



*Bristol Regional Medical Center / Exit 74 Plan*

*Endorsed  
Date*

# THE BRMC LAND USE PLAN

## TABLE OF CONTENTS

	Page
<b>1.0 Introduction</b>	<b>1</b>
<b>2.0 Purpose</b>	<b>4</b>
<b>3.0 Zoning</b>	<b>4</b>
<b>4.0 Land Use</b>	<b>7</b>
<b>5.0 Location</b>	<b>9</b>
<b>5.1 History</b>	<b>13</b>
<b>5.2 Development</b>	<b>14</b>
<b>6.0 Infrastructure</b>	<b>21</b>
<b>6.1 Transportation</b>	<b>21</b>
<b>6.2 Utilities</b>	<b>38</b>
<b>7.0 Analysis of Surveys</b>	<b>43</b>
<b>8.0 Goals</b>	<b>50</b>
<b>Appendix A – Survey</b>	<b>53</b>

# **THE BRMC LAND USE PLAN**

## **FIGURES**

- 1. Study Area**
- 2. Future Land Use Map of the Hospital Study Area**
- 3. Existing Zoning Designation**
- 4. Existing Land Use Survey 2013**
- 5. Location Map**
- 6. Looking south across the Pinnacle Development toward the Bristol Medical Center**
- 7. Bristol Tennessee Major Road Plan Map**
- 8. Bristol Memorial Hospital**
- 9. Annexation Map**
- 10. Border Retail Tourism Development District**
- 11. Pinnacle Concept Plan**
- 12. Looking west, in the direction of Knoxville, toward the Pinnacle Development**
- 13. Looking northwest, in the direction of Kingsport, toward the Pinnacle Development**
- 14. Pinnacle Park Master Plan**
- 15. Medical Park Boulevard Map**
- 16. West State Street Map**
- 17. Meadowview Road Map**
- 18. Highway 126 Map**
- 19. Interstate 81 Map**
- 20. Studied Road Improvements**
- 21. Proposed Sidewalks**
- 22. Transit Map**
- 23. Bicycle Routes**
- 24. Proposed Bicycle Routes**
- 25. Utility District**
- 26. Fire Department Proposed Location Close-up**

## 1 INTRODUCTION

Healthcare is defined as the maintenance and restoration of health by the treatment and prevention of disease especially by trained and licensed professionals (as in medicine, dentistry, clinical psychology, and public health) by “Merriam-Webster Unabridged Dictionary”. The healthcare industry produces more than 14% of the nation’s gross domestic product, or GDP. The 2010 health care revenue on a national basis summed approximately \$904,683,000,000. Hospitals are at the center of this economic activity. The hospital is an institution providing medical or surgical care and treatment for the sick and injured, as defined by Webster’s II New Riverside University Dictionary. American hospitals had 4,685,000 employees in 2010 according to the U.S. Census. The hospital plays a multifaceted and central role in the city. As an entity, the hospital serves as a hub of employment, as a payer of wages and salaries, as a purchaser of goods and services, and as a generator of tax revenue. The hospital as an institution is a very stable feature in the urban landscape. It is typically surrounded by other businesses and land uses related to the hospital’s mission, as the hospital serves as a focal point for these ancillary health care businesses and supportive services. The auxiliary and subsidiary services are essential for the hospital’s maximum effectiveness. Because the hospital plays the integral role of providing healthcare services and is an economic generator for the city, the hospital serves as a city amenity.

According to the 2010 U.S. Census, 12.7% of the national population is 65 years old or over. This signals a key demographic shift in the definition of American culture and society for the next century. It will also affect the way in which cities are designed. This demographic group will more than double by the year 2050, and requires more health care than the general population. This age group is having and will continue to have a big impact on the healthcare industry. A rational connection would appear to exist between the hospital campus and lifelong or elderly living campuses having locations in close proximity. However, the nexus between the two land uses does not exist. The uses of land are different, requiring different infrastructural support systems. The divergent ways in which the land is used are not congruent.

A campus is created by the hospital and the complementary and supportive uses, as well as the travel ways connecting them with the hospital. The ancillary healthcare businesses and supportive service businesses are an important part of the environment and are essential for the hospital to have its maximum effectiveness. The demands of the ancillary businesses for space as well as the hospital’s space demands can potentially impact land markets. The hospital campus adds value to the land surrounding it. Cities and hospitals have mutual stakes and mutual interest in this respect.

The future of the hospital campus and how it grows is of great relevance to both the hospital and the city. Patients, visitors, employees, and city residents all stand to benefit from a vital campus accompanied with a neighborhood environment surrounding the campus. The zoning district designations for land surrounding the fixed asset of the hospital campus can foster non-residential health-related development of corridor and cluster patterns of land use surrounding the hospital campus. People associated with the hospital can have residential needs and a proper zoning designation can foster this.

The central and multifaceted role played by a hospital in a city bears close analysis to better understand its role (Refer to Figure 1). Land uses around the hospital could and should enhance the hospital's campus. Community capacity for healthcare-related business could be increased. Cooperative efforts between the hospital, the city and the city's educational institutions and other resources may prove to strengthen all involved. The hospital campus and the land surrounding it can be defined for purposes of this study as "study area".

The City of Bristol is aware of the locational opportunity in Bristol Regional Medical Center's (BRMC's) current location. A land use study of the community surrounding BRMC is prioritized as a strategic movement. The resulting information will be utilized in combination with locational opportunity already present with Exit 74 of Interstate 81 inside Bristol's city limits and Bristol's Border Region Retail Tourism Development District, which will be discussed later. Because the hospital plays an integral role as an economic generator for the city, the results of this land use study may foster future city development.

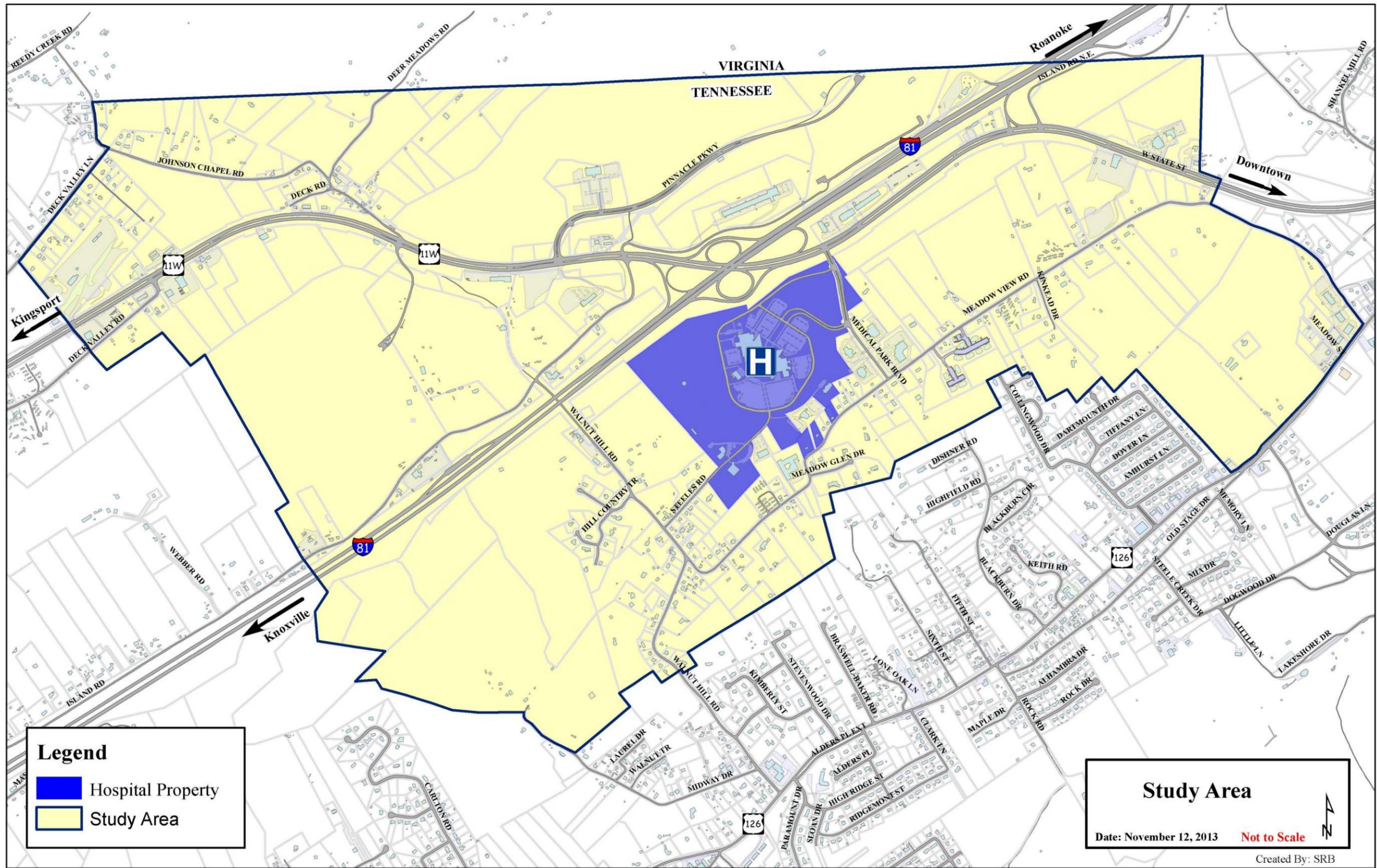


Figure 1 - Study Area

## 2 PURPOSE

The Future Land Use Plan and Policy was adopted in 2013. In the plan, a portion of the city (covered in blue cross hatch) is identified as “Medical Area”. This area is surrounded by a “Medical Impact Area” (dotted blue boundary). Policy 8 of the Plan and Policy enumerates guidance in this special area:

Policy 8: Provide sufficient land and infrastructure to stimulate and support a mixed use medical district with compatible commercial and residential growth in the hospital vicinity (Refer to Figure 2).

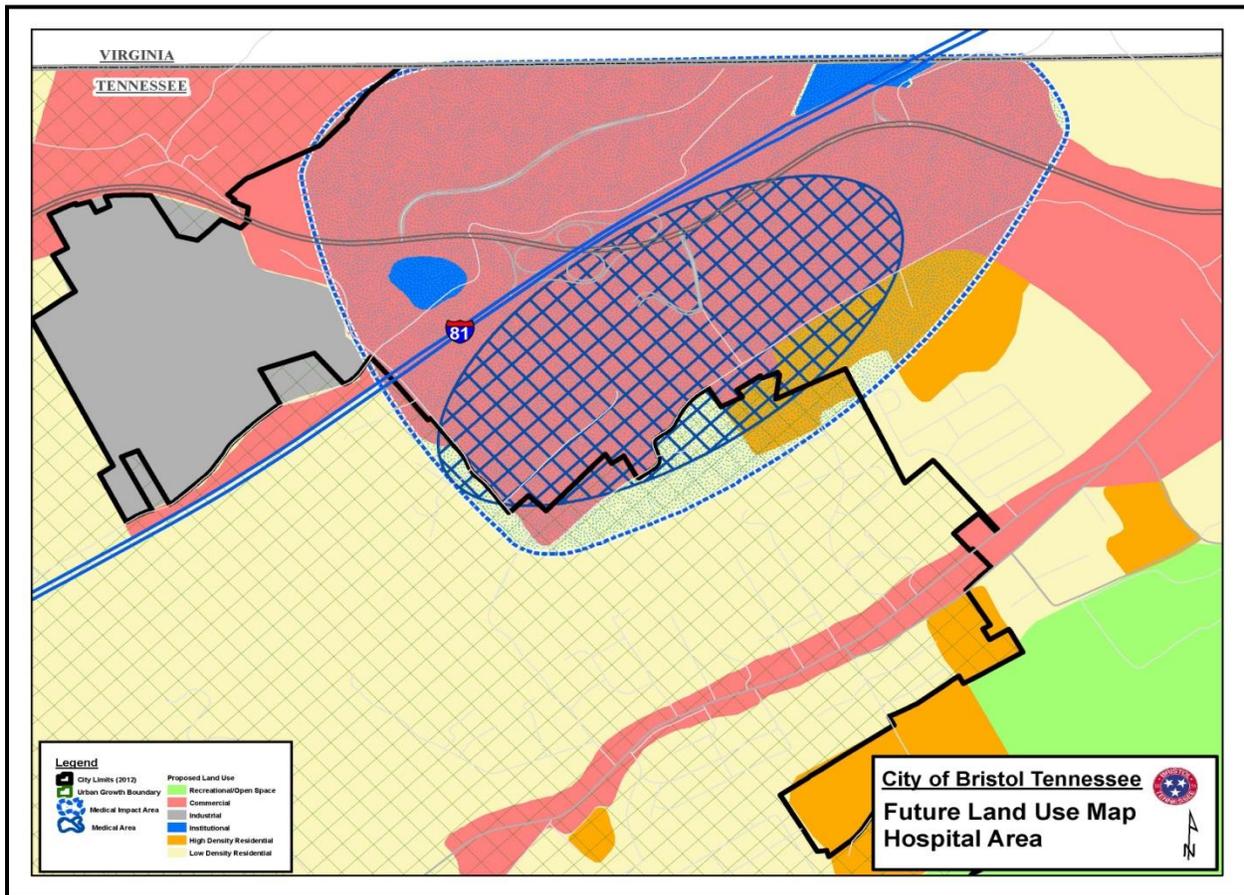


Figure 2 - Future Land Use Map of the Hospital Study Area

## 3 ZONING

Zoning may be defined as the division of a municipality into districts for the purpose of regulating the use of private land. Those zones are shown on a map. Within each of these zones or districts, the text of the zoning ordinance specifies the uses which are permitted, the bulk standards, required yards, and necessary parking requirements as well as other prerequisites in the development of land. A zoning ordinance works hand in hand with a zoning map. The

hospital study area shown above from the Land Use Plan and Policy utilizes a zoning map as a means to accomplish goals.

When a portion of property where BRMC is currently located was annexed into the city it was zoned B-3, and the adjacent portion of the BRMC property already in the city was rezoned from M-1 (Light Industrial/Business) to B-3. Adjacent properties to the west are zoned PBD. B-3 and PBD are located to the south and B-3 is to the east. The hospital is bounded by Interstate 81 to the north. Across the interstate, property zoned B-3 to the northwest exists. An area zoned PBD is also located across the interstate. Properties adjacent to the east are zoned B-3. The zoning district covering the largest property in the study area is PBD, covering 449 acres. Total property zoned B-3 in the study area is almost 415 acres. 204 acres are zoned M-2 and 20 are zoned M-1. Single-family residentially (R-1A) zoned property covers 96 acres (Refer to Figure 3).

