COUNTYWIDE HOUSING STUDY

Roanoke County, Virginia

December 2020

Prepared For:

Roanoke Valley-Alleghany Regional Commission
313 Luck Avenue, SW
Roanoke, Virginia 24010

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Each of the 10+ interviewees that took time to speak with us and discuss the challenges and opportunities facing Roanoke County.

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ROANOKE COUNTY HOUSING STUDY

EXECUTIVE SUMMARY

RKG undertook an analysis of Roanoke County's housing market and compared key metrics to the Roanoke Valley-Alleghany Region (the Region) which is made up of the following localities: Alleghany, Botetourt, Craig, Franklin, and Roanoke Counties, the Cities of Covington, Roanoke, and Salem; and the Towns of Clifton Forge, Rocky Mount, and Vinton. This study provides demographic, economic, household, and housing analyses outlining the shifting market dynamics across Roanoke County. This study points to several challenges Roanoke County is facing as it works to address housing needs which include:

- The county's population has consistently grown over 50 years, with the percentage of elderly residents increasing.
- One- two-, and three-person households comprise the largest share of households across the county and have grown in number over the last five years.
- The current supply of housing units is larger than the number of households in the county, leading to a vacancy rate of 6%. This rate is still considered to be in the healthy market range, especially when looking at vacancy of owner-occupied and renter-occupied units alone.
- Across Roanoke County, jobs in many industry sectors pay higher than average wages and, in many cases, pay wages sufficient to purchase existing homes at the median sales price in the county.
- Across the county, the median sales price of a home is around $213,155 which means to comfortably purchase a home a household needs an income of around $70,000 per year.
- Median rents in the county are increasing. In 2018, the median gross rent was $949 in the county, a 15% increase from 2013. The average rent for a single family home is around $1,200 per month, while rents in multifamily buildings averaged $1,150 per month.
- In Roanoke County, 13% of all households are considered cost burdened and 10% are considered severely cost burdened. This slightly less than cost burden percentages across the Region.
- The number of households that qualify for affordable housing outstrips the current supply, particularly for those households at or below 30% of area median income (AMI).
- Market demand and financial feasibility challenges make construction of new subdivisions or multi-unit structures difficult when factoring in topographic and infrastructure (water and sewer) challenges.
- Financial resources for housing programs are limited, forcing all levels of government to make decisions for how to prioritize limiting funding sources.

To address some of these issues, RKG compiled a set of strategies each informed by a county-wide analysis, interviews and focus groups, and an assessment of existing housing resources and programs. A detailed description of strategies can be found in the Strategy section at the end of this document. Priority strategies the county should consider for addressing housing issues and opportunities include:

- Utilize zoning to allow or incentivize housing production with particular attention given to diversifying housing choices like missing middle housing options, neighborhood infill, downtown infill, and development of key parcels of vacant land.
- Establish a residential rehabilitation program, potentially in partnership with a regional entity to provide funds for rehabilitating older homes.
- Continue to fund infrastructure projects that will improve, enhance, and unlock development sites and encourage rehabilitation and infill development in neighborhoods for residential uses.
- Ensure the preservation of existing affordable housing and look at regulations, financing, and incentives to boost the production of additional affordable housing options.
- Establish an affordable housing trust fund as a flexible funding tool for housing programs geared toward low- and moderate-income households in the county.
- Work to establish a regional coordinating body or group for housing that can bring entities across the region together to work on housing regulations, financing, policy, and education.

ROANOKE COUNTY HOUSING STUDY

STUDY STUCTURE

This section of the study presents an overall introduction to the project, its purpose, and role in helping analyze and understand the housing market in Roanoke County and the Region.

Introduction

Across Roanoke County, and nationally, home prices have risen significantly over the last decade. The recovery from the Great Recession has led to a general uptick in homebuying and renting. In many markets, supply has not kept pace with demand, which is only expected to increase over time. Circumstances have occurred in which home values and rents have risen at a faster rate than wages in many communities, leaving families and individuals priced out of the housing market.

