

CHAPTER V

DEMOGRAPHIC AND LAND USE TRENDS

In addition to the conditions of infrastructure and traffic operations, transportation planning efforts must also understand the conditions of population growth in a region, as well as the variety of transportation needs that may exist for the people who live there.



EXPECTED POPULATION GROWTH

As of 2016, 162,562 people live in the MPA. **Table 3** shows the distribution of people throughout the region. The highest residential densities occur around the University of Lynchburg (formerly Lynchburg College), Liberty University, and the College Hill neighborhood near downtown. Surrounding those areas is the population core of the region, which is roughly bounded by the James River, US Route 460, and US Route 221. The most traveled roads, by AADT, coincide with this population core, which suggests that many of the region's capacity issues will occur in this area.

Per the regional travel demand model, the MPA population will increase to 197,450 by 2045, representing a 21% gain. **Table 4** depicts the population growth for the MPA. Metropolitan Area growth will occur in the context of similar growth for the PDC. TABLE V-2 shows the population growth for the PDC and the constituent jurisdictions.

In the Central Virginia Region, the largest population growth in the region is expected to occur in the City of Lynchburg. Bedford County is also projected to see considerable population increases, while Campbell is expected to see moderate growth and Amherst County is projected to see moderate population loss.

Figure 32 shows the population change estimated in the demand model, followed by the change in employment shown in **Figure 33**.

Table 3: Change in the PDC county populations by locality between 2018 and 2040 | Source: Weldon Cooper Center
*Appomattox County is not part of the urbanized area.

| Locality | 2010 Population | 2019 Population | 2040 Population | 2019 - 2040 Population Change | 2019 - 2040 Percentage Change |
|--------------------|-----------------|-----------------|-----------------|-------------------------------|-------------------------------|
| Amherst County | 32,353 | 31,766 | 30,598 | -1,168 | -3.7% |
| Appomattox County* | 14,973 | 15,818 | 17,390 | 1,572 | 9.9% |
| Bedford County | 68,676 | 78,581 | 88,793 | 10,212 | 13% |
| Campbell County | 54,842 | 55,480 | 58,239 | 2,759 | 5% |
| City of Lynchburg | 75,568 | 80,783 | 96,955 | 16,172 | 20% |
| Total | 246,412 | 262,428 | 291,975 | 29,547 | 11.3% |

Table 4: Change in the MPA population between 2016 and 2045 | Source: Lynchburg Travel Demand Model

| 2016 Population | 2045 Population | Population Change | Percentage Change |
|-----------------|-----------------|-------------------|-------------------|
| 162,562 | 197,450 | 34,888 | 21% |