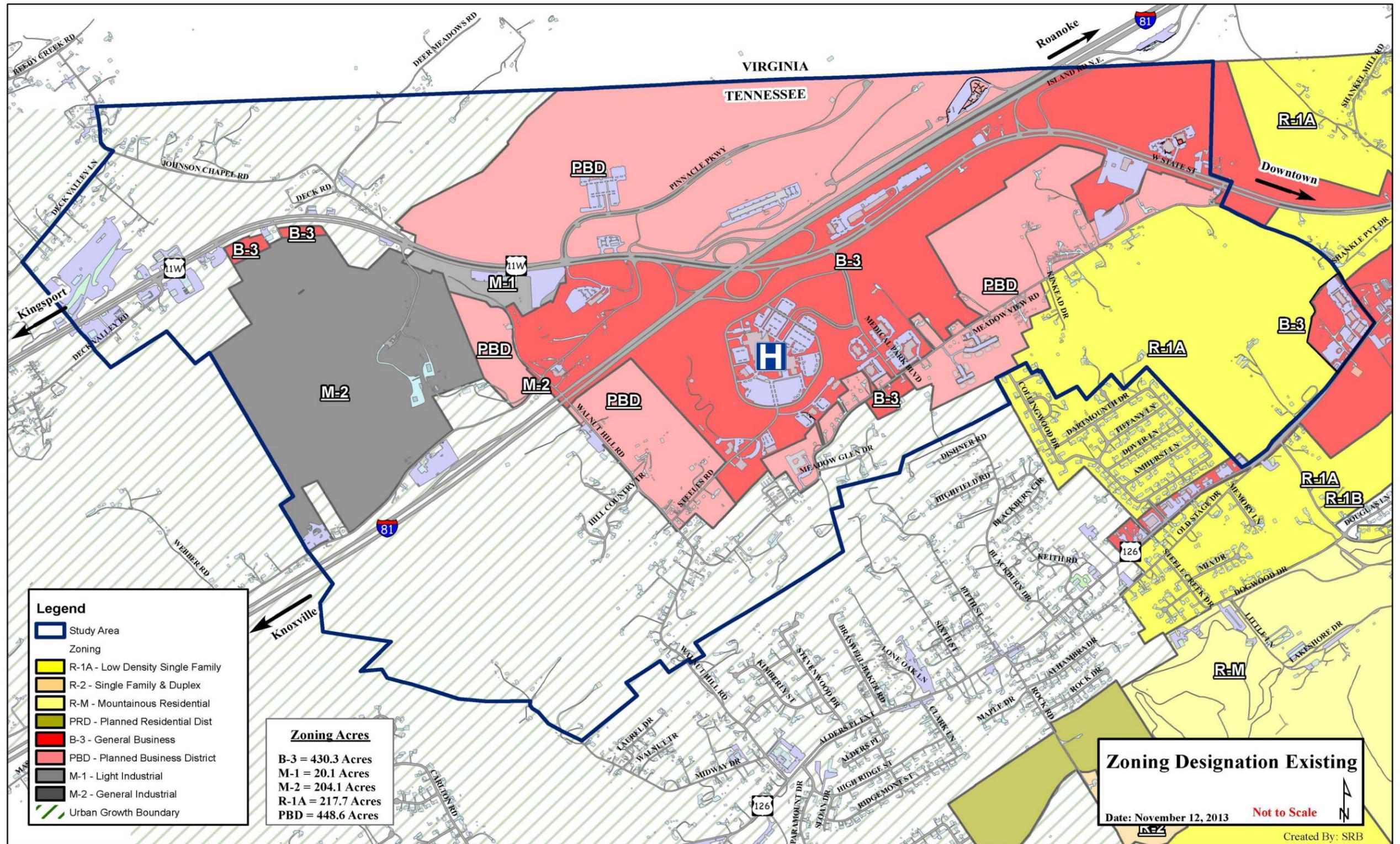


Figure 3 - Existing Zoning Designation

#### **4 LAND USE**

A variety of land uses cover the study area. The largest land use in terms of area is single-family residential, covering 464 acres. Multi-family residential land use utilized 37 acres of property. Church land use covers 6 acres of property, and institutional use covers 17 acres. Commercial land use covers 165 acres. The hospital campus area utilizes 107 acres. Property with industrial land use covers 266 acres. And 621 acres are vacant or open space. City staff conducted a windshield survey of the study to gather land use data. The location of major thoroughfares which essentially bisect the area are significant to the boundary and the land use throughout the study area (refer to Figure 4).

Stable residential communities are located throughout the study area. A community of stable single-family residences is found behind the concrete channel manufacturer company, or between the concrete company and Deck Valley Lane. This stable residential area moves to area outside the city, in the urban growth boundary. The northern portion of Johnson Chapel Road and the area surrounding the intersection of Sourwood Hill Road and Walnut Hill Road is also stable and residential or vacant.

Traveling around the circumference of BRMC campus and moving west on Meadowview Road, a stable area of single-family residences is located here. Following Meadowview Road to its end and traveling northward onto Walnut Hill Road, another neighborhood of single-family residences is found. Hill Country Subdivision is included in this area along the west side of Walnut Hill Road. An expanse of vacant property is located to the west of the stable Hill Country Subdivision, much with unevenly elevated ridgelines.

It is noted that the vacant lowland property could be appropriate for extension of Hill Country Subdivision or for development of a new single-family residential development. Walnut Hill Road extends north under Interstate 81 and connects with Island Road on the north side. A range of older dilapidated businesses and residential buildings are scattered along Island Road.

Commercial areas include Vulcan Quarry to the northwest of Interstate 81 on U.S. 11W. The quarry business utilizes roughly 175 acres, beginning its operations in the 1970's. Adjoining its eastward boundary at a much higher elevation is National Business College, also accessed from U.S. 11W.

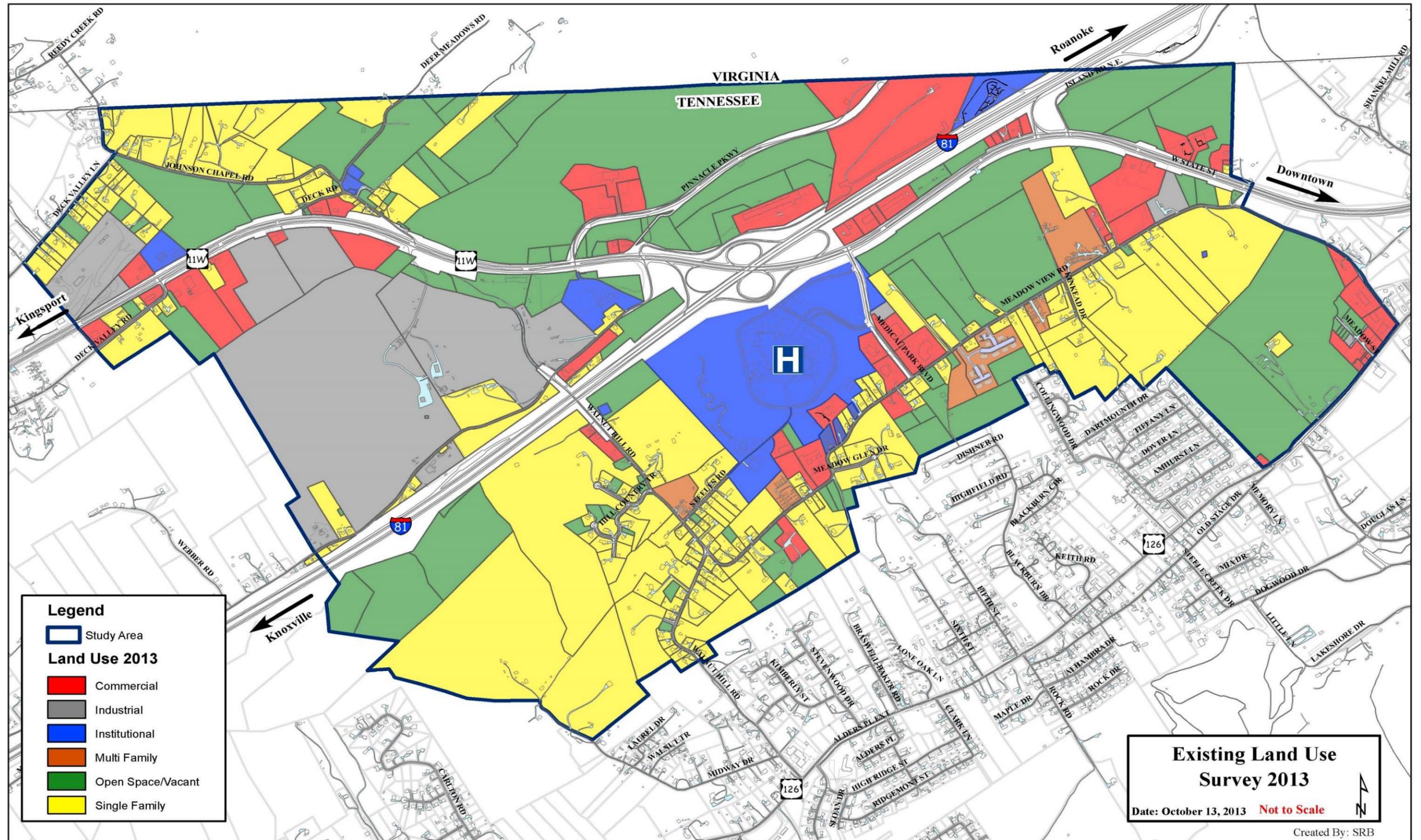


Figure 4 - Existing Land Use Survey 2013

This educational institution was originally built in the late 1990's as a Comfort Inn and has since been converted into a college. To the north across U.S. 11W and outside Bristol city limits, in the urban growth boundary, exists a concrete channel manufacturing company. Located to the east of the concrete channel manufacturer and fronting on U.S. 11W are various businesses to serve highway travel. Some appear dilapidated, and others have fallen into disrepair. A Hambino's restaurant located on the northern side of U.S. 11W and a convenience store (both built in the mid-1990's) fronts the entrance to Bristol Med West (an office establishment) and the Pinnacle. The Tennessee Welcome Center, accessed from Interstate 81, resides at the foot of the hill below the BassPro Shops site of the Pinnacle development.

Uniquely located commercial properties in the study are those which fall between Interstate 81 and West State Street. These properties are accessed off West State Street. These properties include the "giant guitar", as well as what will soon become known as "hotel row". This small unique strip of parcels (11 parcels total 15 acres) is home to Hampton Inn, Days Inn, Fairfield Inn, and a Marriott.

BRMC is located in the south central region of the study area. As discussed earlier, BRMC is surrounded by a host of ancillary businesses. The BRMC campus itself is typical of other hospital campuses nationwide. The established hospital property as well as surrounding properties apply for and receive dozens of building permits yearly to renovate the existing property to allow that property to meet changing needs. The changing needs are based on a variety of factors: changing science, changing technology, changing ownership, changing site needs, etc.

## **5 LOCATION**

The study area contains the 348-bed, 125-acre medical campus and its surroundings, which lie mostly inside the city limits of City of Bristol. The southwest corner of the study area remains in Sullivan County, outside the City. The topography is generally hilly land. Terrain goes from elevations of 1,660 feet and within the City's Urban Growth Boundary by U.S. 11W to 2,200 feet in elevation along the mountain ridge top. A portion of the study area has a slope of 15% or greater. BRMC is a landmark property of the city. Another city landmark property located in the study area is Vulcan Quarry, located to the west along U.S. 11W. National College is a landmark located in the western section of the study area, off U.S. 11W. National College offers business and medical service oriented education as a primary focus, to approximately 250 students. A residential landmark is Sage Meadows Apartments, located southeast of BRMC off Meadowview Drive. Days Inn, Hampton Inn, and Fairfield Inn (currently under construction) are located in the eastern portion of the study area between West State Street and Interstate 81. BRMC property's location is in the middle of the study area (Refer to Figure 5).

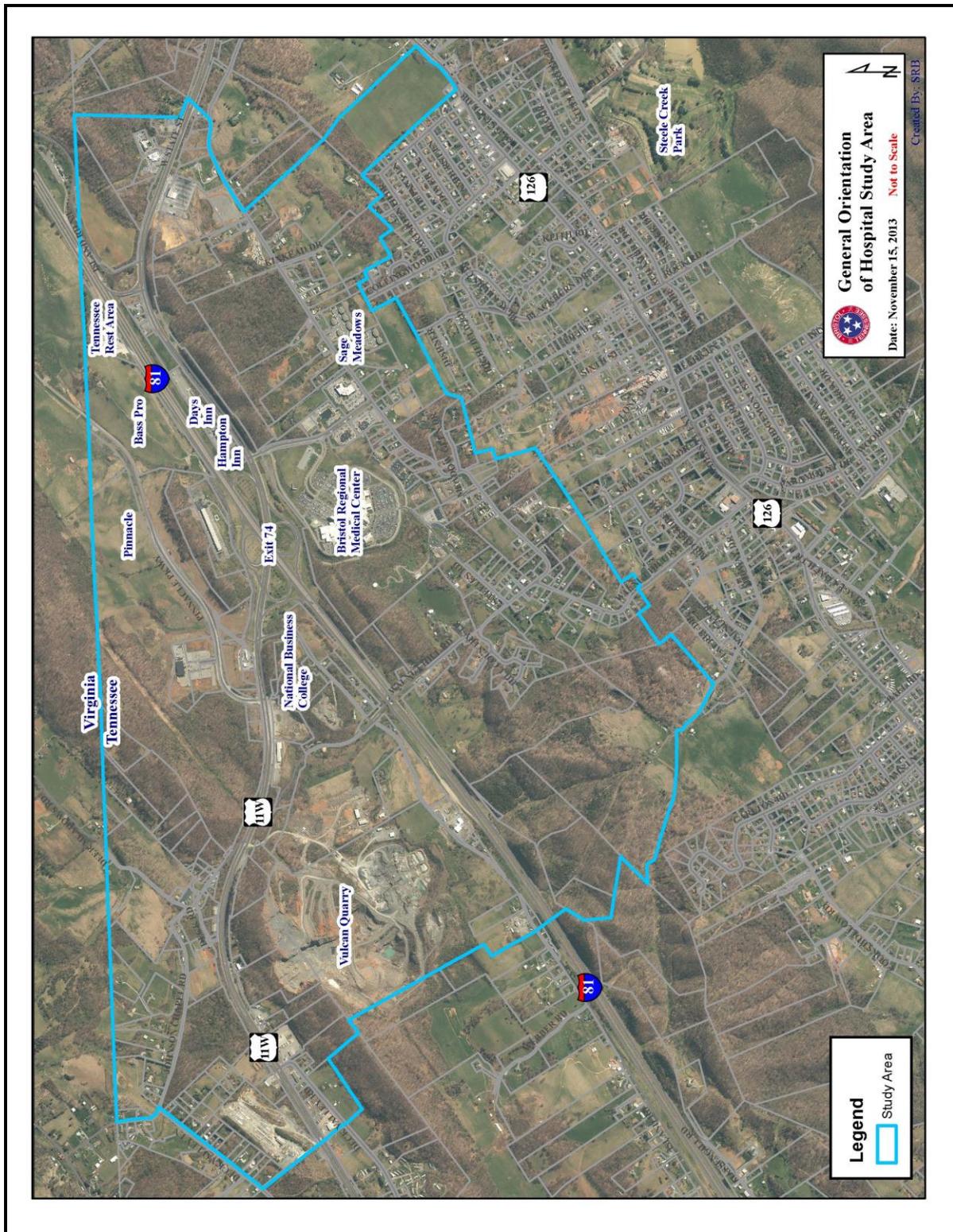


Figure 5 - Location Map

Significant to the land use study are the major thoroughfares which bisect the land, including Interstate 81, U. S. 11W (both major arterials) and West State Street (a minor arterial).

Interstate 81 is a major trucking route which begins in New York and terminates in Dandridge, Tennessee. That portion of Interstate 81 which falls within the study area was commissioned and built between 1961 (Virginia to Walnut Hills Bridge Road) and 1972 (from Walnut Hills Road to Exit 66 if Interstate 81). U.S. 11W meets Interstate 81 just west of the Bristol city limits along a seven ramp cloverleaf interchange where it continues as West State Street into the City (Refer to Figure 6).