Housing affordability and price security are critical components for creating places where residents can live comfortably without feeling stretched financially. As housing prices and rents rise alongside most other monthly expenses, more and more households are having difficulty adjusting to the rising cost of living. This creates a situation where households become cost burdened and are forced to spend more than the recommended 30% of their monthly income on housing-related costs. For many households, this can create a ripple effect where other monthly expenses are scaled back or cut out completely. Food, healthcare and wellness, transportation, and childcare are some of the basic household needs that can go unmet in the face of rising housing costs.

Understanding the economic landscape can help policymakers identify needs and align and direct the requisite resources towards priority actions. Across Roanoke County, economic opportunities vary as do incomes, but a central commonality is that housing is a fundamental need which also defines a community – a collection of households that creates place. Ensuring that housing is available and affordable to all income levels is critical for growing and sustaining our communities long term.

This study, which was commissioned by the Roanoke Valley-Alleghany Regional Commission (RVARC), provides information on housing challenges within Roanoke County and the Roanoke Valley-Alleghany Region.

Project Purpose

The goal of the Roanoke County Housing Study is to analyze, identify, and prioritize needs and gaps in the rental and for-sale housing market. This study, convened by RVARC and conducted with the assistance of a Housing Study Stakeholder Group made up of key stakeholders, aims to paint a county and regional picture of the housing landscape through rigorous quantitative and qualitative data analysis and synthesis. The results will help decisionmakers adjust, add, or reconfigure existing programs and strategies to match the needs of current and prospective residents.

Role of Study

The Roanoke County Housing Study is a compilation of county and regional analyses relating to demographics, socioeconomics, and housing. It identifies data points and highlights key findings. The purpose of the document is to allow policymakers at the local and regional level to understand the historical, current, and future challenges to housing across Roanoke County. The quantification of issues, especially those related to housing supply and demand, are important for imparting regional change. Please note that the terms "affordable", "obtainable" and "workforce" housing are generally used interchangeably throughout the document to describe housing that is within the economic reach of households with about average or below average incomes.

The study utilizes knowledge gained from extensive data analysis to examine the challenges facing the housing market. The study includes a land suitability analysis, which helps identify housing barriers and gaps, as well as a detailed housing strategy section in which strategies are identified that have the potential to overcome the identified challenges.

ROANOKE COUNTY HOUSING STUDY

PRIOR PLANS AND KEY FINDINGS

Several housing studies, plans, and market studies have been completed across the Roanoke Valley-Alleghany region within the last five to seven years. This section of the study provides an overview of key findings from four prior housing studies that include:

- Alleghany Highlands Region Comprehensive Housing Analysis
- Botetourt County Market Analysis
- Ferrum Housing Needs Assessment and Housing Plan
- Route 419 Town Center Residential Market Study

Alleghany Highlands Region Comprehensive Housing Analysis

This study completed in 2019 for the Alleghany Highlands Region included several key takeaways from the analysis. The primary conclusion is the lack of new housing development is not related to housing demand, but instead housing supply. There is a potential housing market in the Highlands region but there is a lack of developers bringing new product to the market, much of which is predicated on the regional economy strengthening and growing.

The second conclusion is there are several available, publicly-owned development sites that could be used to accommodate both single-family and multifamily housing for families and older adults. While public officials have recognized and supported plans for new housing development, there has not been a concerted effort to properly zone sites and ensure infrastructure is in place to facilitate development.

Lastly, there is a need for large employers in the area to assist in housing development strategies through a joint marketing effort. The region needs to work to ensure employees (new and existing) are aware of future housing opportunities and should conduct periodic surveys of employees around housing preferences to pass along to home builders in the area. This could help market the region to these employees, but also provide builders with a sense of market potential and pent-up demand.

