extended Cover Glassworks II Hallbrook 15' Post w/ Decorative Base Hallbrook Single Sheppard Crook
Description	150w/120v Metal Halide Aluminum Post with 22" Decorative Base Single Sheppard Crook
Color	Black

NOTES: THESE SHOULD ALTERNATE WITH THE SPACING OF STREET TREES



BANNERS

Banners can be used to highlight the character and bring out the identity of an area. Both Campbell Avenue and Odd Fellows Road should consider using banners similar to the Arts & Cultural District banners.

5.4 Landscaping

There are two core themes proposed for streetscape plantings along the Odd Fellows Road corridor. From the new US 460/29 interchange northward to the proposed Mayflower Drive roundabout, the theme is one of a high quality roadway serving a rejuvenated employment and industrial district for the City; the new interchange also provides a new City gateway opportunity. From the Mayflower Drive roundabout to the Lynchburg Expressway, the landscape character of the roadway becomes more urban and formal, thereby supporting the opportunity for a new mixed use development pattern. The proposed roundabout at Albert Lankford Drive and Murray Place provides a unique placemaking opportunity through the application of special streetscape and center island design treatments. The new interchange also provides a new gateway to the Liberty University campus, with a roundabout focal element at Top Ridge Road. This short segment of Odd Fellows Road should be treated much like the more formal streetscape prescribed for the Albert Lankford/Mayflower segment. Refer to the illustrative birdseye sketch of the proposed new US 460/29 interchange for more design guidance for this important gateway zone. The accompanying map and table offer more specific landscape character guidance for the key streetscape elements of this street; as with the Campbell Avenue guides, these tools are organized by identifying a series of unique segments, roundabouts and intersections.



	Expwy Segment	Lankford/Mayflower & Bradley/Capron Segments	Mayflower/Bradley Segment	Roundabouts	Bradley Drive Intersection
Street Trees:					
Function	Corridor Definition Placemaking	Corridor Definition Pedestrian Safety	Corridor Definition Pedestrian Safety	Spatial Definition Placemaking	Pedestrian Safety Placemaking
Planting Pattern	Informal Pattern Parkway Treatment Naturalistic Clusters	Regular Spacing Opposing/Both Sides	Regular Spacing Opposing/Both Sides Adjust Spacing for curves & curb cuts	Regular Spacing Opposing/Both Sides Flower & Leaf color attributes	Regular Spacing Opposing/Both Sides Flower & Leaf color attributes
Mature Crown Spread	Intermediate (35'-50') to Wide (50'-75')	Intermediate (35'-50')	Narrow (20'-35')	Narrow (20'-35')	Very Narrow (>20')
Mature Height	Varies by Species	Varies by Species Maintain Min. 10' Clearance from Overhead Lines	Varies by Species	Varies by Species	Varies by Species Maintain Min. 10' Clearance from Overhead Lines
Spacing	40'-80' (Clusters)	40'-80'	20'-40'	Varies by geometry of roundabout	Varies by geometry of intersection
Median/Center Island Plantings					
Ornamental/Flowering Trees	Yes	Yes	Yes	Yes	Yes
Low Shrubs	Yes	No	No	Yes	No
Ground Covers	Yes	No	No	Yes	Yes
Lawn	Yes	Yes	Yes	Yes	Yes

NOTES:
1. FINAL STREETSCAPE PLANTINGS TO BE DETERMINED BY CITY ARBORIST AND HORTICULTURALIST IN CONSULTATION WITH CITY PLANNER.
2. REFER TO INTERCHANGE BIRDSEYE ILLUSTRATIVE GATEWAY SKETCH FOR LANDSCAPE CONCEPT FOR NEW US 460/29 INTERCHANGE.

6.0 Implementation Measures

This plan provides a vision and sets goals for the Campbell Avenue & Odd Fellows Road Corridors. The following sections provide an approach to a 10 year implementation that will achieve the type of rehabilitation / redevelopment and infill that is desired, to implement streetscape improvements, provide for alternative modes of transportation, to create memorable gateways to the City, and encourage economic development activities.