Figure 32: Change in population estimated in the travel demand model

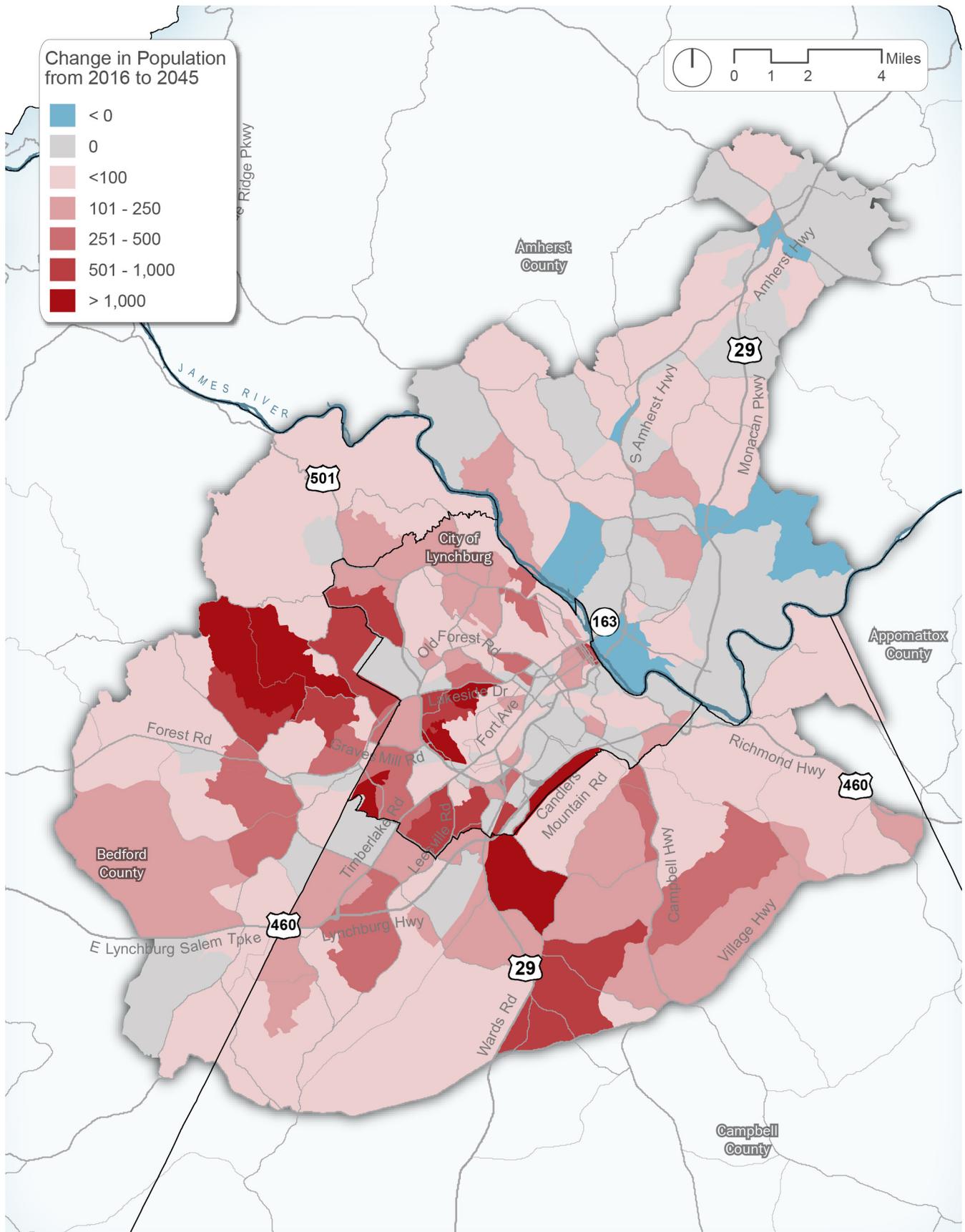
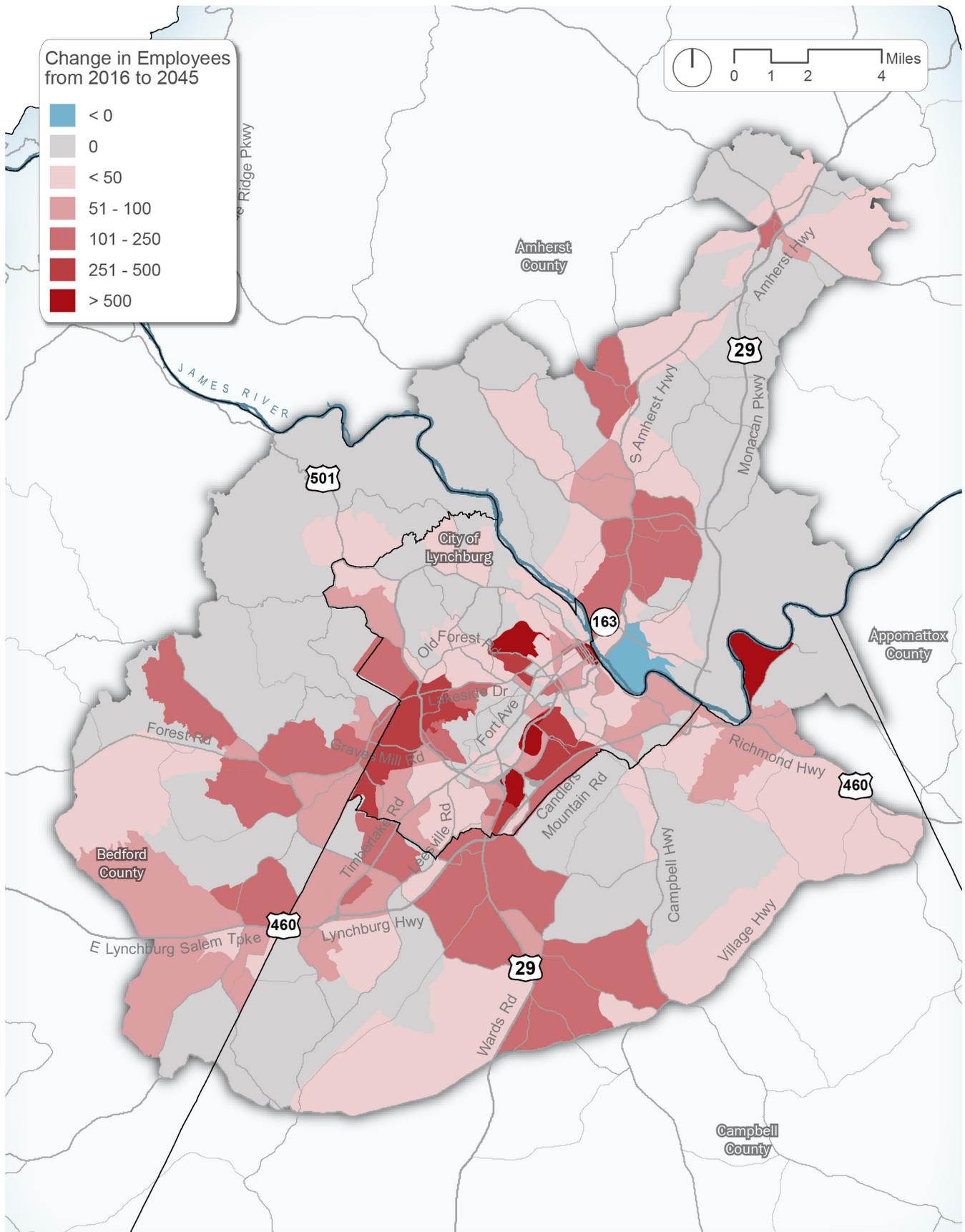