Botetourt County Market Analysis

This study completed in 2019 for Botetourt County was intended to identify new housing opportunities for new employees who are projected to work in the county over the next 5+ years. Of the 1,200 new employees expected across the county, most are likely to have annual incomes at or below $45,000. Many of these workers will require rental housing and/or affordable housing, particularly those that comprise single-income households. The new home market in the county is at a price range of $250,000 and above which would exceed what a $45,000 income could support. The study also identified a severe lack of quality rental housing in the county, and limited housing options across the broader region. Key findings from this study include:

- The general lack of affordable housing, particularly rental housing, will limit the county's ability to attract new employees to live in the county.

- The county has limited land zoned for apartment unit development and current zoning density for multifamily housing is likely too low to attract developers and meet financial return expectations.
- There are few sites today that are readily available for apartment unit development, but several, with rezoning, that could serve the county's needs. Readying these sites is key to serving the county's housing needs.

Ferrum Housing Needs Assessment and Housing Plan

This study completed in 2020 for Ferrum was intended to provide a detailed description of the demographics, economics, and housing inventory of Ferrum and the surrounding area that impacts Ferrum. The findings from this study, included below, were then used to provide a recommended housing plan to be considered for implementation. Key findings in this study include:

- There is limited availability within the existing housing inventory with a shortage of units available to both owner and renter households at varying levels of affordability. Housing product should be diversified to include single-family homes and multifamily buildings.
- Adopting a regional approach to housing solutions would benefit all involved. Many of the housing challenges around availability and affordability exist beyond the boundaries of Ferrum.
- A regional approach would also help to attract commuters to Ferrum and Franklin County. Local employers, chambers, economic development officials, and real estate professionals should work together to market the area to commuters.
- Prioritize efforts to develop/redevelop vacant sites and buildings, particularly those already served by infrastructure. Local government entities may want to develop a list of sites to market to the development community.
- Support housing that would allow senior residents to downsize into housing that would better accommodate their needs. This should include a mix of both rental and for-sale product such as apartments and condominiums.
- Support efforts to develop new single-family housing and couple that with first-time homebuyer assistance programs.

Route 419 Town Center Residential Market Study

This study completed in 2016 was intended to identify the market potential and optimum market position for new housing units that could be developed within the proposed Route 419 Town Center area in Roanoke County. The study identified market potential for up to 500 units over a five to seven year absorption period. The recommendation of the study was to concentrate new residential development on the higher-density housing types which could be more easily integrated into the commercial development already existing in the study area.

The study recommended the split of the 500 units include 70% multifamily rental housing units, 14% multifamily condo units, and 16% single-family attached units (townhomes). With this mix of housing types, the study recommended targeting empty-nesters and retirees, younger singles and couples, and traditional and non-traditional families. Price points were projected to be in range with what the county is already experiencing where 72% of all multifamily units would be priced below $1,500 per month. The study also recommended 80% of all for-sale units be priced at $250,000 or less.

The market position for the study area is predicated on a walkable town center design that can attract people, differentiate itself from other areas of the market, and command higher rent and sale prices. The town center area would not only need to be a walkable place, but also contain a mix of uses that would appeal to renters and buyers across the income and age spectrum. The study identifies the ability of walkable town centers to command a price premium of 35% on rental products and 15% on for-sale condos.