6.1 Policy Considerations

This plan is the direct result of the planned construction of the US 460/29 and Odd Fellows Road Interchange, the establishment of Liberty University Student Housing at Odd Fellows and Albert Lankford Drive, the growth of the Virginia University of Lynchburg and a grass roots planning effort in the Campbell Avenue / Fairview Heights Neighborhoods. There are three items required for the successful implementation of any plan document: Inclusion within the broader Comprehensive Plan, appropriate zoning designations and inclusion within the Capital Improvement Plan. The successful implementation of this plan is dependent on phasing with special attention being given to recommendations for plan elements. Failure to implement plan elements in one phase could result in unsuccessful implementation of future phases.

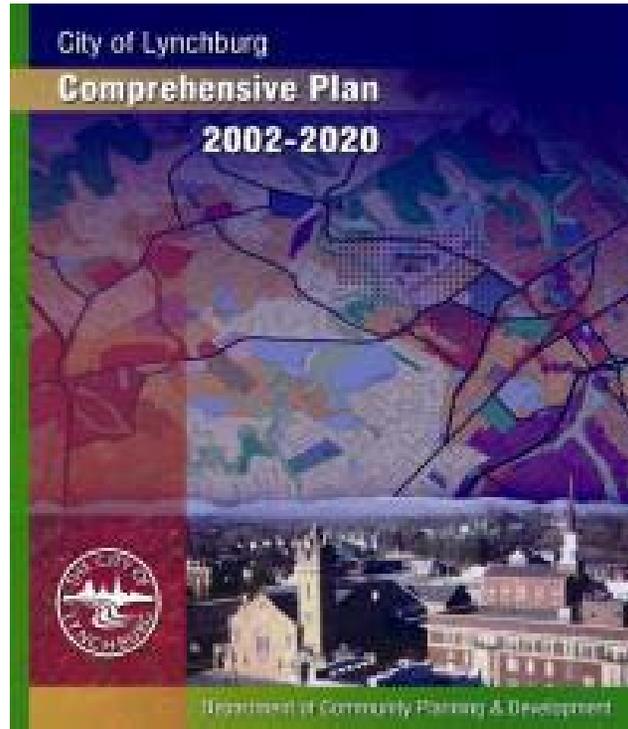
The Campbell Avenue & Odd Fellows Road Land Use Study and Corridor Master Plan is an amendment to the City of Lynchburg Comprehensive Plan 2002-2020 and policies specific to the study areas are adopted in the form of vision, goals and plan elements as identified in this document. The City will consider the policies contained within this document in all road designs planned or underway and in private developments requiring rezoning or conditional use permit.

6.2 Zoning

The zoning of the areas is a mixture of residential, commercial and light industrial as identified in Section 2.3. As the City moves forward with the rewrite of the City's Zoning Ordinance and revision of the Official Zoning Map, careful attention should be given to ensuring appropriate zoning designations and design considerations are in place to implement the policies contained within this document. The Zoning Ordinance rewrite and revision of the Official Zoning Map is scheduled for completion in 2014 which is before the scheduled construction start for the Odd Fellows Road interchange. In the interim the City should refrain from rezoning properties unless proffers are offered to insure the successful implementation of this plan.

6.3 Future Land Use Map

The Future Land Use Map in the City of Lynchburg Comprehensive Plan 2002-2020 is amended to change the land use designations for Campbell Avenue and Odd Fellows Road as shown on page 31 of this document. A mixed use designation is shown for the Florida Avenue Shopping Center located at Florida and Campbell Avenue and for the Genworth Campus and Liberty University Annex located at Odd Fellows Road, Murray Place and Albert Lankford Drive. A Community Commercial designation is indicated on the southern side of U.S. Route 460/29 at the terminus of the proposed Odd Fellows Road interchange. Smaller areas currently used as residential with an Employment 2 future land use designation and zoned Industrial along with other minor refinements to land use should be considered as part of the overall Comprehensive Plan update scheduled for completion in October 2013.



6.4 Phasing & Budget Considerations

Phasing Strategy. The primary catalyst for proposed corridor and area improvements is the proposed construction of, and extension of Odd Fellows Road to, a new interchange at US 460/29. This state-funded interchange project creates a new City gateway opportunity and offers the potential to rejuvenate the older employment area it currently serves. The interchange project will also significantly reduce traffic volume growth on Campbell Avenue within the study area, allowing for implementation of a lane reduction and reconfiguration project, termed a “road diet”, which includes new bicycle lanes and improved streetscape elements along the roadway. Therefore, the timing of multi-modal improvements along Campbell Avenue and Odd Fellows Road are dependent on, and must follow, the completion of the Odd Fellow Road interchange at US 460/29. The proposed phasing of key multimodal projects under this study includes:

1. Odd Fellows Road and US 460/29 Interchange (From US 460/29 to relocated John Capron Road; estimated completion date: Summer, 2017.)
2. Odd Fellows Road Improvements/Phase I (From new interchange to Mayflower Drive; estimated completion date: Summer, 2017.)
3. Odd Fellows Road Improvements/Phase II (From Mayflower Drive to Lynchburg Expressway; and construction of a replacement railroad underpass bridge within that segment; estimated completion date: Summer, 2018.)