Figure 6 - Looking south across the Pinnacle Development toward the Bristol Medical Center

Interstate 81 runs northeast to southwest across the study area. U.S.11W is located in the northern portion of the study area. The study area is bounded on a portion of the south by S.R. 126, and in the west Walnut Hill Road is located. Meadowview Road serves as an eastern boundary. Medical Park Boulevard currently connects West State Street (north of the study area) and Meadowview Road. The main BRMC entrance is located on Medical Park Boulevard (See Figure 7).

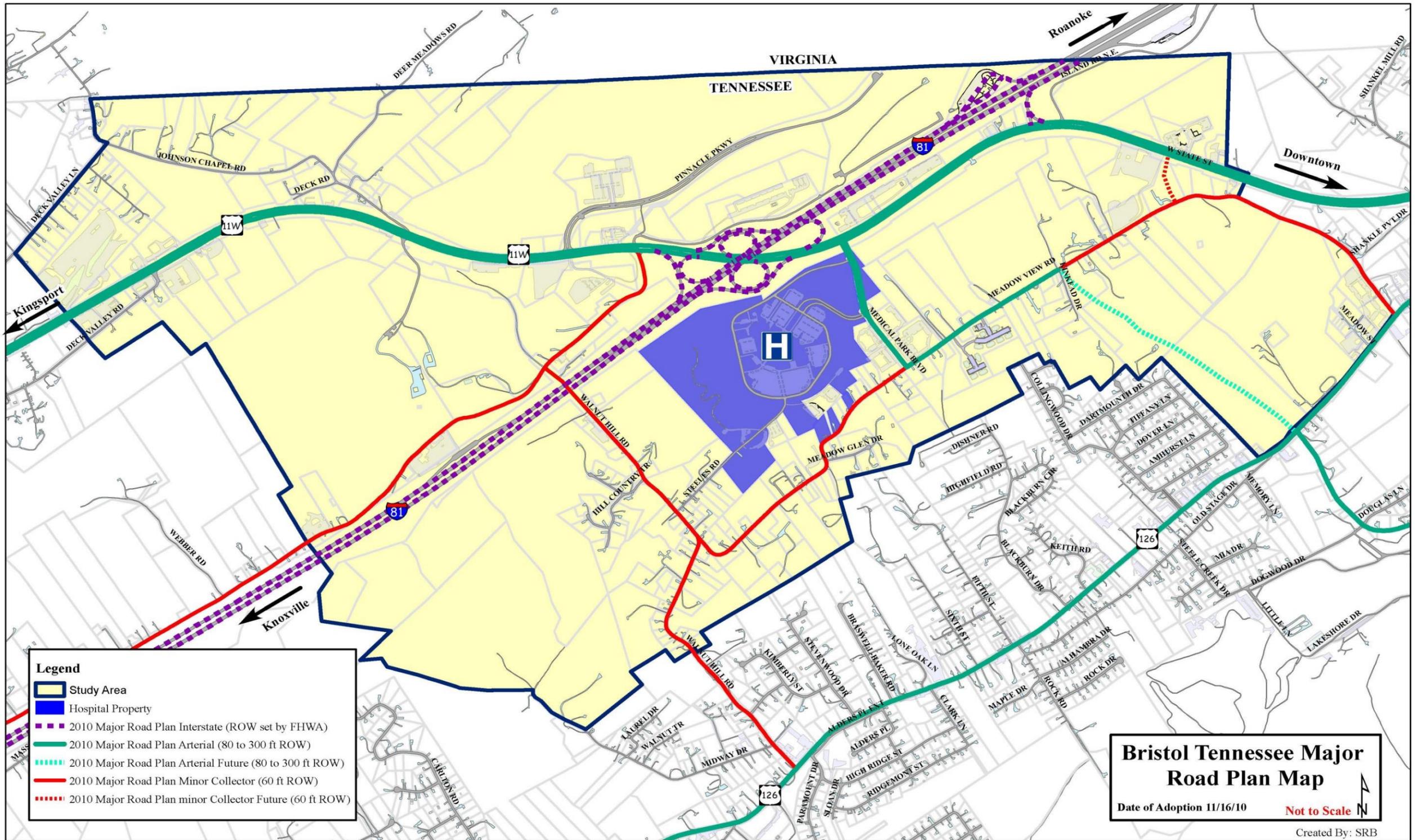


Figure 7 - Bristol Tennessee Major Road Plan Map

## 5.1 HISTORY

Bristol's original hospital was Kings Mountain Hospital, located on West State Street in Bristol, Virginia. Kings Mountain Hospital was succeeded by Bristol Memorial Hospital. Bristol Memorial straddled the Tennessee-Virginia State line, located behind what is now the Kroger Shopping Center on Gate City Highway (Refer to Figure 8).



**Figure 8 - Bristol Memorial Hospital**

Having outgrown space limitations of Bristol Memorial Hospital's (Refer to Figure 8) facility, Bristol Memorial Hospital relocated to the current hospital campus, Bristol Regional Medical Center (BRMC). BRMC began receiving patients in 1994. Easy access and room for expansion were targeted as key goals in this move. The hospital's emergency rooms are visited by 63,000 patients annually with hospital admissions exceeding 15,000. Physicians performed over 3,000 inpatient and 4,500 outpatient surgeries.

The property on which National College is located was originally a Comfort Suites hotel. A wealth of business activities has created the community that is currently the hospital study area.

Multiple annexations in the study area occurred dating back to 1984, with the most recent in 2004 (Refer to Figure 9). At the time the property where the hospital now resides was annexed it was given zoning designations considered at the time appropriate for future anticipated land use of the area. A small portion along Highway 11W to the northwest is located outside Bristol's city limits but is inside the Urban Growth Boundary. The Urban Growth Boundary, through Public Chapter 1101 is an area adjoining the city but outside Bristol's municipal limits where growth is expected.

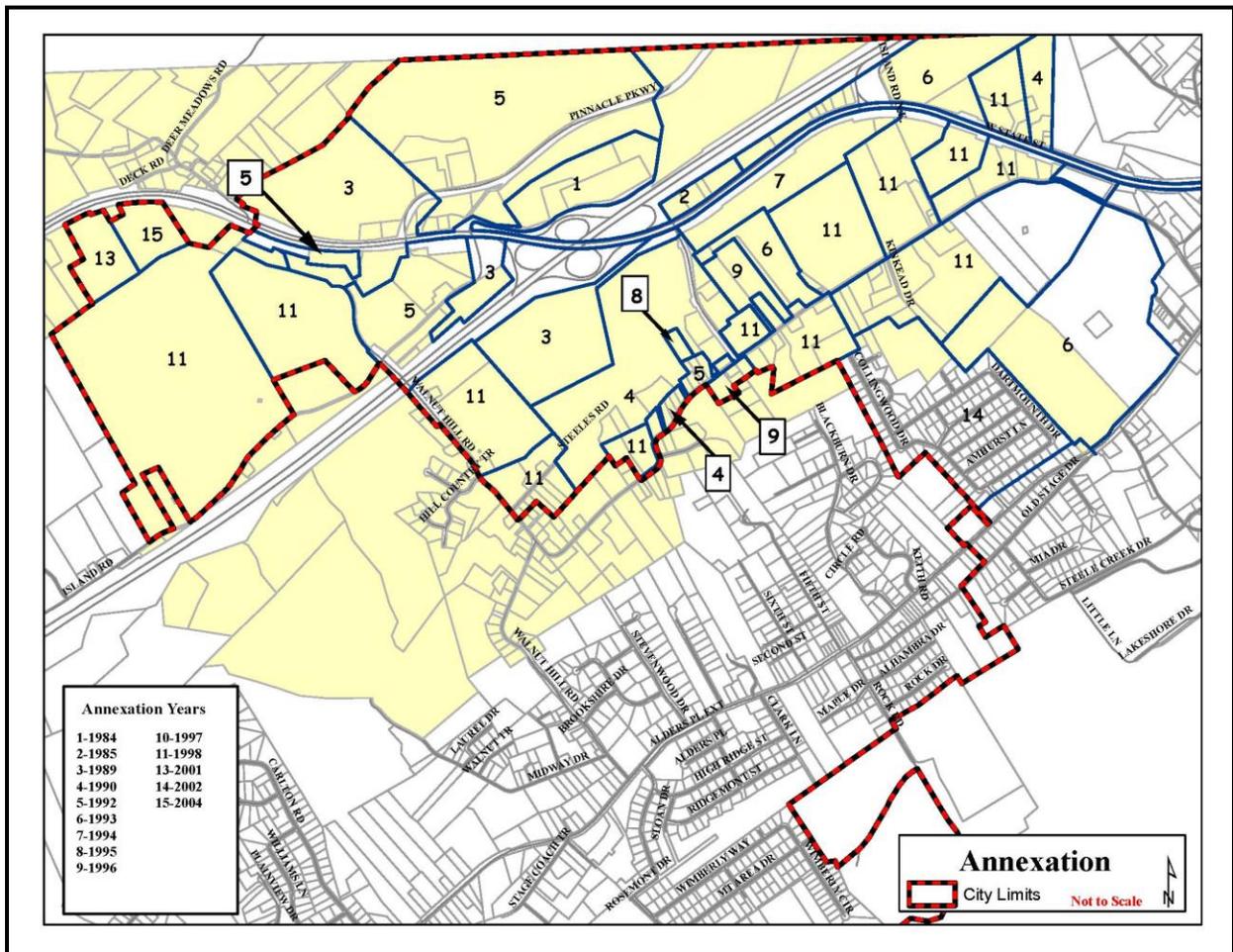


Figure 9 - Annexation Map

The portion of the BRMC property that was annexed in 1990 was provided with the B-3 (General Business) zoning designation (BTA90-04). The portion of BRMC property already in the city was rezoned from M-1 (Light Industrial/Business) to B-3 in that year.

## 5.2 DEVELOPMENT

### PUBLIC CHAPTER 420 – BORDER REGION RETAIL TOURISM DEVELOPMENT DISTRICT ACT

In 2011 the Tennessee Legislature enacted the creation of Public Chapter 420 – The Border Region Retail Tourism Development District Act. This enabled those municipalities which directly abut state lines the ability to capture sales tax revenue which would otherwise be lost to neighboring states. The local government may receive sales tax revenues in the amount of the incremental increase in the state sales tax resulting from the Border Region Retail Tourism Development District (Refer to Figure 10).

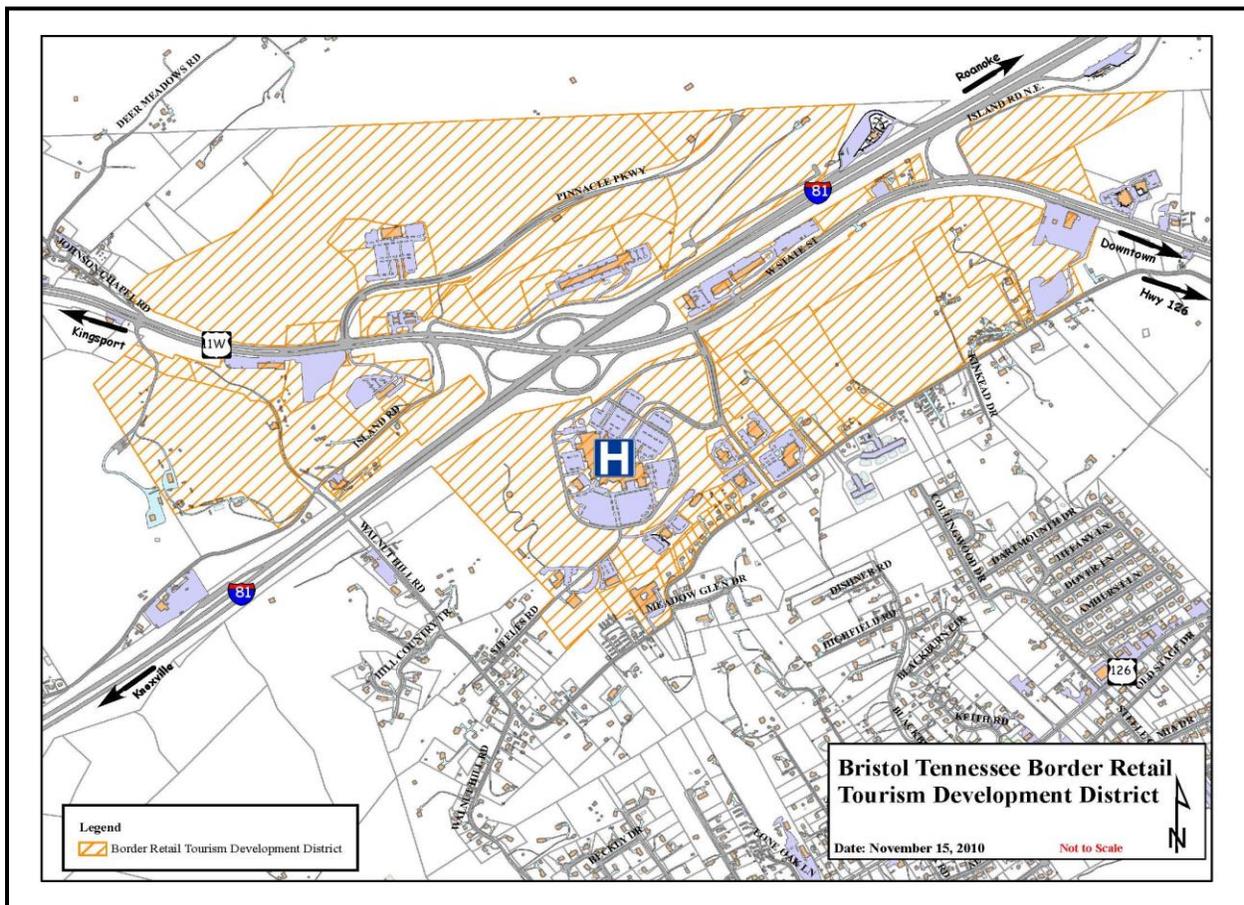


Figure 10 - Border Retail Tourism Development District

The district boundary within Bristol, Tennessee is comprised of 807 acres of commercially zoned properties along the City's northwesterly city limit, inclusive of Exit 74 and the newly named regional development "The Pinnacle". The entire district falls within this study area. The Pinnacle is located to the north of the BMRC property across Interstate 81.

## **THE PINNACLE DEVELOPMENT (Master Plan)**

Approximately 296 acres of property identified as Bristol West were rezoned in 2012 from B-3 (General Business), R-3 (Multi-Family Residential), & M-2 (General Industrial) to PBD (Planned Business District). The Pinnacle Phase I Master Plan and The Pinnacle, Phase 1 subdivision plat were also approved by Planning Commission in 2012. The current revised concept plan, approved in 2013, is shown below. Building permits on this site are current (Refer to Figures 11, 12, and 13).





Figure 12 - Looking west, in the direction of Knoxville, toward the Pinnacle Development



Figure 13 - Looking northwest, in the direction of Kingsport, toward the Pinnacle Development

## **COMMUNITY FACILITIES**

### **PINNACLE PARK**

Within the study area is an enormous commercial development under construction, known as The Pinnacle. When the development is complete, it will include a moderate-sized community park owned by the City of Bristol. The park will be named Pinnacle Park and will include a large manmade lake that is outlined by a landscaped walkway. The lake will include a small waterfall feature and will be landscaped with trees that are native to the Appalachian region. The lake will be equipped with a fishing pier and a bubbler fountain. The walkway will include an observation plaza, multiple observation points and a boardwalk (Refer to Figure 14).