Figure 33: Change in employment estimated in the travel demand model



ALTERNATIVE TRANSPORTATION NEEDS

Like many cities in America, most people living in the Lynchburg Metropolitan area rely on private automobiles to meet their transportation needs. Some people, however, are subject to conditions that make transportation by automobile a difficult or dangerous mode of travel. These individuals may rely on a variety of alternative forms of transportation to meet their travel needs.

This chapter identifies some of the major cohorts that may rely on alternative modes of transportation. Each section briefly describes the reasons that members of the group may need to rely on other forms of transportation, identifies areas in the metropolitan region in which a large number of their members may be found, and explains what types of transportation infrastructure or services may support their travel needs. It is the goal of the CVTPO to help provide a high quality of life for people of all abilities. It supports efforts to improve the mobility of people who have special transportation needs.

ELDERLY

Older travelers more commonly have physical or cognitive conditions that make the operation of an automobile a challenge. Over time, individuals may lose the ability to safely operate an automobile before they lose the ability to live independently. When this occurs, older seniors must rely on alternative modes of transportation to access important services such as groceries, medical care, and access to social networks.

Active seniors will benefit from effective pedestrian infrastructure such as sidewalks, crosswalks, and pedestrian bulb-outs and medians at major street crossings. Those with mobility constraints may rely on transit or paratransit services. The median age of each block group in the region is shown in **Figure 34**.

YOUTH

Young people who are below the legal driving age are unable to operate an automobile. When children become old enough to engage in activities outside the home without the accompaniment of their parents, they may use alternative modes of travel

such as walking and biking to reach their destinations. These modes of transportation are especially important for children who travel independently to and from school.

Young residents will benefit from effective pedestrian infrastructure such as sidewalks, crosswalks, pedestrian bulb-outs, and medians at major street crossings, as well as bicycle facilities.

DISABLED

Some individuals with physical or cognitive disabilities may be unable to operate an automobile. When this occurs, individuals may occasionally or frequently rely on alternative or public modes of transportation to travel to school, work, shopping areas, social networks, or medical care.

People with disabilities can access many more destinations when infrastructure is designed to accommodate their needs. Examples of these accommodations may include wider sidewalks that are clear of obstacles, sidewalk ramps, and bus stops that are served by handicap accessible sidewalks and ramps. Paratransit services that can provide transportation directly from a disabled person's home to their destination can be especially valuable. Disability rates across the region can be seen in **Figure 35**.

POVERTY

Individuals and families who live in poverty may be unable to afford to own or operate an automobile. The rising cost of vehicle ownership has contributed to more people relying on walking or biking to access needs such as work, school, groceries, and medical care. Those individuals that walk or ride a bicycle will benefit from safe and well-maintained infrastructure such as sidewalks, crosswalks, and bicycle lanes. It is also important that they have ready access to transit services. It is especially important that people living in poverty have safe and complete routes to schools and employment centers that may enable them to achieve greater financial stability. **Figure 33** shows the household poverty rates in the MPA.

CONCLUSIONS

Given the overlay of the various cohorts above, the areas shown in **Figure 37** should be targeted for Travel Demand Management (TDM) approaches.



TDM focuses on understanding how people make transportation decisions to make better use of existing infrastructure. The goal of TDM is to reduce the overreliance on cars by making other modes, such as transit, rideshare, or biking, easier. The outcome of TDM is a more balanced transportation system than one that is built around personal cars.

RELATIONSHIP BETWEEN LAND USE PLANNING AND MOBILITY OPTIONS.

Based upon extensive studies of the relationships between land use patterns and travel behavior, transportation researchers have identified several specific factors of the built environment that have a direct bearing upon our mobility options and choices. Known as “The Four D’s,” these factors include key characteristics that are strongly affected by local government land use policies, regulations and incentives: Density, Diversity, Design, and Destination.