4. Campbell Avenue Improvements/Phase I (VUL Gateway Roundabout at Edmunds Street; Road Diet improvements from Edmunds Street to Fairview Avenue; and Road Diet pavement striping from Fairview Avenue to Florida Avenue; estimated completion date: 2019.)

5. Campbell Avenue Improvements/Phase II (Rail-Trail Link from VUL Campus to Kemper Street Station trailhead; estimated completion date: 2020.)

6. Campbell Avenue Improvements/Phase II (City Gateway Roundabout at Florida Avenue; estimated completion date: 2021.)

7. Campbell Avenue Improvements/Phase III (Road Diet improvements from Fairview Avenue to King Street; estimated completion date: 2022.)

8. Campbell Avenue Improvements/Phase IV (Road Diet improvements from King Street to Florida Avenue; estimated completion date: 2023.)

9. Odd Fellows Road – Campbell Avenue Connector Road (Odd Fellows Road to Campbell Avenue via Martin Street; estimated completion date is dependant on local real estate development demand.)

10. John Capron Road Extension (John Capron Road extension to Odd Fellows Road; estimated completion date is dependant on local real estate development demand.)

Concept Construction Budget. A concept planning-level budget for the phased development of key multimodal infrastructure projects identified in this study was developed by the study team. A summary of these project budget estimates, set within the phasing approach described earlier, follows:

ODD FELLOWS RD. / CAMPBELL AVE. DESIGN, ENGINEERING & CONSTRUCTION (BY PHASE)					
	Plan Component	Location	Estimated Cost*	Completion Date	Funding
<u>ODD FELLOWS ROAD</u>					
1	Odd Fellows Road Interchange / Odd Fellows Rd.	Odd Fellows Rd. & U.S. Route 460 Interchange to relocated John Capron	\$31,715,145	Summer 2017	VDOT
2	Phase I - Odd Fellows Road Improvements	Odd Fellows Interchange to Mayflower Drive	\$5,040,000	Summer 2017	VDOT / Capital
3	Phase II - Odd Fellows Road Improvements - New RR-Underpass Bridge	Mayflower Drive to Lynchburg Expressway	\$8,000,000	2018	VDOT / Capital
			Odd Fellows Rd. Plan \$13,040,000		
<u>CAMPBELL AVENUE</u>					
4	Phase I - Campbell Ave. - VUL Gateway Roundabout - Road Diet (Edmunds St. to Fairview Ave.) - Road Diet striping to Florida Ave,	Old Campbell Ave to Florida Ave.	\$1,400,000	2019	Capital
5	Phase II - Rail Trail Link - VUL to Kemper St. Station	VUL to Kemper St. Station	\$1,040,080	2020	Capital
6	Phase II - Campbell Ave. / Florida Ave. Roundabout	Campbell Ave. / Florida Ave.	\$600,000	2021	Capital
7	Phase III - Campbell Ave. Road Diet	Fairview Ave. to King St.	\$1,100,000	2022	Capital
8	Phase IV - Campbell Ave. Road Diet	King St. to Florida Ave.	\$755,000	2023	Capital
			Campbell Ave. Plan \$4,895,080		
<u>CONNECTOR ROADS</u>					
9	Odd Fellows Rd. / Campbell Ave. Connector	Odd Fellows Rd. to Campbell Ave. via Martin St.	\$5,500,000	Demand	Private/ED
10	John Capron Road Extension	John Capron Road to Odd Fellows Road	\$785,000	Demand	Private/ED
			\$6,285,000		
			Total Implementation \$24,220,080		
* Planning level costs in 2013 dollars 10% Engineering & 20% Contingency included per Plan component					

6.5 Federal & State Funding Opportunities

There are a wide range of grants available from state and federal agencies and programs, as well as from institutions and foundations. Some state monies are pass-through funds from federal agencies; most grant opportunities require a 'local match' and some are reimbursement-based. Following is a summary outline of those funding sources:

MAP-21 Moving Ahead for Progress in the 21st Century (Federal Funding via VDOT). Signed into law by President Obama on July 6, 2012, MAP-21 (P.L. 112-141) creates a streamlined, performance-based, and multimodal project funding program to address the many challenges regarding the U.S. transportation system. The act builds upon and refines earlier programs and policies, while restructuring core highway funding programs. Transportation enhancement activities under the former SAFETEA-LU have been redefined as "transportation alternatives" under MAP-21. Key transportation alternatives under MAP-21 that are applicable to project funding opportunities for Campbell Avenue and Odd Fellows Road Corridor improvements include:

- Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1009.
- Construction, planning, and design of infrastructure-related projects that will provide safe

routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.

More information of MAP-21 can be found at <http://www.fhwa.dot.gov/map21>.

Safe Routes to School Program (Federal Funding via VDOT). Safe Routes to School (SRTS) is a federally funded program that offers both infrastructure and programmatic grants to encourage healthier lifestyles and safe opportunities for school age children (K-8) to walk or bike to school. Since many of the design elements needed to improve walkability for children coincide with the Campbell Avenue Corridor Plan recommendations, this is a special funding opportunity to implement much needed pedestrian improvements around W.M. Bass Elementary School on Seabury Avenue.

A January 2013 infrastructure grant application submission included \$263,825 for improvements around Bass Elementary. Key elements of that application include widening sidewalks along Campbell in the immediate vicinity of the school, improving pedestrian crosswalks and signals, and improving Seabury Avenue sidewalks with "curb extensions/bump-outs," creating a safe, enjoyable route from Campbell Avenue to the school. Other improvements, including filling gaps in disconnected sidewalks, are planned for later grant applications. The City is waiting to hear the status of the 2013 application.

Additional Federal Government Funding Sources:

Federal Economic Stimulus Funding (via VDOT)
Community Development Block Grant Program
U.S. Environmental Protection Agency, Environmental Education Grants Program
Chesapeake Bay Gateways Program
Conservation Reserve Program (USDA)
Wetlands Reserve Program (USDA)
Watershed Protection and Flood Prevention (Small Watersheds) Grants (USDA/NRCS)
Urban and Community Forestry Assistance Program (USDA)
Small Business Tree Planting Program (SBA)
Economic Development Grants for Public Works and Development of Facilities (The US Department of Commerce, Economic Development Administration (EDA))

State Funding Opportunities:

Virginia Land Conservation Foundation
Virginia Department of Conservation and Recreation (DCR)
Virginia Recreation Trails Fund
Land and Water Conservation Fund (LWCF)
Virginia Department of Forestry (DOF)
Water Quality Improvement Fund

6.6 Local Funding Opportunities

CIP Funding. Local governments can commit an annual appropriation for transportation improvements, including multi-modal projects, roadway improvements, pedestrian & bicycle facilities and park & open space development through their Capital Improvements Programs (CIP). The area land use/master plan will define projects for inclusion into the CIP. CIP funds can be earmarked for matching funds when seeking grants with such requirements.

Private Real Estate Developer Funding.

In Virginia, many new residential and non-residential development projects include roadways, pedestrian/bicycle, open space, greenway and other improvements which are funded by the real estate developers of those projects. The developer “proffers” (proactively offers) a set of infrastructure improvements as part of her application for project approval by the local governing bodies. A number of roadway improvements within the study area, including the proposed corridors connector road and the extension of existing roadways, may be funded in part through the proffer approach.

Local Private-Sector Funding. Private industries and businesses may donate property, cash, discounted materials, and/or in-kind services. Examples include: Donations of trail easements; cash for a way-finding signage systems, pedestrian links, street furnishings or specific greenway projects. Donations of services by businesses, including equipment and labor, can reduce the costs of park and trail improvements.

Volunteer Organizations. Volunteer organizations can be created to aid in the development of greenways and trails within the area. Volunteers are an invaluable resource either in actual greenway construction or by conducting fund-raisers. A manual for park volunteers should be developed to guide and regulate their work. The manual should include a description of appropriate volunteer efforts, request forms, waiver and release forms, and a completion form (where volunteers are asked to summarize their accomplishments). Virginia State Parks has been quite successful in using such ‘friends’ groups for special park project implementation.