Figure 14 - Pinnacle Park Master Plan

## 6 INFRASTRUCTURE

### 6.1 TRANSPORTATION

The study area is traversed by U.S. 11W (West State Street) and Interstate 81 in the north. The south is partially bounded by S.R. 126 (Blountville Highway). Walnut Hill Road serves as partial border to the west, and Meadowview Road is located in the east. Medical Park Boulevard, which currently runs between West State Street and Meadowview Road, runs along the BRMC campus. The existing routes to BRMC from the southwest are noted as narrow with deficient horizontal and vertical alignments, resulting in tenuous conditions for emergency vehicles and the general public.

### ROADWAYS IN STUDY AREA

#### Medical Park Boulevard

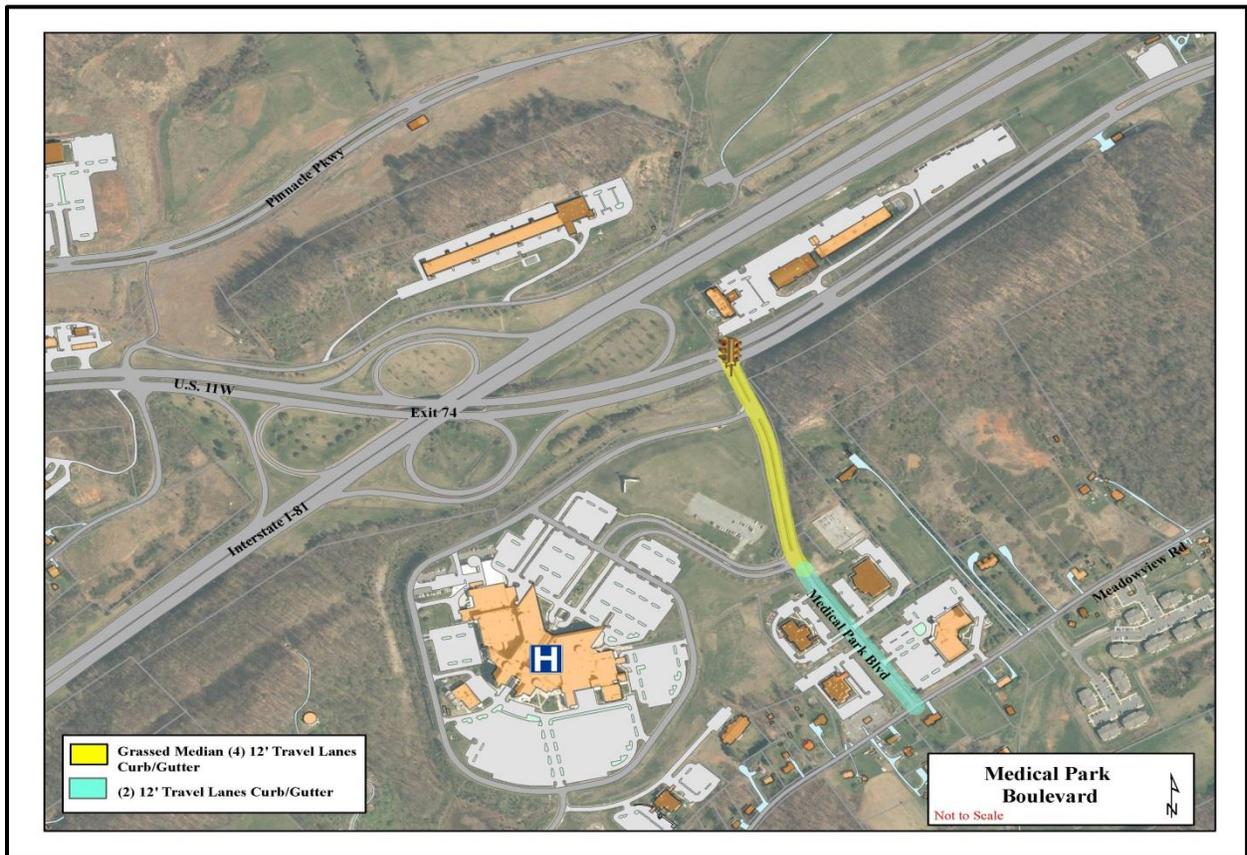


Figure 15 - Medical Park Boulevard Map

Medical Park Boulevard is functionally classified as a collector. It connects U.S. 11W (West State Street) and Meadowview Road and provides access to BRMC. The typical section from

U.S. 11W (West State Street) to the main entrance to BRMC consists of four 12' lanes with grass median and curb & gutter, and two 12' lanes with curb & gutter from the hospital entrance to Meadowview Road. The 2007 average daily traffic of Medical Park Boulevard is 22,477 (Refer to Figure 15).

U.S. 11W (West State Street)

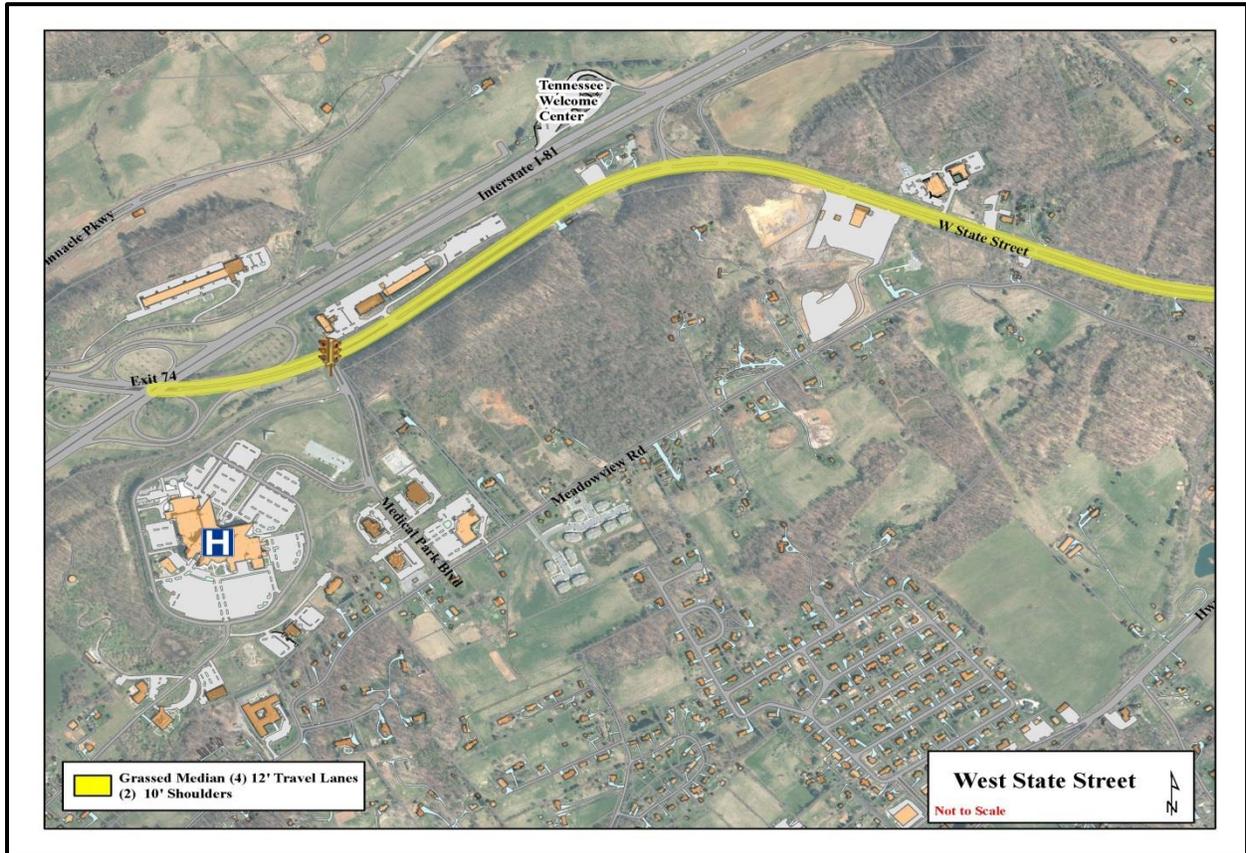


Figure 16 - West State Street Map

U.S. 11W (West State Street) is functionally classified as an arterial that serves as a major east/west thoroughfare through Bristol, and continues to the northeast into Virginia and continues to the south from the study area towards Kingsport. The typical roadway section consists of four 12' lanes, 10' shoulders, and a grass median. According to a count collected by TDOT in 2007, the average daily traffic of West State Street is 13,152 (Refer to Figure 16).

Meadowview Road

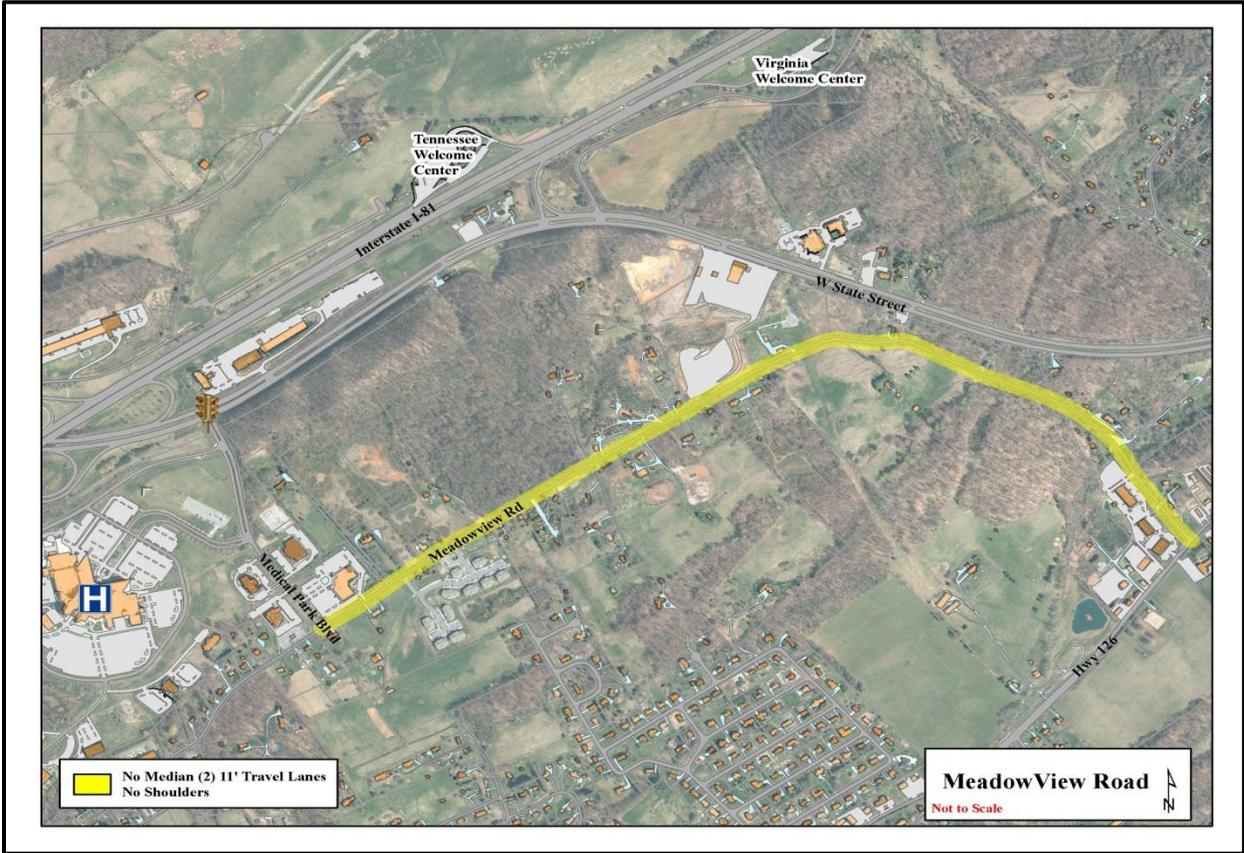


Figure 17 - Meadowview Road Map

Meadowview Road is functionally classified as a collector that connects S.R. 126 and Medical Park Boulevard. The typical roadway section consists of two 11’ lanes with no shoulders. According to a count collected by TDOT in 2007, the average daily traffic of Meadowview Road is 1,024 (Refer to Figure 17).

S.R. 126 (Blountville Highway)

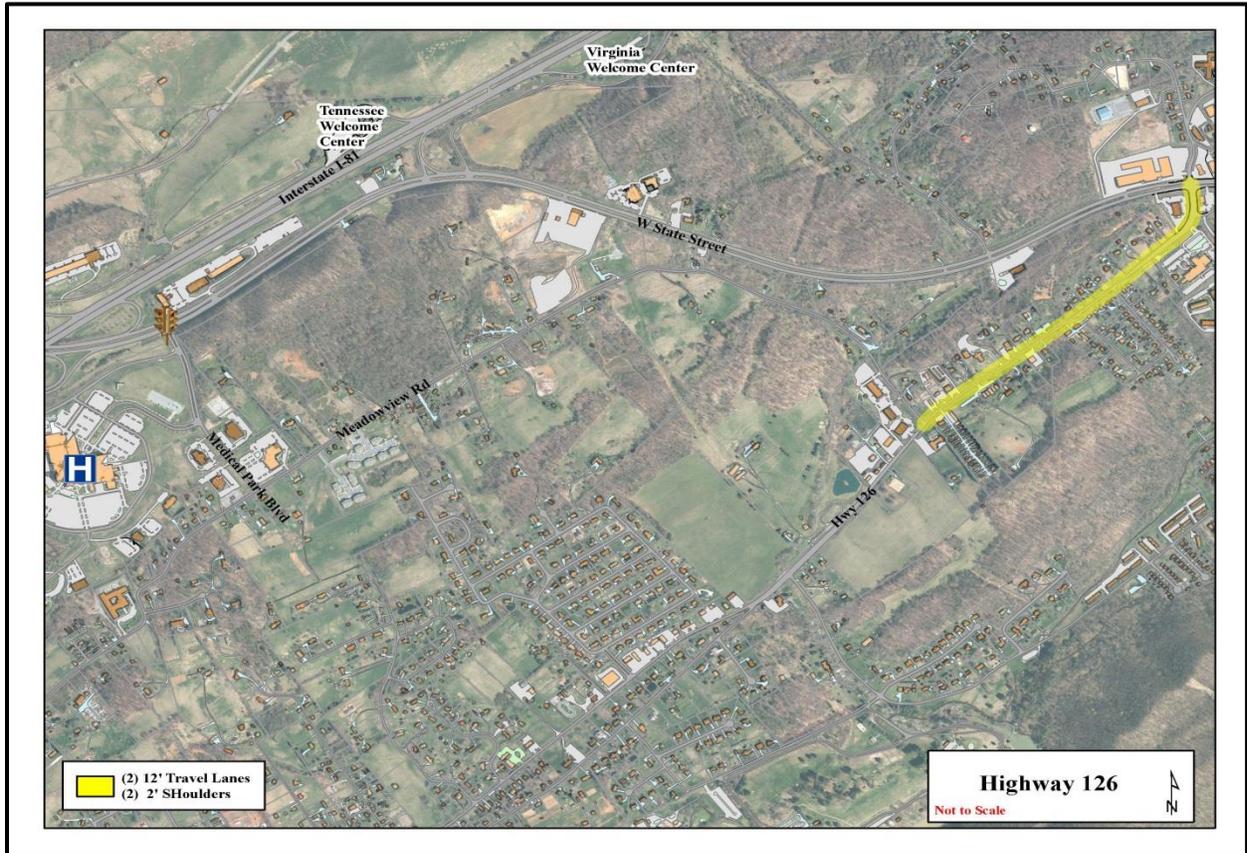


Figure 18 - Highway 126 Map

S.R. 126 (Blountville Highway) is functionally classified as an arterial that serves as a major north/south thoroughfare between Bristol and Blountville, and serves as the partial southern boundary of the study area. The typical roadway section consists of two 12' lanes and 2' shoulders. According to a count collected by TDOT in 2007, the average daily traffic of S.R. 126 is 8,114 (Refer to Figure 18).