DENSITY

Density describes the number of households and jobs within a given location, such as a neighborhood, a central business district, the area within a half-mile of a transit-stop or a traffic analysis zone.

It influences the number of trips that are produced by, and attracted to, that location. It also plays an important part in creating a market for transit.

DIVERSITY

Diversity describes the variety of origins and destinations within a given location. A more diverse array of activities within close proximity creates opportunities for people who live, work or shop in the area to meet their daily needs through short vehicle trips, or by walking or bicycling.

DESIGN

Design refers to the way in which a given place is laid out in terms of street and buildings, which can “make or break” the option to walk and/or use transit. Walkable communities typically feature short, interconnected blocks (300-600 feet between intersections) lined by a variety of pedestrian-accessible buildings oriented toward the street.

DESTINATION

Destination refers to the location and accessibility of a given place via roadway, transit, bicycle and pedestrian networks. Places that can be reached easily by a variety of modes are more likely to generate fewer vehicle trips than places located in isolated areas that can be reached only by automobiles.



Figure 34: Median age by block group in the MPA | Source: American Community Survey Five-Year Estimates 2013-2017

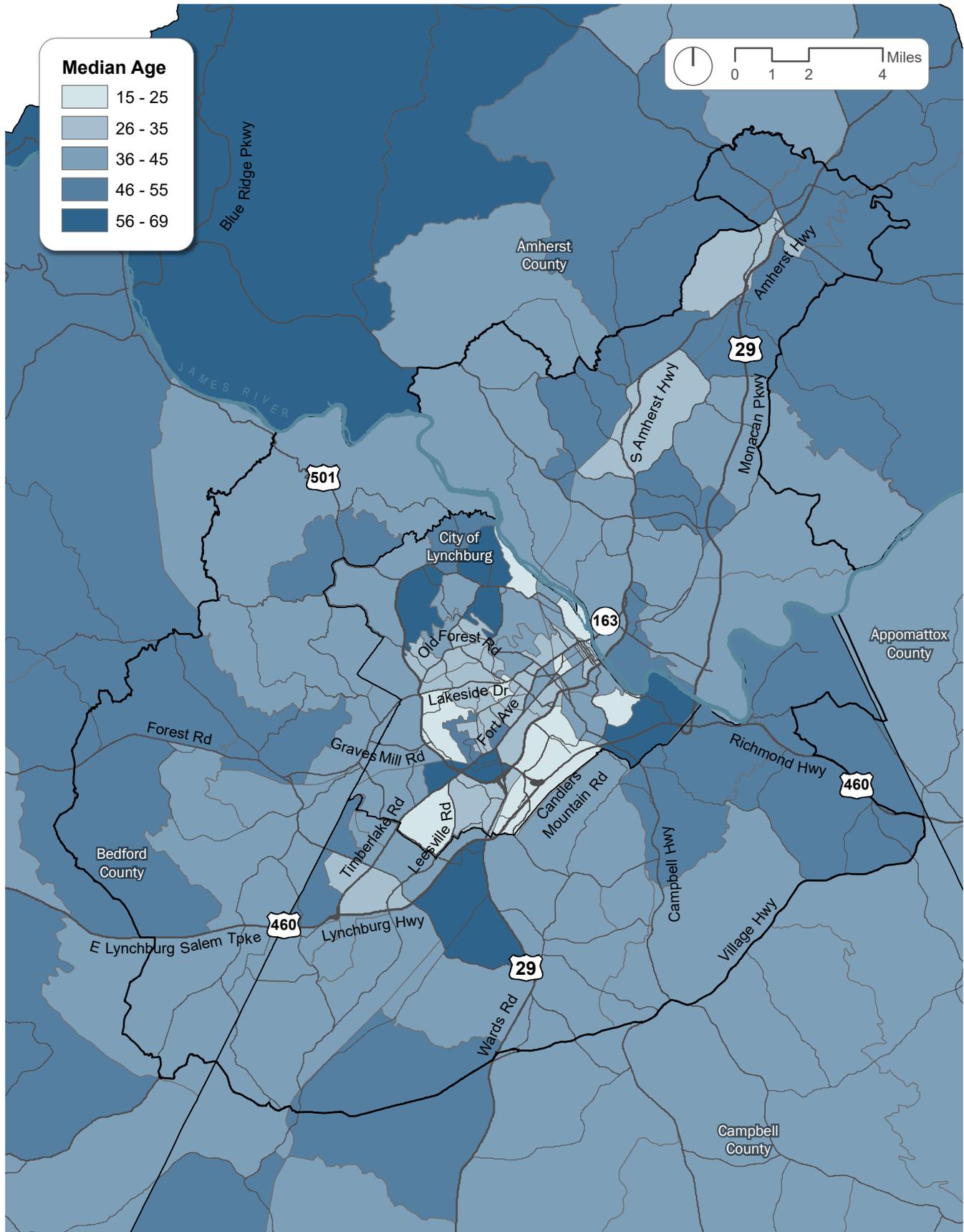


Figure 35: Disability rate by block group in the MPA | Source: American Community Survey Five-Year Estimates 2013-2017