Trail and Greenway Sponsors. A sponsorship program for greenway amenities and trails system elements of the master plan, allows for smaller donations to be received both from individuals and businesses. Lynchburg has already had success in using private sector sponsorship of street and roadway landscaping projects. The program must be well planned and organized, with design standards and associated costs established for each amenity. Project elements can include mile markers, call boxes, trash receptacles, benches, entry signage, directional signs, interpretive brochures, bollards, and picnic areas.

Public Private Transportation Act of 1995 (PPTA). The Public Private Transportation Act of 1995, as amended, is a legislative framework that allows the Commonwealth of Virginia and qualifying local governments to enter into agreements with private entities to construct, improve, maintain and/or operate transportation facilities. A PPTA offers benefits in that faster project solutions can be realized while enhancing economic efficiency such that greater return of investment (ROI) is realized.

6.7 Private Sector Assistance

With about 300 businesses and 6,700 employees in the area as of 2010, implementing this plan will be a joint effort between public institutions and private stakeholders and landowners. The City of Lynchburg’s Office of Economic Development helps administer a number of federal, state, and local programs that can be used to promote plan implementation through the private sector.

HUB Zone. Small businesses in high-unemployment, low-income areas can receive an economic boost from the HUBZone contracting program. The HUBZone (Historically Underutilized Business Zones) program provides contracting assistance to small businesses located in economically distressed communities to promote job growth, capital investment and economic development in these areas. The program’s benefits for HUBZone-certified companies include competitive and sole source contracting, a 10% price evaluation preference in full and open contract competitions, as well as subcontracting opportunities. The Federal government has a goal of awarding 3% of all dollars for Federal prime contracts to HUBZone-certified concerns.

EDA Capital Investment Grant. A local incentive of cash or infrastructure improvements to eligible projects for capital investment. 2% of capital investment up to \$10M, 1% of capital investment over \$10M, maximum incentive value \$350,000. All taxes generated by capital investment must generate a positive ROI over a 36-month period, subject to verification and the terms of a performance agreement.

EDA Job Creation Grant. A local incentive of cash or other improvements, generally up to 2% of the increase of the annual payroll for full-time employees with health benefits if base employment is increased by more than one-third, netting a minimum of thirty new FTEs in one year, subject to payroll audit and performance agreement.

Virginia Jobs Investment Program. This program offers customized recruiting and training assistance to companies that are creating new jobs or experiencing technological change.

Revolving Loan Fund. This is a source of money that offers innovative financial services, by providing working capital at competitive rates when traditional bank financing is not feasible, and tax-exempt Industrial Revenue Bonds.

Technology Zone. The entire city is a Technology Zone, offering tax abatement for capital investment and job creation for qualified businesses. Technology businesses are broadly defined, and include sectors from advanced manufacturing to engineering, electronics to pharmaceuticals.

Enterprise Zones. The City of Lynchburg has two Enterprise Zones encompassing over 4,000 acres of the City that includes prime commercial real estate and industrial park lots. The Enterprise Zone program is an economic development tool administered at the local level. E-Zones provide cash grants for real property improvements and job creation within the designated zones.

State Grants: The Real Property Investment Grant provides up to \$200,000 for real estate rehabilitation or new construction with over \$100,000 of initial investment. The Job Creation Grant provides a cash grant up to \$800 per job per year or per 5-year period.

Local Grant: The Local Enterprise Zone Redevelopment Grant Program is designed to assist property owners and/or businesses with real property and capital investment projects, while decreasing vacancy rates, revitalizing designated areas, and increasing the City's tax base. Commercial, industrial, and mixed-use commercial (with no more than 80% residential) are eligible for funding of up to 1/3 of the qualified renovation, rehabilitation or capital improvement costs, with a maximum of \$25,000. Unlike the State grant, it has no required minimum of initial investment, but does have limited total amounts available each year.

New Market Tax Credits (NMTC). NMTC is a federal program that permits taxpayers to receive a credit against Federal income taxes for making qualified equity investments in designated Community Development Entities (CDEs). Substantially all of the qualified equity investment must in turn be used by the CDE to provide investments in low-income communities. The credit provided to the investor totals 39% of the cost of the



ENTERPRISE ZONES WITHIN AND AROUND THE STUDY AREA

investment and is claimed over a seven-year credit allowance period.