## Interstate 81

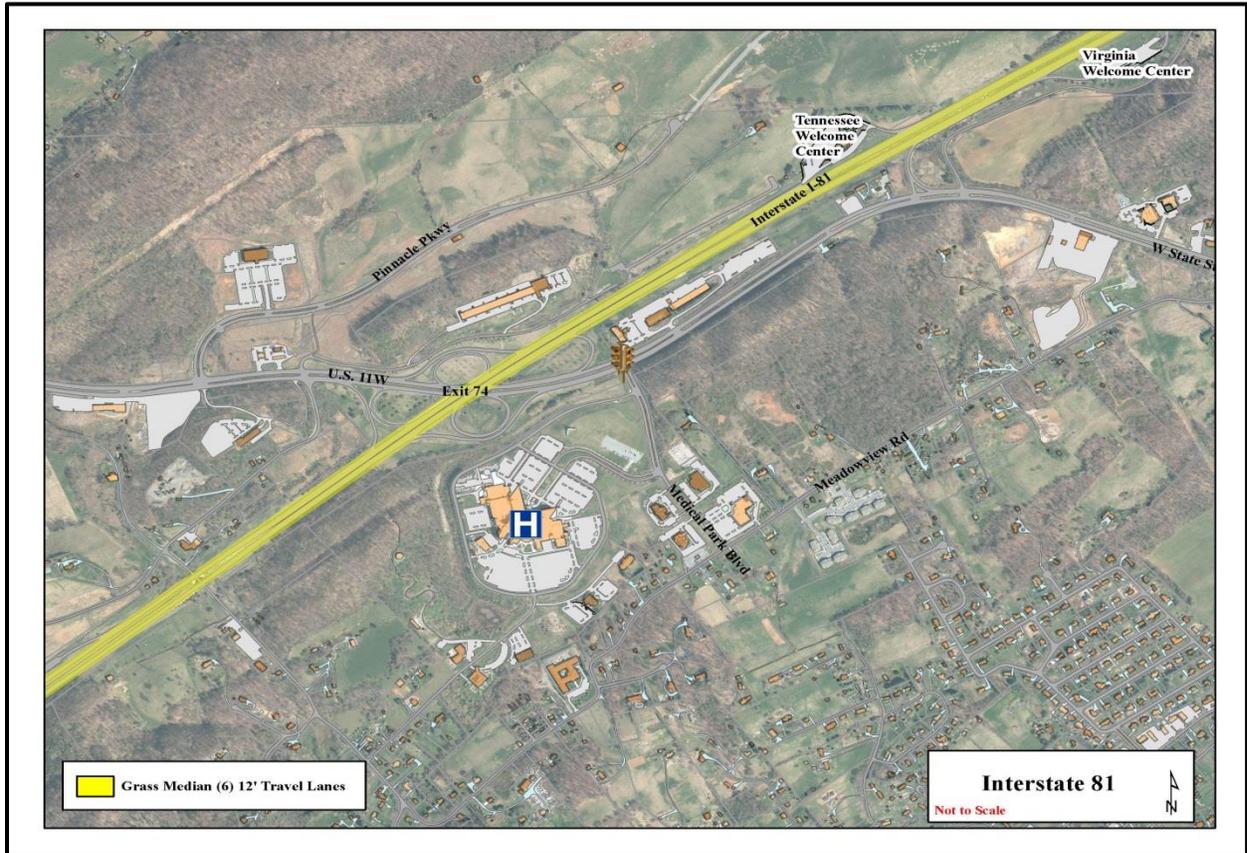


Figure 19 - Interstate 81 Map

Interstate 81 is functionally classified as an arterial that runs from Dandridge, Tennessee, west of the study area, northwest through the study area and then north to the Canadian border around Fishers Landing, New York. The typical roadway section consists of four 12' lanes and 6' shoulders. According to a count collected by TDOT in 2012, the average daily traffic of I-81 is 29,380 (Refer to Figure 19).

## **ROADWAY MODIFICATION & ADDITION STUDIES**

### Median Modifications

This project involves the installation (or lengthening at Medical Park Boulevard) of left turn lanes at selected median opening location on West State Street from Sycamore Street to Interstate 81, and on U.S. 11W at its intersection with Island Road. Not every median opening needs modification. This project consists of work at a series of locations, so this project lends itself to being broken into sections (Refer to Figure 16).

### Modifications and Connector Addition to Meadowview Road

This project involves vertical and horizontal alignment modifications of Meadowview Road between Medical Park Boulevard (at its new eastern intersection) and Highway 126. The purpose is to improve sight distance and vehicle operations. The portion from Medical Park Boulevard to a point east of the Collingwood subdivision would also function as an extension of Medical Park Boulevard. The construction of a new four-lane connector between Meadowview Road and West State Street is a possible project component (Refer to Figure 20).

### Medical Park Boulevard Extension - Studied

This proposed project will provide a direct route from S.R. 126 to BRMC, West State Street, and Interstate 81. Currently, no direct route exists to link traffic from S.R. 126 to Interstate 81. The project will tie into the existing Medical Park Boulevard on the north end and S.R. 126 on the south end. It is expected that the project will greatly increase accessibility to BRMC from S.R. 126. It will also improve safety for vehicles, bicycles and pedestrians while reducing travel delays and enhancing local economic development opportunities. Several options were considered for this project. For each option, a horizontal and vertical alignment was developed, two typical sections were considered, and cost estimates were prepared for each of the typical sections.

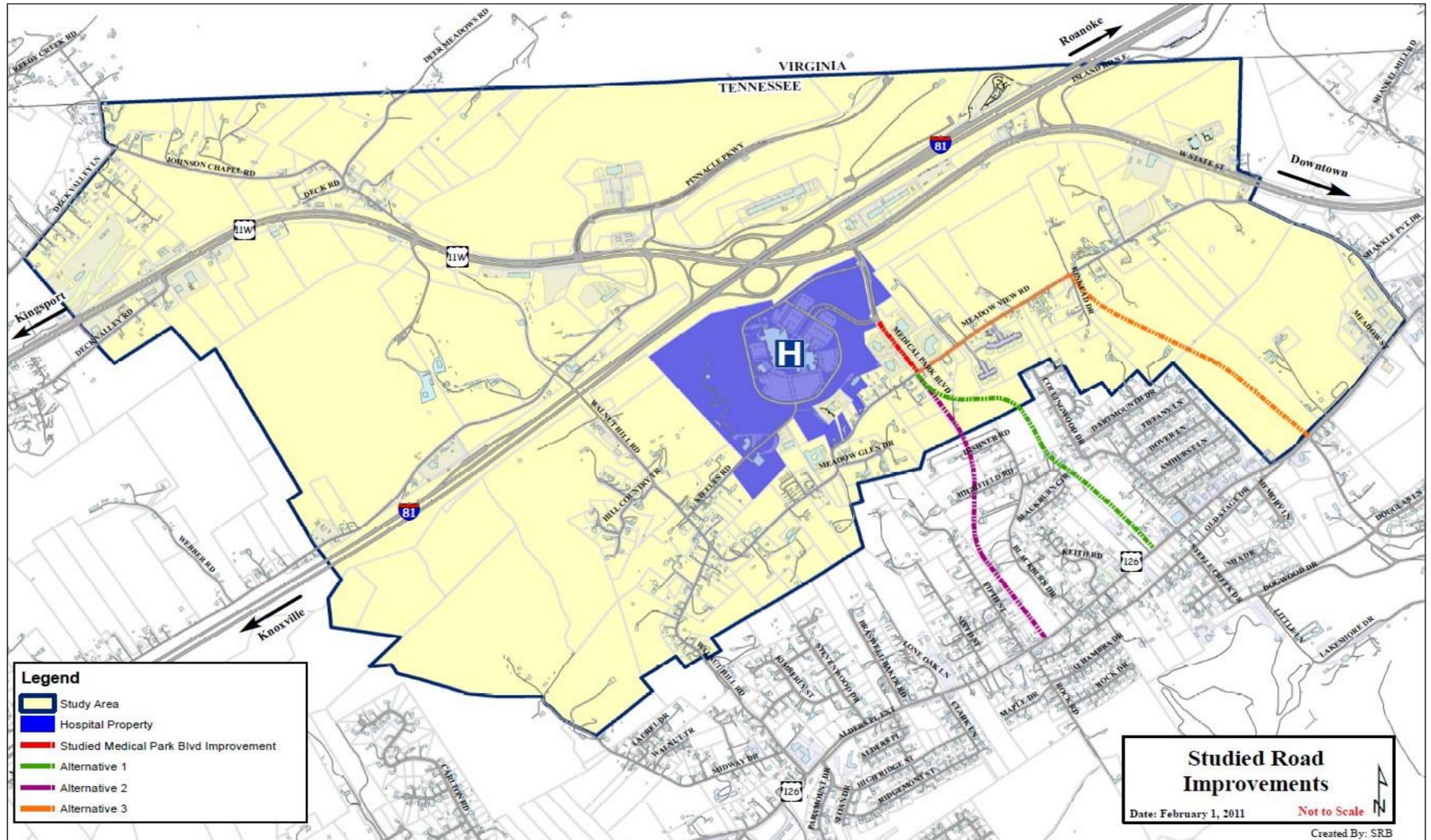


Figure 20 - Studied Road Improvements

*New Alignment Alternative 1, Options A and B* – This alternative extends Medical Park Boulevard 4052' (0.77 miles) from Meadowview Road to S.R. 126 650' south of Collingwood Road. This horizontal alignment is based on the alignment as shown in the Feasibility Study of Medical Park Boulevard from Meadowview Road to S.R. 126, as prepared by the TDOT Planning Division, dated February 25, 2005. This horizontal alignment is based on a 40 mph design speed and includes four curves with a minimum radius of 520'. The vertical alignment is also based on a 40 mph design speed with a minimum grade of 2% and maximum grade of 11%. Two typical sections were investigated for this alternative, along with a slope analysis for potential development. A summary of Options A and B is detailed below.

- Option A - The slope lines and proposed right-of-way is based on two 12' travel lanes with curb and gutter and 5' sidewalk within a 50' proposed right-of-way. Slope easements are shown outside the proposed right-of-way limits. The total cost of this option is \$5.5 million and displaces three single family homes, two garages and one business.
- Option B - The slope lines and proposed right-of-way is based on two 12' travel lanes with 12' raised grass median, curb and gutter, 3.5' utility strip, and 5' sidewalk within a 60' proposed right-of-way. Slope easements are shown outside the proposed right-of-way limits. The total cost of this option is \$6.0 million and displaces three single-family homes, two garages and one business.
- It should be noted that TDOT's Feasibility Study included a typical section of four 12' travel lanes with 14' raised median, curb and gutter, and 5' sidewalk within an 85' proposed right-of-way. The total cost was \$7.1 million with eight family displacements and one business displacement.

*New Alignment Alternative 2, Options A and B* – This Alternative extends Medical Park Boulevard 4016' (0.76 miles) from Meadowview Road to S.R. 126 and near Blackburn Road. This horizontal alignment is based on the alignment as suggested by the City of Bristol and is based on a 40 mph design speed and includes two curves with a minimum radius of 1000'. The vertical alignment is also based on a 40 mph design speed with a minimum grade of 1% and maximum grade of 12%. Two typical sections were investigated for this alternative, along with a slope analysis for potential development. A summary of Options A and B is detailed below.

- Option A - The slope lines and proposed right-of-way is based on two 12' travel lanes with curb and gutter and 5' sidewalk within a 50' proposed right-of-way. Slope easements are shown outside the proposed right-of-way limits. The total cost of this option is \$4.9 million and displaces three single family homes and three mobile homes.
- Option B - The slope lines and proposed right-of-way is based on two 12' travel lanes with 12' raised grass median, curb and gutter, 3.5' utility strip, and 5' sidewalk within a 60' proposed right-of-way. Slope easements are shown outside the proposed right-of-way limits. The total cost of this option is \$5.4 million and displaces three single-family homes and three mobile homes.

*New Alignment Alternative 3, Options A and B* - This alternative extends Medical Park Boulevard 3774' (0.71 miles) from Meadowview Road near Kinkead Drive to S.R. 126 at Steele Creek Road. The horizontal alignment is based on a 40 mph design speed and includes two curves with a minimum radius of 1000'. The vertical alignment is also based on a 40 mph design speed with a minimum grade of 1% and maximum grade of 9% (Refer to Figure 7). A summary of Options A and B is detailed below:

- Option A – A proposed right-of-way is based on two 12' travel lanes with curb and gutter and a 5' sidewalk within a 50' proposed right-of-way. Slope easements are located outside the proposed right-of-way limits. The total cost of this option is \$3.7 million with no home displacements.
- Option B – The right-of-way proposal is based on two 12' travel lanes with a 12' raised grass median, curb and gutter, 3.5' utility strip, and a 5' sidewalk within a 60' proposed right-of-way. Slope easements are located outside the proposed right-of-way limits. The total cost of this option is \$4.2 million with no home displacements.

Meadowview Road Upgrade - This upgrades the existing Meadowview Road 2431' (0.46 miles) from Medical Park Boulevard to Kinkead Drive. The horizontal alignment is based on the existing centerline of Meadowview Road, which is equivalent to a 40 mph design speed with four curves with a minimum radius of 5000'. The vertical alignment is also based on a 40 mph design speed with a minimum grade of 1% and maximum grade of 5%. The typical roadway section includes utilization of the existing travel lanes and widening the existing roadway from U.S. 11W (West State Street) to BRMC. Two 12' lanes are proposed with curb and gutter and a 5' sidewalk. It is anticipated that this option can be constructed within a 40' existing right-of-way (based on tax map information) and slope easements will be required outside the limits of the existing right-of-way limits. The total cost for this upgrade is \$1.5 million with no house displacements (Refer to Figure 20).

Medical Park Boulevard Upgrade - This upgrades existing Medical Park Boulevard from the existing BRMC entrance to Meadowview Road, approximately 850' (0.16 miles). The existing typical roadway section of two 12' lanes with curb and gutter will be widened to include a 10' raised grass median with two additional 12' travel lanes with curb and gutter. It is anticipated that additional right-of-way or slope easements will not be required on this upgrade. Horizontal and vertical alignments were not evaluated. The total cost for the road upgrade is \$1.0 million with no home displacements (Refer to Figure 20).