ROANOKE COUNTY HOUSING STUDY

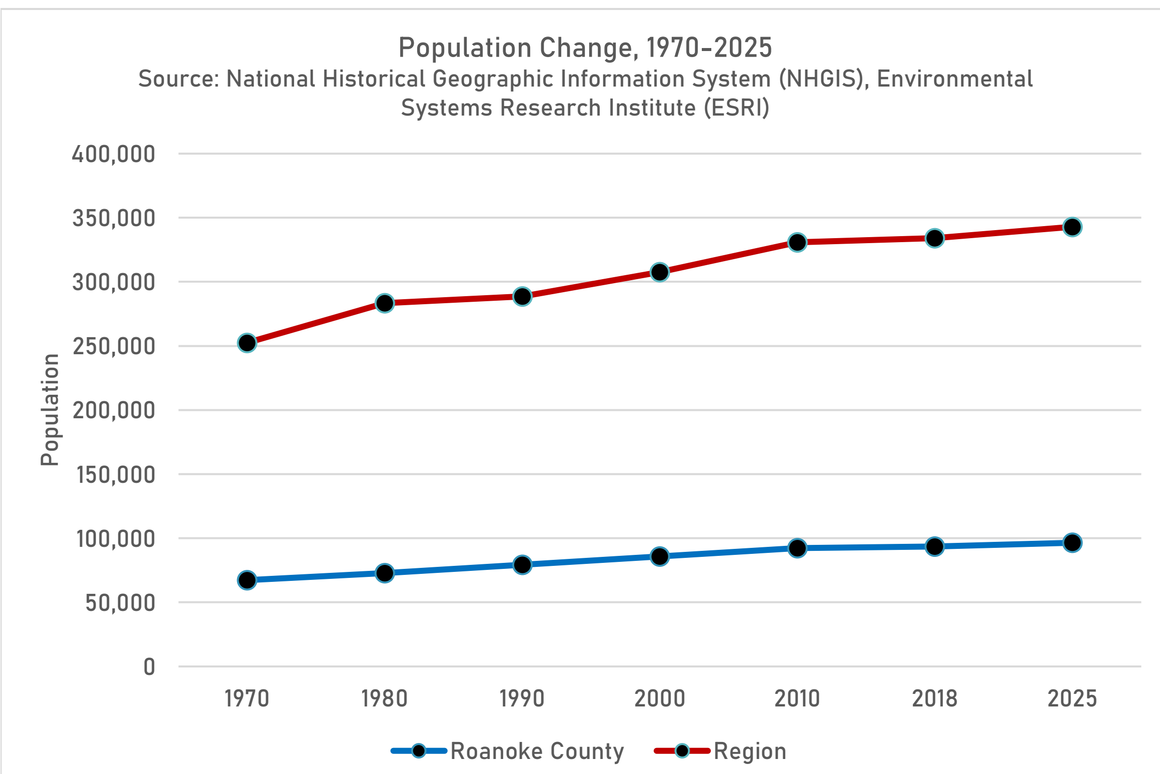
DEMOGRAPHIC ASSESSMENT

This section of the study explores key data measures such as changes in population and population by age, changes in household composition, shifts in education levels, changes in household income, employment patterns, and changes to the industrial economy. These data points, and more, are used to evaluate the needs of today's residents and those who may choose to locate here in the future. The heart of this analysis is grounded in empirical data but is supplemented by knowledge gained from interviews with stakeholders described in more detail throughout the study.

Population

Between 1970 and 2010, the population of Roanoke County grew by 37%, rising from around 67,000 to about 92,000. Over the same period, the Region grew by only 31%, indicating that Roanoke County outpaced the Region. The rapid population growth coincided with national trends like suburbanization, while also being influenced by new economic opportunities in industries such as the health care, manufacturing, and the professional services sector. To accommodate this growth in population, new housing units were created across the county. Although the Region's growth rate was not as high as Roanoke County's during this period, the trend line of growth followed a similar progression.