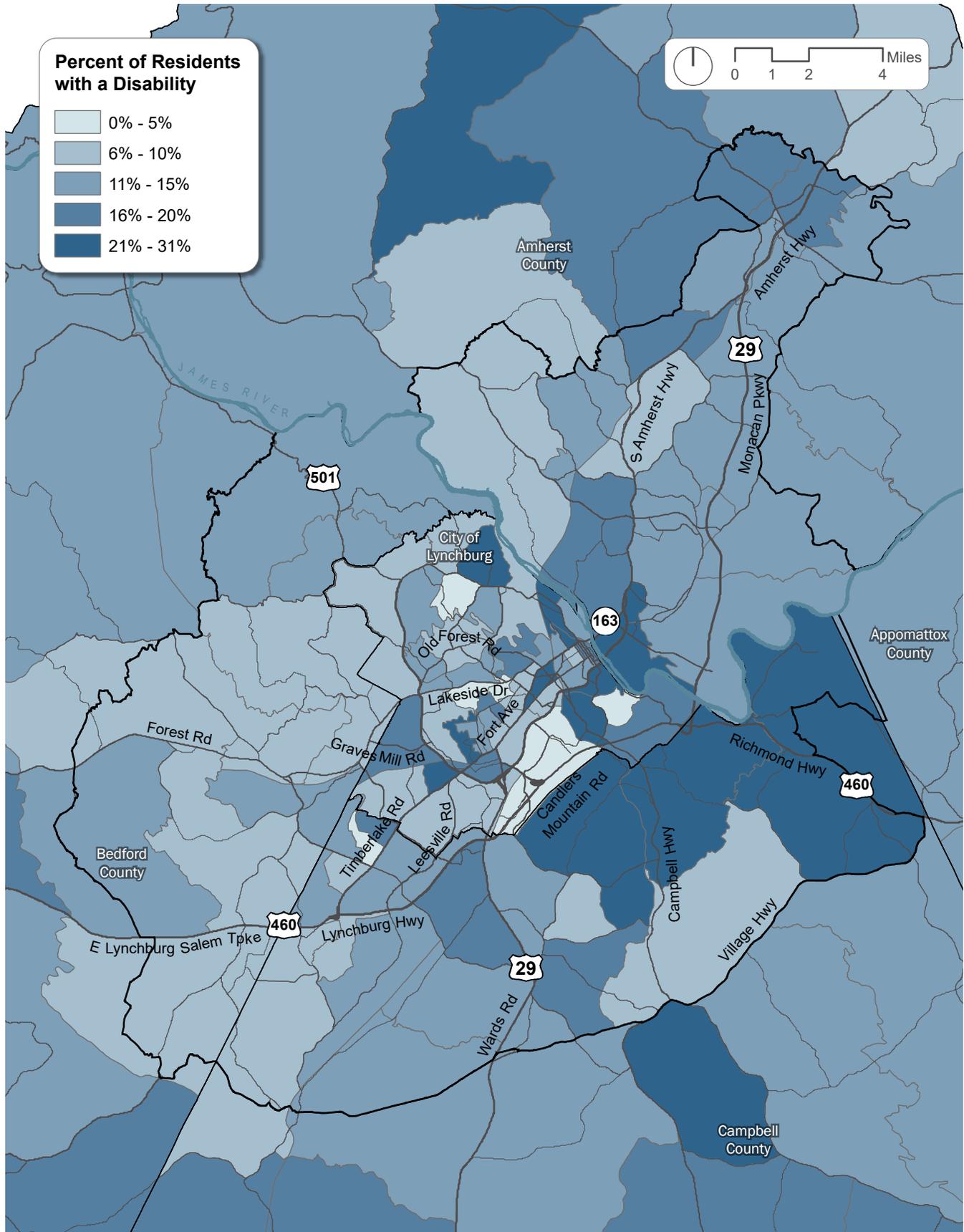


Figure 36: Household poverty rate by block group in the MPA | Source: American Community Survey Five-Year Estimates 2013-2017