## **PEDESTRIAN ACCESS & SIDEWALKS**

Currently there are no sidewalks in the study area. However, the Medical Park Boulevard Extension includes sidewalks as part of the new road construction and the upgrade to Meadowview Road. The new road extension and Meadowview Road would be equipped with 5' sidewalks on both sides. The Pinnacle development will also construct sidewalks on both sides of all streets. The Pinnacle sidewalks are designed to extend from Highway 11W, down Pinnacle Parkway and spread throughout the entire development (Refer to Figure 21).

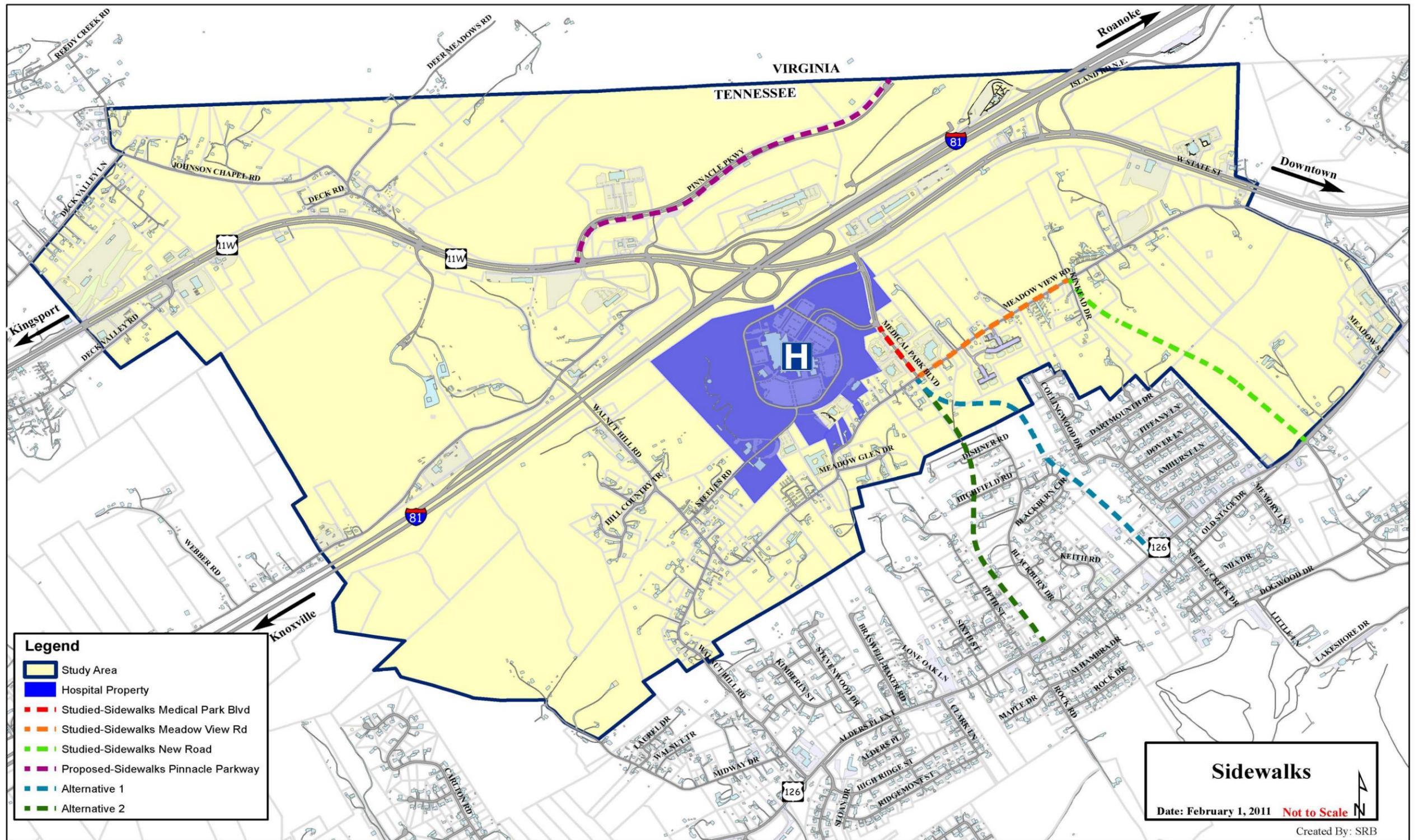


Figure 21 – Proposed Sidewalks

## **FIXED BUS ROUTE TRANSPORTATION**

The study area is served by the Hospital Route, as shown on the Bristol Transit Map (Refer to Figure 22). The Bristol Transit and Bristol Virginia Transit systems have provided transportation to the Greater Bristol area since the early 1980's. Six buses operate 5 days a week (Monday - Friday) and cover 850 miles a day with both programs offering convenient, inexpensive transportation to key locations in the city. Service within the study area includes the following streets: West State Street, Medical Park Boulevard, and Meadowview Road. Transit stops in this study area include Sapling Grove Medical Center and BRMC. The fixed route bus service operates from a downtown transfer station in the 800 block of State Street. The overall service of the transit system is provided to commercial and residential areas, as well as the medical/hospital campus and educational institutions. Transit service is offered on weekdays from 6:15 AM to 6:00 PM, except for holidays observed by the City.

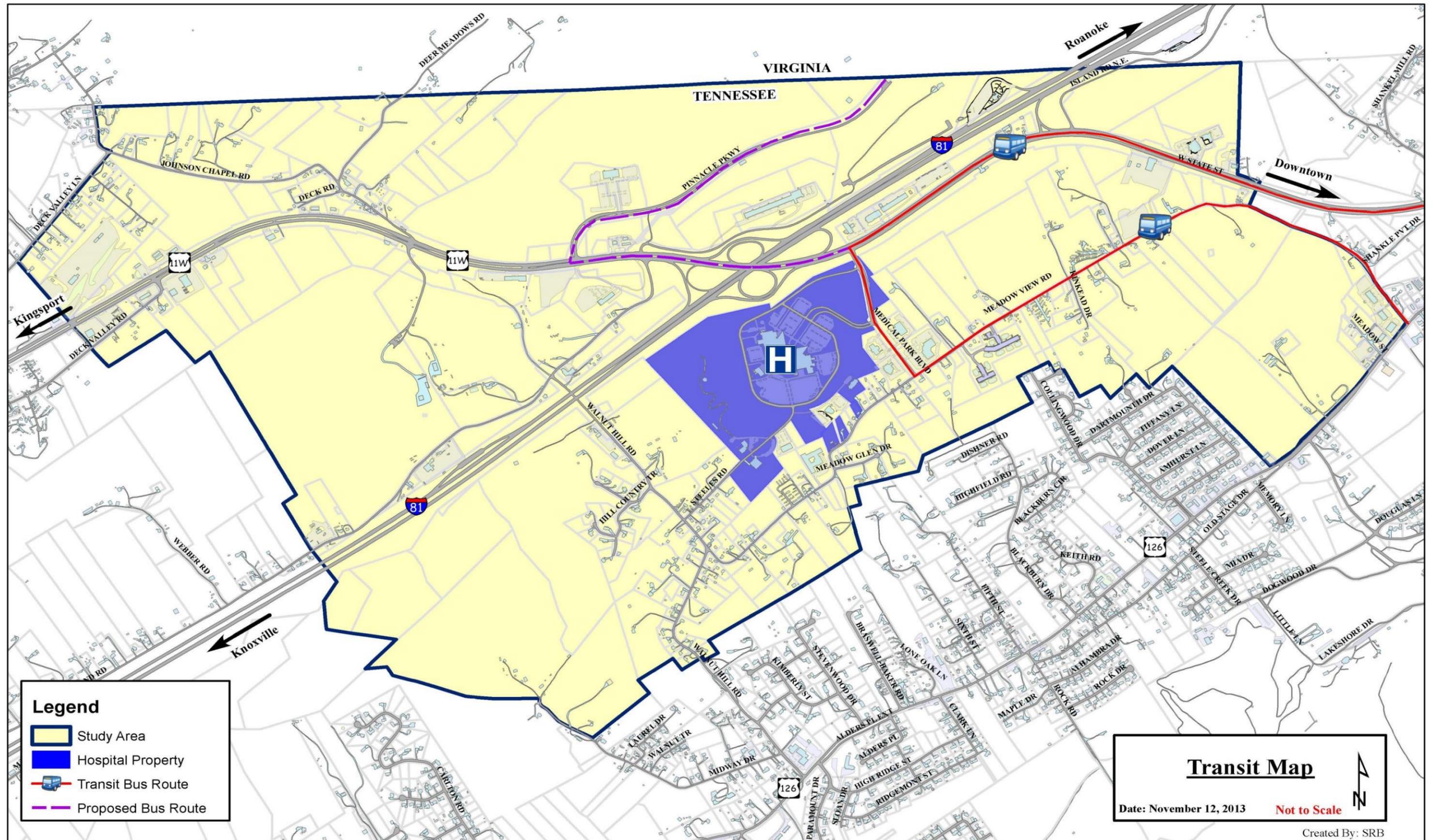


Figure 22 - Transit Map

## **BIKE ROUTES AROUND BRMC**

One bike route runs through the study area, located on U.S. 11W between Bristol's northern city limits and Interstate 81. There are two proposed bicycle routes that would have a direct impact on the study area. These proposed routes are named the Far West Bicycle Route and the Lakeside Bicycle Route. The Far West Bicycle Route would serve as a connector between the U.S. 11W route, the western connection to the Bristol, Virginia bicycle route system and the bicycle routes connecting to Steele Creek Park. It begins at the intersection of Highway 11W and Island Road, then travels to Walnut Hill Road, to Steele Road, Medical Park Boulevard, onto West State Street ending at the intersection of West State Street and Euclid Avenue/Gate City Highway in Virginia. The Lakeside Bicycle Route would serve as a connector between the Far West Route and U.S. 11W through Steele Creek Park to downtown and southern Bristol. The roads in the study area that are impacted by this route are Medical Park Boulevard and Meadowview Road. The Far West Route is 4.38 miles long and the Lakeside Route is 6.99 miles long, of which 2.10 miles already exists in Steele Creek Park and Rooster Front Park (Refer to Figures 23 & 24).