Real Estate Rehabilitation & Renovation Tax Credits. A local incentive that provides a tax exemption for five years on the value added to commercial or industrial real estate through rehabilitation or renovation.

Federal and State Rehabilitation Tax Credits. These income tax credits, administered by the state, are available to help offset investment in buildings that were built prior to 1936, or are “certified historic.” 10% and 20% options are available on the Federal level and 25% is available from the State depending on which category the building falls into. All alterations must adhere to the Secretary of the Interior’s Standards for Rehabilitation.

APPENDIX

Roundabouts: (VDOT WEBPAGE) <http://www.virginiadot.org/info/faq-roundabouts.asp>
(VDOT BROCHURE): <http://www.virginiadot.org/info/resources/roundabouts.pdf>

Selection from the above brochure (click link for full document):

Roundabouts in Virginia

The Virginia Department of Transportation has begun using roundabouts in certain situations to enhance safety and reduce delays encountered by the motoring public.

Roundabouts have been used effectively throughout the world for many years. In recent years, they have been used here in the United States to reduce crashes, traffic delays, fuel consumption, air pollution and construction as well as maintenance costs, while quite often moving more traffic and enhancing intersection beauty. They have also been used to control speed in residential neighborhoods and are accepted as one of the safest types of intersection designs.

Roundabouts differ from the old, larger traffic circles in three major areas:

- 1) A roundabout is generally smaller in diameter, requiring lower traveling speed.
- 2) At roundabouts, the entering traffic yields the right-of-way to the circulating traffic. This yield-at-entry rule keeps traffic from locking up and allows free flow movement.
- 3) The splitter and center islands of a roundabout deflect entering traffic and reinforce the yielding process.

Why use a roundabout?

- ❖ **Safety** — Roundabouts have been shown to reduce fatal and injury crashes as much as 75 percent. The reduction in crashes is attributed to slower speeds and reduced number of conflict points.

- ❖ **Low maintenance** — Eliminates maintenance and electricity costs associated with traffic signals, which could possibly be as much as \$5,000 per year per intersection.
- ❖ **Reduced delay** — By yielding at the entry rather than stopping and waiting for a green light, delay is significantly reduced.
- ❖ **Capacity** — Intersections with high volumes of left turns are often better handled by a roundabout than a multi-phased traffic signal.
- ❖ **Environmental** — A reduction in delay corresponds to a decrease in fuel consumption and air pollution.
- ❖ **Aesthetics** — The central island provides an opportunity to beautify the intersection with landscaping.

What do roundabout signs look like?

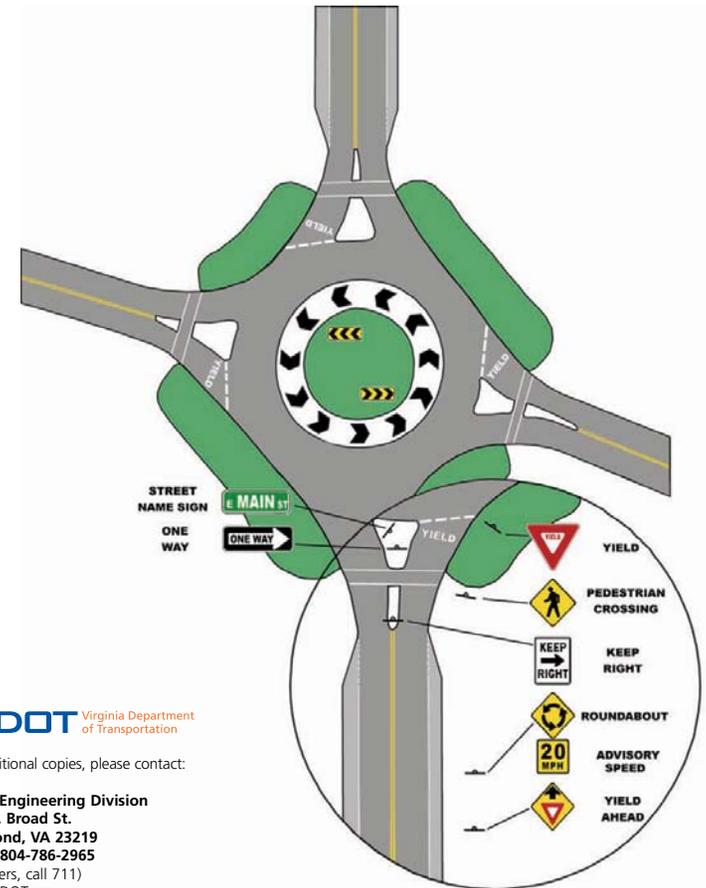
Roundabouts are easy to use. You simply position your vehicle correctly and indicate where you want to go.