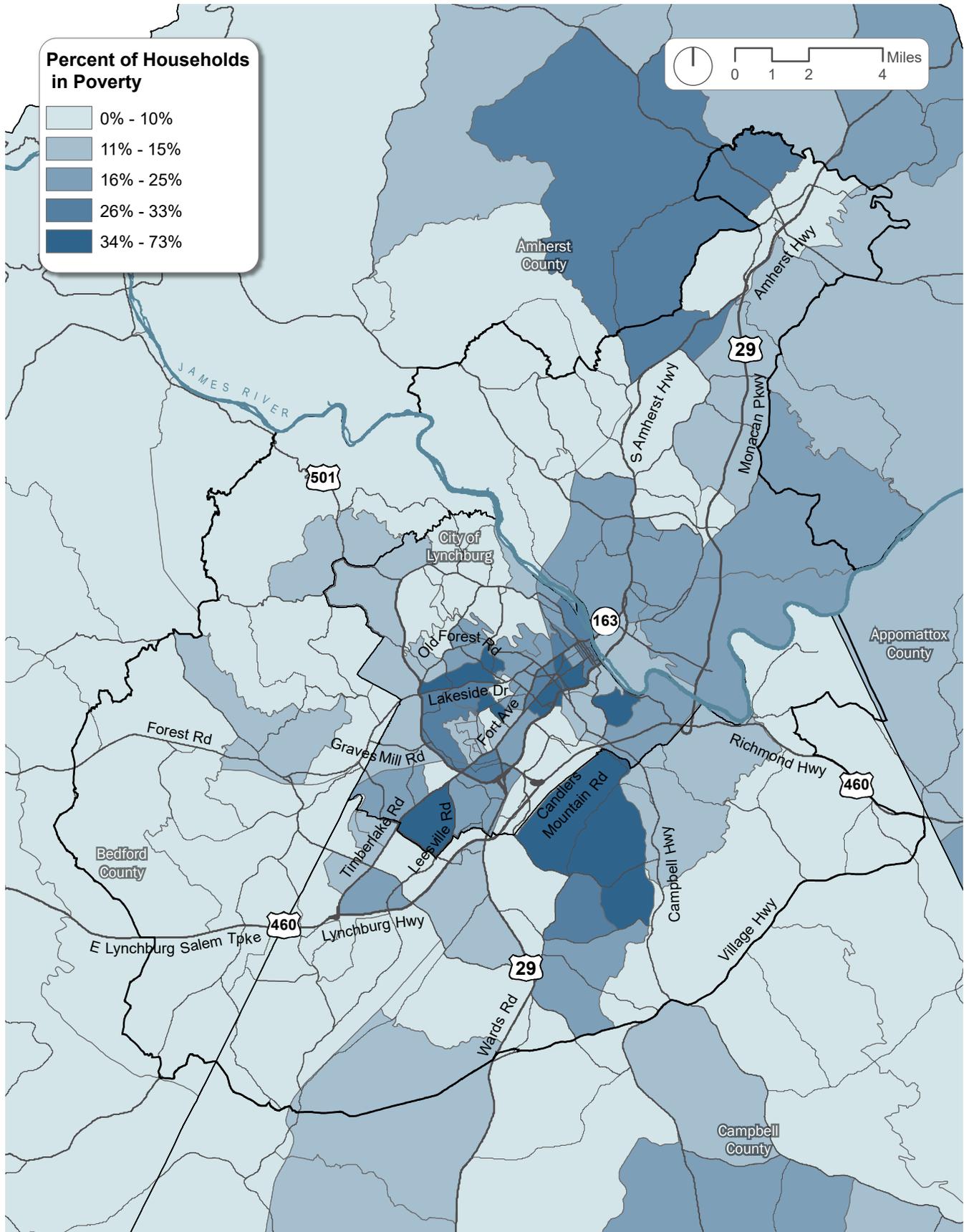
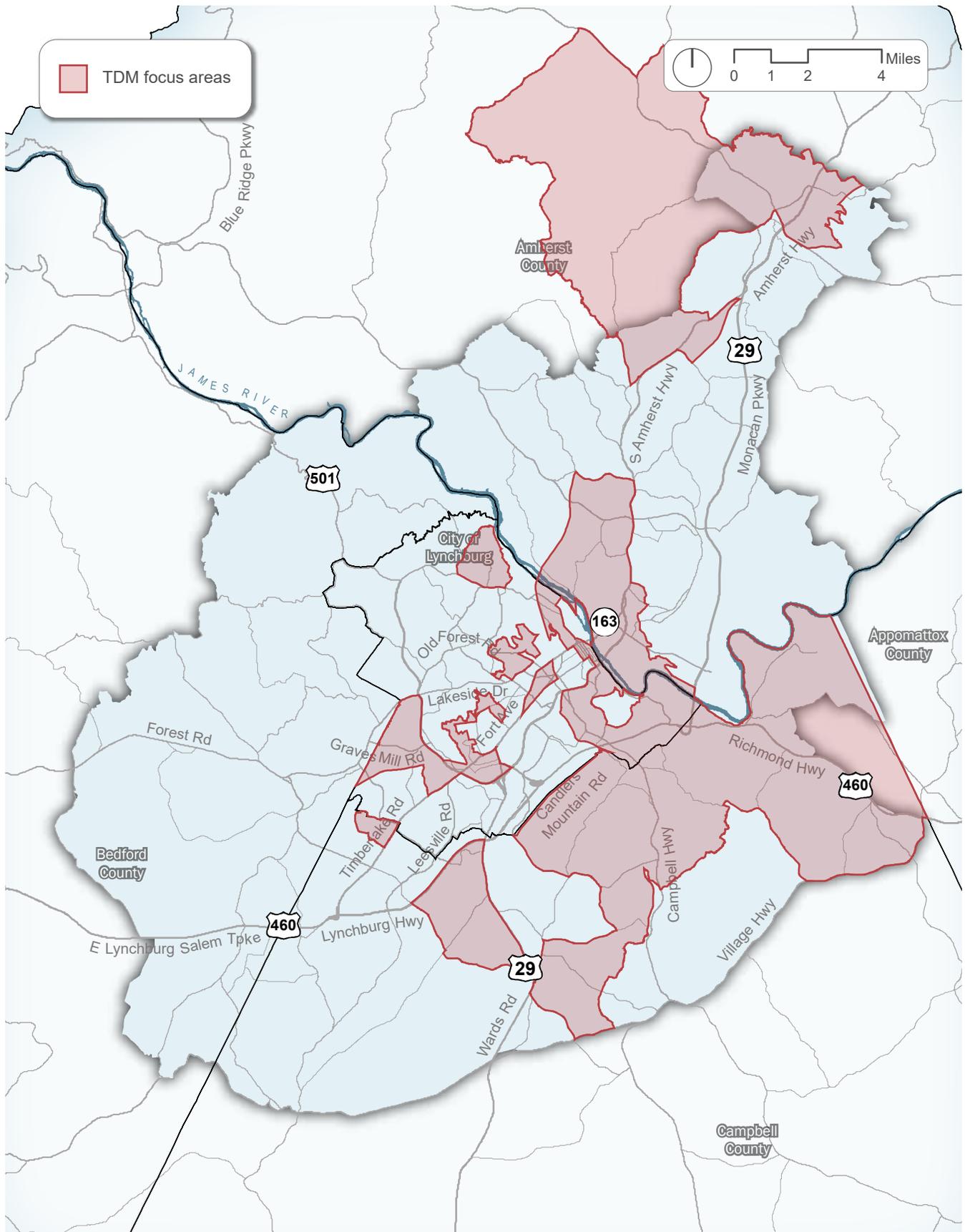