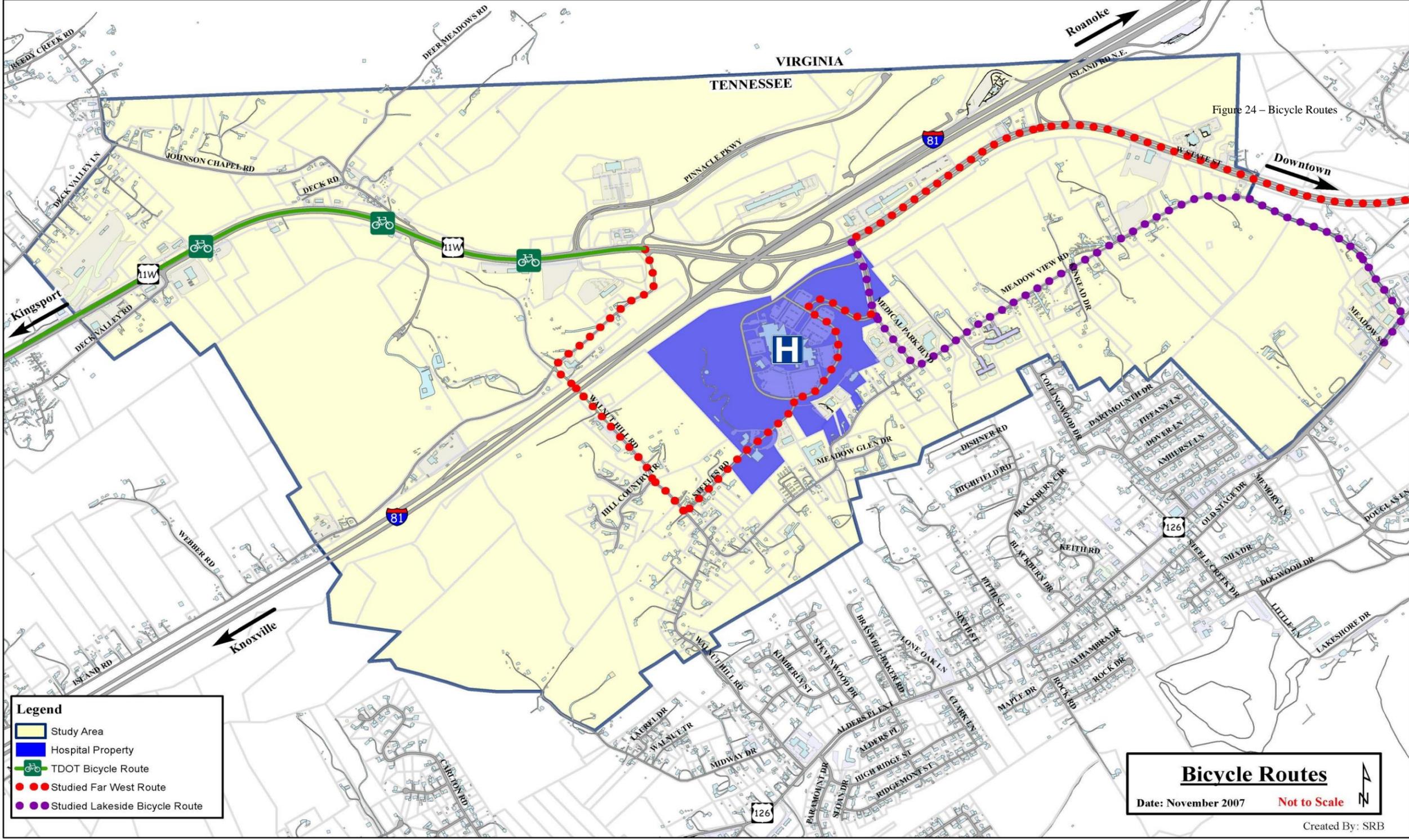


Figure 24 - Bicycle Routes

Figure 23 - Bicycle Routes

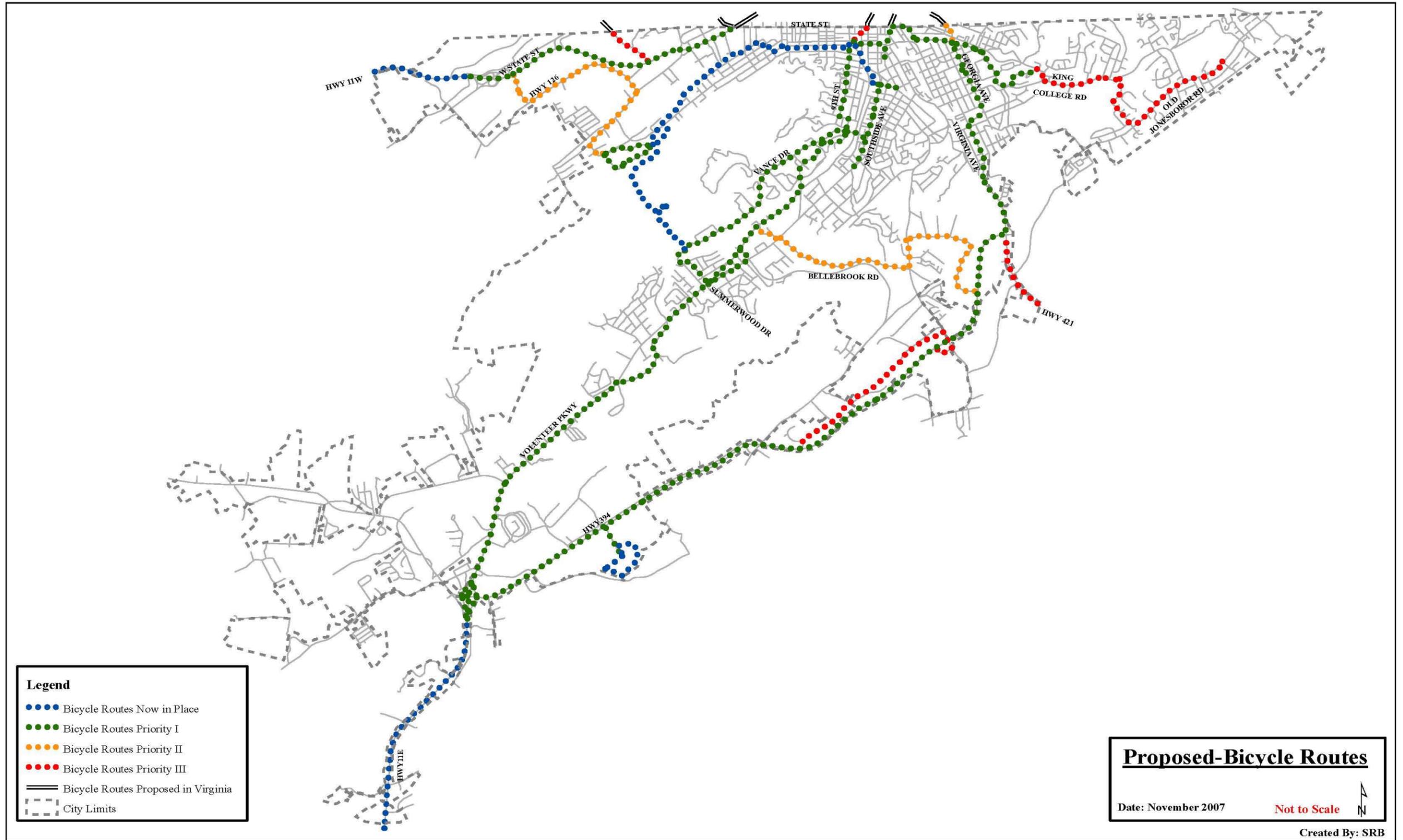


Figure 24 - Proposed Bicycle Routes

## **Road Connection to Interstate 81**

Staff analyzed land uses in the study area in relation to Interstate 81 and other state routes. The following letter sums the result of this study.

On September 6, 2013 Interim City Manager Bill Sorah drafted a resolution requesting the Tennessee Department of Transportation (TDOT) to study the feasibility of the creation of an inter-connecting route between S.R. 34 (in the vicinity of Bristol Motor Speedway), S.R. 126, S.R. 1, and Exit 74 on Interstate 81. The lack of east-west linkage has long been a problem for traffic movement in Bristol. The location of BRMC on S.R. 1 near Exit 74 off Interstate 81 has increased awareness of the difficulty of emergency response vehicles to easily access the hospital facility for the southern portions of S.R. 34. In addition, The Pinnacle will increase the need for an east-west connector route to address increased traffic flow to the Exit 74 of I-81/SR1 area. Lastly, this new connector route would enhance traffic flow into and out of events held at Bristol Motor Speedway. (Letter sent from the City Manager, Bill Sorah, to Commissioner John Schroer of the Tennessee Department of Transportation on September 6, 2013)

## **6.2 UTILITIES**

### **WATER**

The city of Bristol serves as both potable and non-potable water provider within its corporate limits with approximately 11 miles of water lines within the study area. A pump station is included on the north side of Interstate 81 at the bottom of Holiday Inn Drive. A new 300,000 gallon capacity water tower is being constructed beside Medical Park West to help support the potable water needs of The Pinnacle. Blountville Utility District provides water (only) service to the study area not within the corporate limits south of Interstate 81 and north of Steele Creek Park. Properties north of Interstate 81 to the Virginia state line are provided water service by the City of Bristol (Refer to Figure 25).

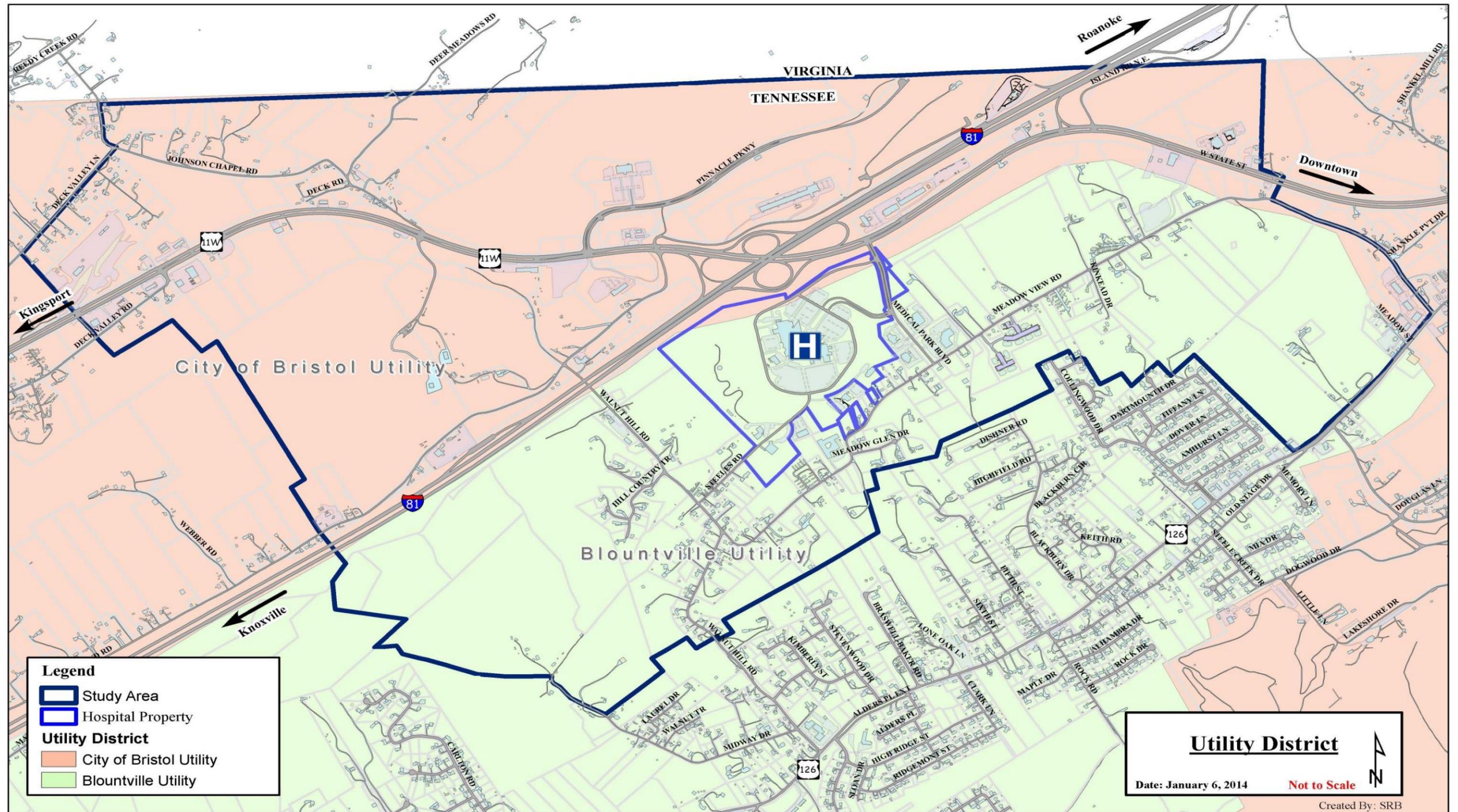


Figure 25 - Utility District

## **SANITARY SEWER**

Sanitary sewer provided by Bristol, Tennessee is extended to all Bristol residents and developments. Lines extend for roughly 9 miles around the study area with forced main lines running along West State Street, crossing over Interstate 81 thence running northward along U.S. 11W. Those sanitary trunklines which are located outside corporate limits are often there due to cost saving designs in getting effluent back to the municipal sewer plant. A main trunkline runs south along Walnut Hill and traverses southwest to its point of commencement at the intersection of Exide Drive and Highway 11E.

## **ELECTRICITY/GAS**

Electrical service is provided by BTES. Internet and landline phone services have several providers, including CenturyLink, CharterNet and BTES. Natural gas is also available within the region, serving predominantly subdivisions adjacent to S.R. 126 (Collingwood and Steele Creek Colony). ATMOS Gas also serves the BRMC campus and will serve The Pinnacle Development when complete

## **FIRE STATION**

Construct a fire station in the vicinity of Exit 74 (Refer to Figure 26).

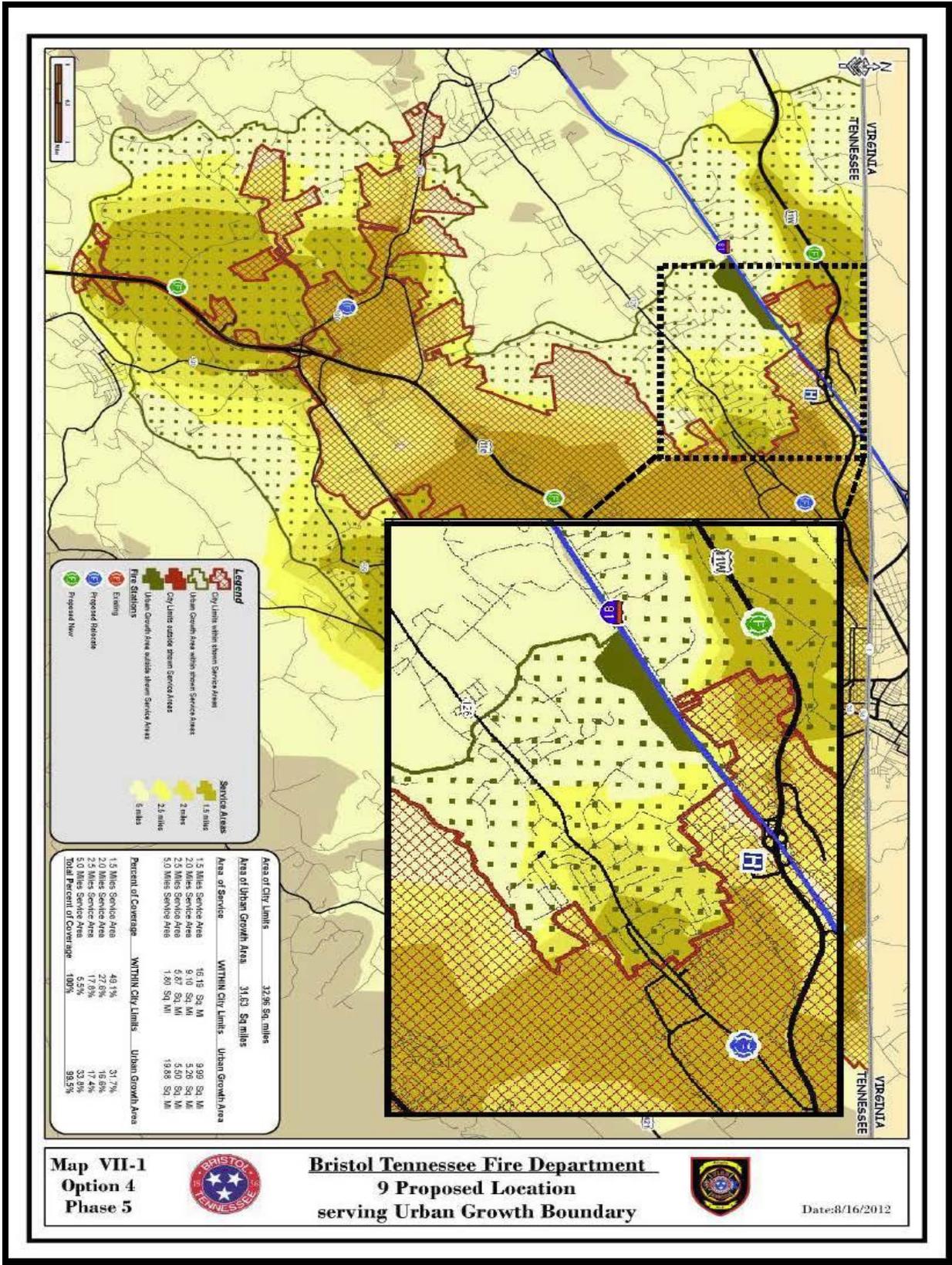


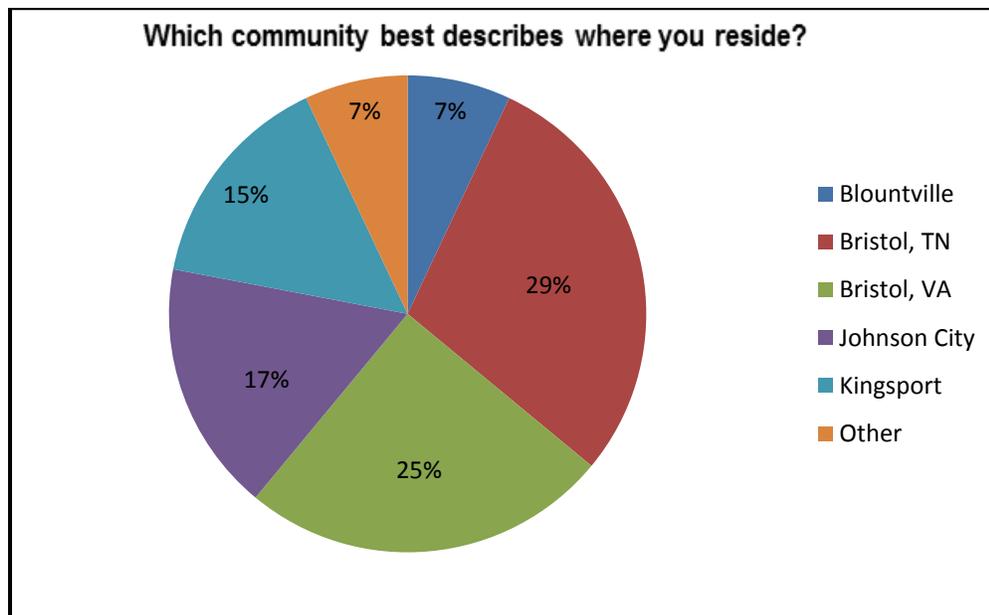
Figure 26 - Fire Department Proposed Location Close-up

## 7 ANALYSIS OF SURVEYS

To obtain information from individuals working in the community, voluntary surveys were distributed to employees of BRMC and National Business College. Data obtained from that survey is shown below. For discussion purposes, the data was separated into four categories.

### PLACE OF RESIDENCY

The largest percentage of respondents, 29%, live in Bristol, TN, followed by 25% who live in Bristol, VA and 17% who commute from Johnson City, TN.



Which community best describes where you reside?	
Blountville	7%
Bristol, TN	29%
Bristol, VA	25%
Johnson City	17%
Kingsport	15%
Other	7%

When asked the type of residential style that would appeal to employees if they were to move to a location closer to the hospital, the residential style of a single-family home on a large lot was the largest group, with 37.1%, followed by 25.7% who were interested in condominiums or townhomes and 25.7% who were interested in a gated community.