Roundabout "Yield" signs together with "Yield" line markings are placed at the intersection of each approach road with the roundabout.

Advance Roundabout Warning Signs advise that you are approaching a roundabout.

In Virginia, roundabouts will be either one lane or two lanes. Listed here are the procedures one must take to negotiate turns when approaching a roundabout.

Sample signing and pavement marking plan for a roundabout



VDOT Virginia Department of Transportation

For additional copies, please contact:

Traffic Engineering Division
1401 E. Broad St.
Richmond, VA 23219
Phone 804-786-2965
(TTY users, call 711)
VirginiaDOT.org

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Complete Streets: <http://www.smartgrowthamerica.org/complete-streets/complete-streets-fundamentals/complete-streets-faq>

From the National Complete Streets Coalition (click the link above for more information):

Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from train stations.

Creating Complete Streets means transportation agencies must change their approach to community roads. By adopting a Complete Streets policy, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. This means that every transportation project will make the street network better and safer for drivers, transit users, pedestrians, and bicyclists – making your town a better place to live.

What does a “Complete Street” look like?

There is no singular design prescription for Complete Streets; each one is unique and responds to its community context. A complete street may include: sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more.

A Complete Street in a rural area will look quite different from a Complete Street in a highly urban area, but both are designed to balance safety and convenience for everyone using the road. Check out our ‘Many Types of Complete Streets’ slideshow to see examples from across the country.

Why do we need Complete Streets policies?

Incomplete streets – those designed with only cars in mind – limit transportation choices by making walking, bicycling, and taking public transportation inconvenient, unattractive, and, too often, dangerous.

Changing policy to routinely include the needs of people on foot, public transportation, and bicycles would make walking, riding bikes, riding buses and trains safer and easier. People of all ages and abilities would have more options when traveling to work, to school, to the grocery store, and to visit family.

Making these travel choices more convenient, attractive, and safe means people do not need to rely solely on automobiles. They can replace congestion-clogged trips in their cars with swift bus rides or heart-healthy bicycle trips. Complete Streets improves the efficiency and capacity of existing roads too, by moving people in the same amount of space – just think of all the people who can fit on a bus or streetcar versus the same amount of people each driving their own car. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.

Complete Streets are particularly prudent when more communities are tightening their budgets and looking to ensure long-term benefits from investments. An existing transportation budget can incorporate Complete Streets projects with little to no additional funding, accomplished through re-prioritizing projects and allocating funds to projects that improve overall mobility. Many of the ways to create more complete roadways are low cost, fast to implement, and high impact. Building more sidewalks and striping bike lanes has been shown to create more jobs than traditional car-focused transportation projects.

Road Diets: http://safety.fhwa.dot.gov/provencountermeasures/fhwa_sa_12_013.htm

From the Federal Highway Administration (click the link above for more information):

The classic roadway reconfiguration, commonly referred to as a "road diet," involves converting an undivided four lane roadway into three lanes made up of two through lanes and a center two-way left turn lane. The reduction of lanes allows the roadway to be reallocated for other uses such as bike lanes, pedestrian crossing islands, and/or parking. Road diets have multiple safety and operational benefits for vehicles as well as pedestrians, such as:

- Decreasing vehicle travel lanes for pedestrians to cross, therefore reducing the multiple-threat crash (when one vehicle stops for a pedestrian in a travel lane on a multi-lane road, but the motorist in the next lane does not, resulting in a crash) for pedestrians,
- Providing room for a pedestrian crossing island,
- Improving safety for bicyclists when bike lanes are added (such lanes also create a buffer space between pedestrians and vehicles),
- Providing the opportunity for on-street parking (also a buffer between pedestrians and vehicles),
- Reducing rear-end and side-swipe crashes, and
- Improving speed limit compliance and decreasing crash severity when crashes do occur.



other resources:

VDOT page on US 460/29 and Odd Fellows Road Interchange: [click here!](#)

Campbell Avenue Access Management Study (June 2012): [click here!](#)

Cursory Lane Reduction Analysis: [click here!](#)