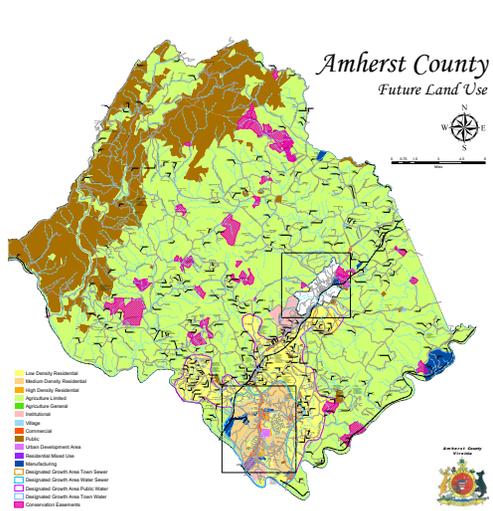
Figure 37: Areas where TDM strategies should be implemented



LAND USE CONSIDERATIONS

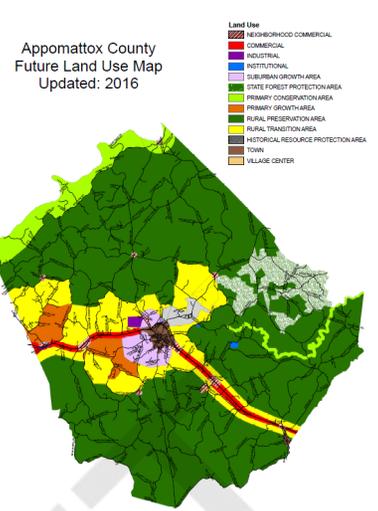
Land use is an important factor in transportation planning from the regional scale down to the block-level. Land use decisions have a considerable impact on the transportation system. The density of the built environment has a significant effect on the transportation infrastructure that serves land uses, which in turn affects the transportation choices available to people. When the places where people live, work, shop, etc., are closer together, more modes become available as practical means to travel from one place to another. To increase choices, reduce emissions, and support placemaking initiatives, the region's localities should identify growth areas and consider the four "D"s relative to future development and redevelopment projects.