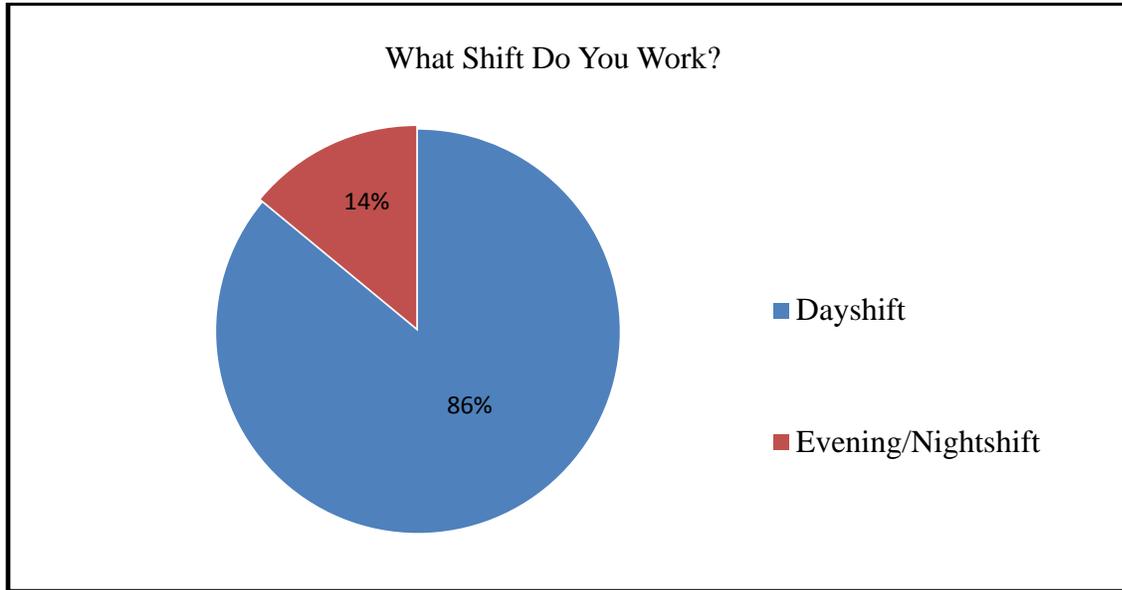
Which of the following would most appeal?

Single family home on a small lot	5.7%
Single Family home on a large lot	37.1%
A gated community with amenities	25.7%
A condo or townhouse where the common areas are taken care of by someone else	25.7%
Other	5.7%

A good amount of residential land use is located in the study area. Housing in a variety of forms and densities is of interest to hospital workers. Fostering this flexibility would benefit all parties involved. Provision for or allowance of these types of land uses is essential.

## WORK/CLASS SHIFTS

The majority of survey participants (86%) works or attends class during dayshift hours. Fourteen percent (14%) work or attend class in evenings or night shift hours.



## ACTIVITIES DURING BREAKS

When asked the activities engaged in during breaks, participants had the opportunity to choose as many activities as they wanted. The activity receiving the largest percentage response was eating in at 50%, with the next largest response eating out (41%). The survey showed that 40% of participants run errands. Also, 39% walk during their breaks, 23% of participants rest and 22% shop.

<u>Activities during breaks</u>	<u>Response Percent</u>
Walking	39%
Resting	23%
Reading	20%
Running errands	40%
Shopping	22%
Eating in	50%
Eating out	41%
Working out	7%
None of the above	7%

## ACTIVITIES IF CONVENIENTLY LOCATED

The employees in the area and those involved with the college surveyed have preferences for gas station/convenience store purchases most often going home from work or class, if conveniently located, at 84.2%. The next highest percentage of likely purchases, if conveniently located, is grocery store shopping as customers go home from work or class. This received a response rate of 81.8%. Survey takers were also interested in shopping for conveniently located clothing stores as they go home from work or class, responding at 78.7%. The most often time to visit a conveniently located coffee shop is on the trip to work, at 38.0%.

<u>Activity if Conveniently Located?</u>	<u>Going to Work</u>	<u>Going</u>			
		<u>Home from Work</u>	<u>On my Break</u>	<u>Would Not Use</u>	<u>I already Use</u>
Clothing store	10.0%	78.7%	27.0%	11.3%	14.1%
Coffee shop	38.0%	16.5%	26.0%	36.3%	11.6%
Day care center	5.7%	4.7%	1.6%	83.9%	11.4%
Dine-in restaurant	11.0%	67.0%	40.9%	13.3%	9.9%
Drive-thru restaurant	41.8%	62.0%	54.7%	6.6%	23.7%
Dry cleaner laundry	18.0%	39.7%	15.5%	48.7%	3.3%
Exercise center/gym	17.3%	55.5%	15.2%	36.4%	6.0%
Grocery store	22.3%	81.8%	20.9%	8.1%	23.3%
Gas station/convenience store	50.9%	84.2%	28.6%	2.9%	28.9%
Library	6.7%	32.2%	12.2%	56.3%	8.9%
Movie theater	2.9%	46.7%	5.1%	43.3%	11.5%
Park	8.9%	48.5%	36.0%	30.1%	18.4%
Pharmacy	23.1%	58.4%	27.8%	16.9%	85.7%

Restaurants dine-in and drive-thru, received large interest if located conveniently. Respondents at 67.0% were interested in a dine-in restaurant on the way home from work or class, and 62.0% were interested in a drive-thru restaurant if conveniently located on the trip home from work or class. Additionally, 41.8% were interested in a conveniently located drive-thru restaurant on the trip to work or class, and 54.7% were interested in a drive-thru restaurant in a convenient

location to visit on work or class breaks. Also relevant were the 40.9% of respondents who were interested in a conveniently located dine-in restaurant to visit during breaks.

The drive home from work appeared the most convenient time to visit a conveniently located dry cleaner, with 39.7% interested in that service at that time. This errand could also be run on the trip to work, claiming 18.0% of interest, and during breaks, with 15.5% interested. Also, 22.3% and 20.9% are interested in grocery shopping on the way to work or during breaks.

A conveniently located pharmacy would be of interest for shoppers going home from work with 58.4% of responses as well as 27.8% on work or class breaks and 23.1% on the way to work. Respondents were interested in utilizing conveniently located gas stations/convenience stores on the way to work or class (50.9%), going home from work or class (84.2%), and on breaks (28.6%).

The largest percentage of respondents was 55.5% interested in participation in an exercise center/gym on the way home from work or class. A visit to a conveniently located library was most likely to occur going home, with 32.2% interested. Movie theaters also were most likely to be attended on the way home with 46.7% interested. A conveniently located park would be of interest going home from work or class (48.5%) and during breaks (36.0%).

Information obtained from residents, workers and students in the study area is essential in the formulation of goals.

### **Public Meeting April 10, 2014**

On April 10, 2014 a public meeting was held to share these findings. The meeting was held at National College, which is located in the study area. The Bristol Regional Medical Center Exit 74 Land Use Plan was presented at that public meeting. Then meeting attendees were invited to share ideas and ask questions. Input gathered from the public via verbal and written feedback is an invaluable resource. The comments have been categorized in one main group, land use. The groups of comments are shown below:

#### Land Use -

- Annexation – A number of residents shared interest with the city of having their property annexed into the city.
- Corridor Retail land use was suggested along Highway 11W and State Street.
- Assisted Living Facilities in the area would be beneficial.
- Commercial uses were suggested where Interstate 81 crosses Walnut Hill.
- Specific types (business specific) of commercial land uses were suggested.
- Large lot residential land use was suggested in the southwest quadrant of the study area.
- Medically related land use along the northern side of Meadowview Road, in close proximity to the BRMC.
- Multi-family land use along the southern side of Meadowview Road.

- “High end” multi-family land use was suggested on the northern side of Interstate 81, in close proximity to BRMC.

## 8 GOALS

The goals were developed by survey analysis and community meetings in conjunction with the City's Land Use Plan and Policy. The City of Bristol Tennessee assessed how it would be able to assist in the future growth and development of the study area by targeting specific goals. The strategic policies that the study recommends are: Policy 1, Policy 2, Policy 3, and Policy 8. Once these policies are identified, there are specific recommendations for each policy.

**Policy 1:** Provide sufficient park and open space to satisfy the recreational and leisure needs of the community.

Goal: Identify property with potential greenway, trail, or park in northwest section of study area.

Goal: Obtain the land for and install park space in The Pinnacle.

**Policy 2:** Provide a housing inventory that is diversified in dwelling unit type, size and design that supports the local population, attracts new residents, and creates a high quality residential environment.

Goal: Streamline assisted living/nursing homes in the zoning text to allow as a use by right.

Goal: Guide the development of large lot residential uses west of the hospital.

Goal: Minimize encroachment and maintain zoning of established residential areas.

Goal: Guide the development of multi-family residential south of Meadowview as a buffer between nonresidential along Meadowview and established residential.

**Policy 3:** Sustain existing commercial areas while providing for adequate and compatible growth and expansion.

Goal: Guide the development of commercial uses along West State Street and Highway 11W.

Goal: Guide the development of medical related uses between West State Street and Meadowview Road.

**Policy 8:** Provide sufficient land and infrastructure to stimulate and support a mixed use medical district with compatible commercial and residential growth in the hospital vicinity.

Goal: Annex as requested within the city's urban growth boundary.

- Goal: Buy land and construct a new fire station in the Exit 74 area.
- Goal: Enhance landscaping in the project area with cohesiveness in the design.
- Goal: Expand transit service in the study area.
- Goal: Study feasibility of sanitary sewer service extension along Interstate 81 between the Fairfield Inn property and Island Road.
- Goal: Study road connector between south Bristol and Exit 74.
- Goal: Study minor road connector between Highway 126 and Meadowview Road.
- Goal: With new street construction in the study area, include sidewalks/dedicated bike lanes or sidewalk combinations.
- Goal: Expand utilities in study area where needed.

**Appendix A – Surveys**

[Download](#)[Create Chart](#)1. What shift do you work?

answered question	100
skipped question	0

	Response Percent	Response Count
7a - 7p	10.0%	10
7p - 7a	2.0%	2
Dayshift	84.0%	84
Other	4.0%	4

[Download](#)[Create Chart](#)2. What mode of transportation do you use to get to work? Check all that apply.

answered question	100
skipped question	0

	Response Percent	Response Count
Walk	0.0%	0

[Download](#)[Create Chart](#)1. What shift do you work?

<b>Bike</b>	0.0%	0
<b>Bus / Public transportation</b>	0.0%	0
<b>Carpool</b>	0.0%	0
<b>Personal vehicle</b>	<b>100.0%</b>	<b>100</b>

[Download](#)[Create Chart](#)3. If convenient, would you use mass transportation (bus or trolley)?  
Check all that apply.

<b>answered question</b>	<b>100</b>
<b>skipped question</b>	<b>0</b>

	<b>Response Percent</b>	<b>Response Count</b>
<b>To get to work</b>	12.0%	12
<b>During lunch</b>	9.0%	9
<b>After work</b>	8.0%	8
<b>Would not use</b>	<b>82.0%</b>	<b>82</b>

[Download](#)[Create Chart](#)4. Which of these communities best describes where you reside?

[Download](#)[Create Chart](#)3. If convenient, would you use mass transportation (bus or trolley)?  
Check all that apply.

answered question 100

skipped question 0

	Response Percent	Response Count
Abingdon	7.0%	7
Blountville	7.0%	7
Bluff City	6.0%	6
Bristol, TN	29.0%	29
Bristol, VA	19.0%	19
Fall Branch	1.0%	1
Johnson City	8.0%	8
Kingsport	15.0%	15
Piney Flats	1.0%	1
Other	7.0%	7

[Download](#)[Create Chart](#)5. Which activities do you engage in during your breaks? Check all that apply.

[Download](#)[Create Chart](#)5. Which activities do you engage in during your breaks? Check all that apply.

answered question 100

skipped question 0

	Response Percent	Response Count
Walking	38.0%	38
Resting	21.0%	21
Reading	17.0%	17
Running errands	36.0%	36
Shopping	20.0%	20
Eating in	60.0%	60
Eating out	39.0%	39
Working out	7.0%	7
None of the above	9.0%	9

[Download](#)[Create Chart](#)6. Which of the following would you use if conveniently located near BRMC? For each service, select all that apply.

answered question 100

[Download](#)[Create Chart](#)5. Which activities do you engage in during your breaks? Check all that apply.

	skipped question					0
	Going to work	Going home from work	On my break	Would not use	I already use	Rating Count
<b>Clothing store</b>	7.5% (7)	<b>75.3% (70)</b>	25.8% (24)	14.0% (13)	14.0% (13)	93
<b>Coffee shop</b>	37.1% (33)	13.5% (12)	22.5% (20)	<b>38.2% (34)</b>	11.2% (10)	89
<b>Day care center</b>	5.0% (4)	3.8% (3)	0.0% (0)	<b>85.0% (68)</b>	11.3% (9)	80
<b>Dine-in restaurant</b>	6.4% (6)	<b>61.7% (58)</b>	38.3% (36)	14.9% (14)	10.6% (10)	94
<b>Drive-thru restaurant</b>	39.4% (37)	<b>59.6% (56)</b>	53.2% (50)	7.4% (7)	23.4% (22)	94
<b>Dry cleaner / laundry</b>	19.8% (17)	40.7% (35)	15.1% (13)	<b>48.8% (42)</b>	3.5% (3)	86
<b>Exercise center / gym</b>	17.0% (15)	<b>51.1% (45)</b>	14.8% (13)	38.6% (34)	5.7% (5)	88
<b>Grocery store</b>	21.1% (20)	<b>80.0% (76)</b>	20.0% (19)	8.4% (8)	23.2% (22)	95
<b>Gas station / convenience store</b>	49.0% (48)	<b>80.6% (79)</b>	25.5% (25)	3.1% (3)	28.6% (28)	98
<b>Library</b>	5.1%	29.5%	7.7%	<b>59.0%</b>	7.7% (6)	78

[Download](#)[Create Chart](#) 5. Which activities do you engage in during your breaks? Check all that apply.

	(4)	(23)	(6)	(46)		
<b>Movie theater</b>	3.6% (3)	43.4% (36)	3.6% (3)	<b>44.6%</b> <b>(37)</b>	12.0% (10)	83
<b>Park</b>	5.8% (5)	<b>45.3%</b> <b>(39)</b>	32.6% (28)	33.7% (29)	14.0% (12)	86
<b>Pharmacy</b>	23.0% (20)	<b>56.3%</b> <b>(49)</b>	27.6% (24)	17.2% (15)	35.6% (31)	87

[Download](#)[Create Chart](#) 7. If a more diverse housing choice existed near the hospital, would you move to be closer to work?

	<b>answered question</b>	<b>99</b>
	<b>skipped question</b>	<b>1</b>

	<b>Response Percent</b>	<b>Response Count</b>
<b>Yes</b>	22.2%	22
<b>No</b>	<b>77.8%</b>	<b>77</b>

[Download](#)[Create Chart](#) 8. If yes, which of the following would most appeal to you?

[Download](#) [Create Chart](#) 7. If a more diverse housing choice existed near the hospital, would you move to be closer to work?

answered question 35

skipped question 65

	Response Percent	Response Count
Single family home on a small lot	5.7%	2
Single family home on a large lot	37.1%	13
A gated community with amenities	25.7%	9
A condo or townhouse where the common areas are taken care of by someone else	25.7%	9
Other	5.7%	2