The land use configurations across the Urbanized Area play an important part in planning for the transportation needs of the region. The land uses in Central Virginia are especially important as they include the visions and policies from five jurisdictions. It is important to recognize the land use planning from each of the member localities when considering the future of the region's transportation system. This page briefly describes the land use plans of the CVPDC member localities.



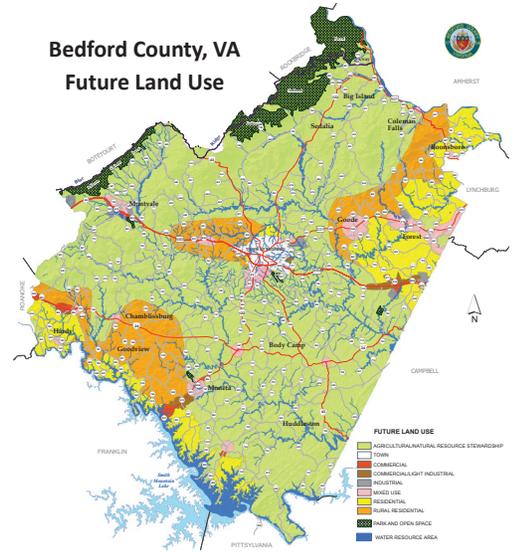
Amherst County

Much of the county is agricultural, with swathes of public land draping the Blue Ridge Mountains in the west. Outside the Town of Amherst, residential and commercial uses primarily fall along Route 29 approaching Lynchburg.



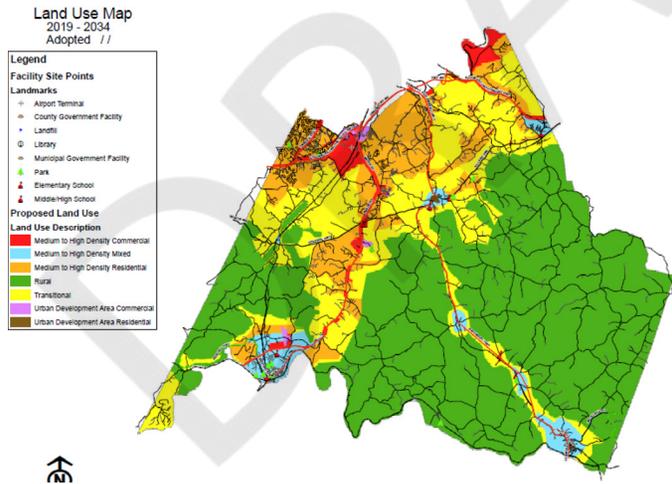
Appomattox County

Falling outside the TPA, most of Appomattox County is preserved rural land. Residential and commercial uses narrowly follow Route 460 in the east, broadening on approach to the Town of Appomattox and Lynchburg in the west.



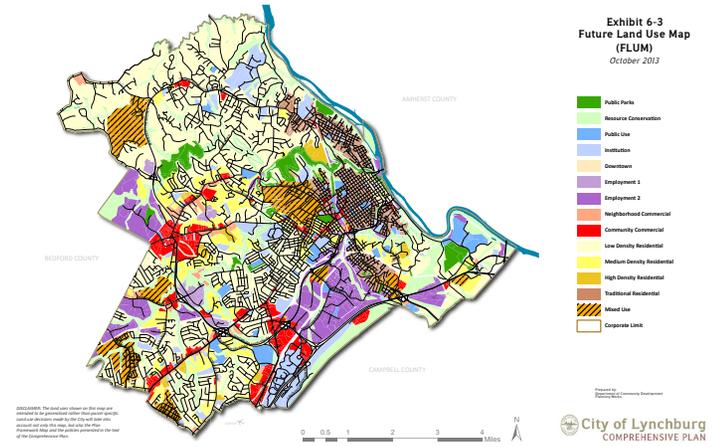
Bedford County

Bedford's more intense uses are largely on Routes 460 & 221 near Lynchburg, around the Town of Bedford, and approaching Smith Mountain Lake. Apart from residential areas near Lynchburg, Roanoke, and the lake, much of the county is agricultural or protected land.



Campbell County

The County focuses more intense land uses around the airport and along Route 29. Although largely rural, higher residential densities and some mixed uses occur around the Lynchburg City line, as well as in towns like Altavista, Brookneal, and Rustburg.



City of Lynchburg

The city's more intense land uses roughly follow a horseshoe shape running from Downtown to Montview and the Liberty University area and then following the Route 501 corridor. Pockets of mixed-use developments dot a largely low-density residential landscape.