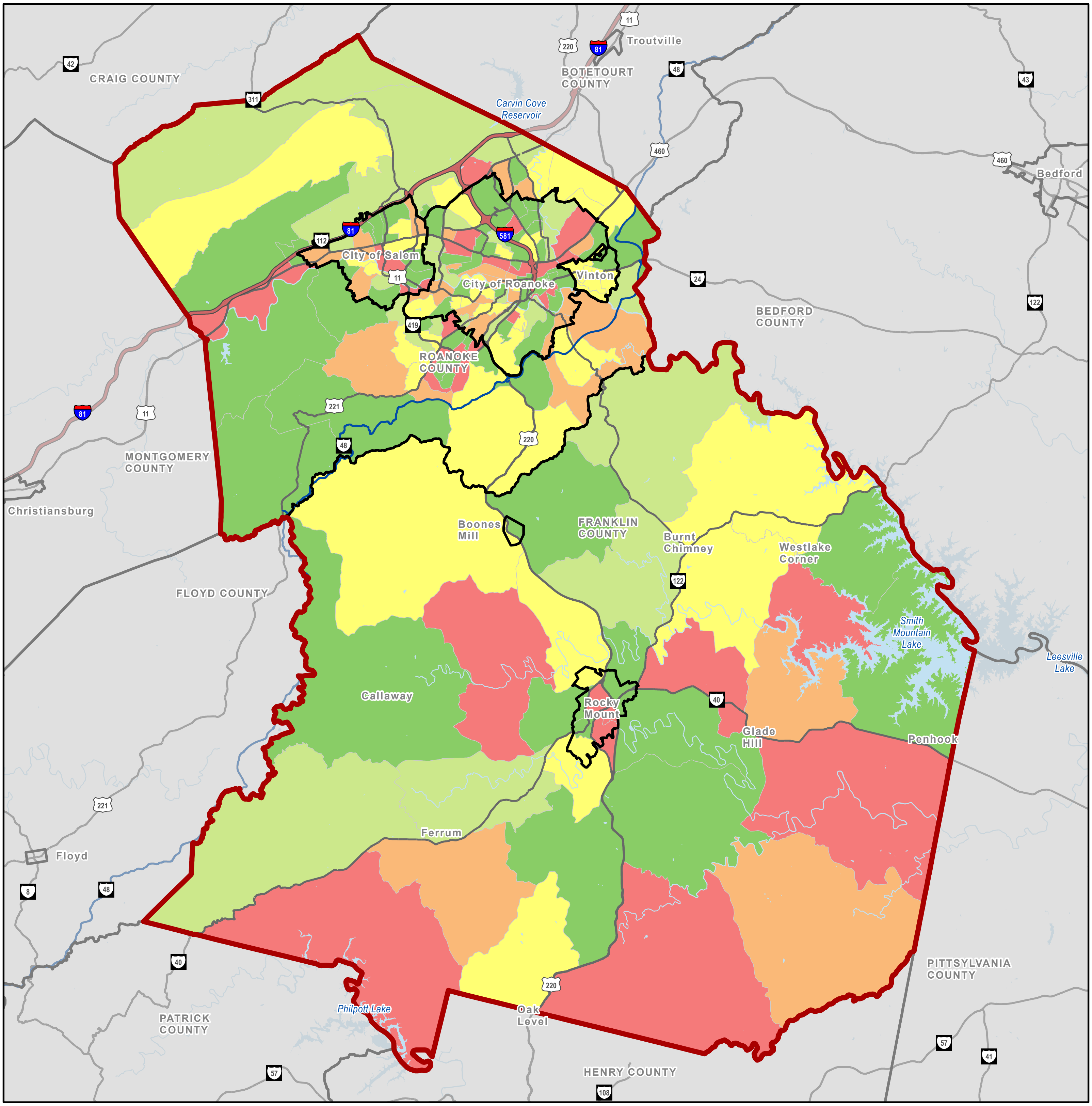
Figure 1: Population Change



Over the last decade the county's population has stabilized. As of 2018, the population was 93,583 which was a little over 1,000 additional residents over eight years. Looking forward, the population of Roanoke County is projected to increase by 3% between 2018 and 2025, or about 2,900 residents, a similar growth rate to what is projected for the Region.

Roanoke Valley Housing Study - Population Change

Prepared by JM Goldson LLC



Road Type

- Interstate
- Primary
- Blue Ridge Parkway
- Roanoke Valley Study Region
- Administrative Boundaries
- Water Bodies

Population Change

2013 - 2018

- -20% or more
- -10% to -20%
- 0% to -10%
- 0% to +10%
- +10% or more

0 2.5 5 10 Miles

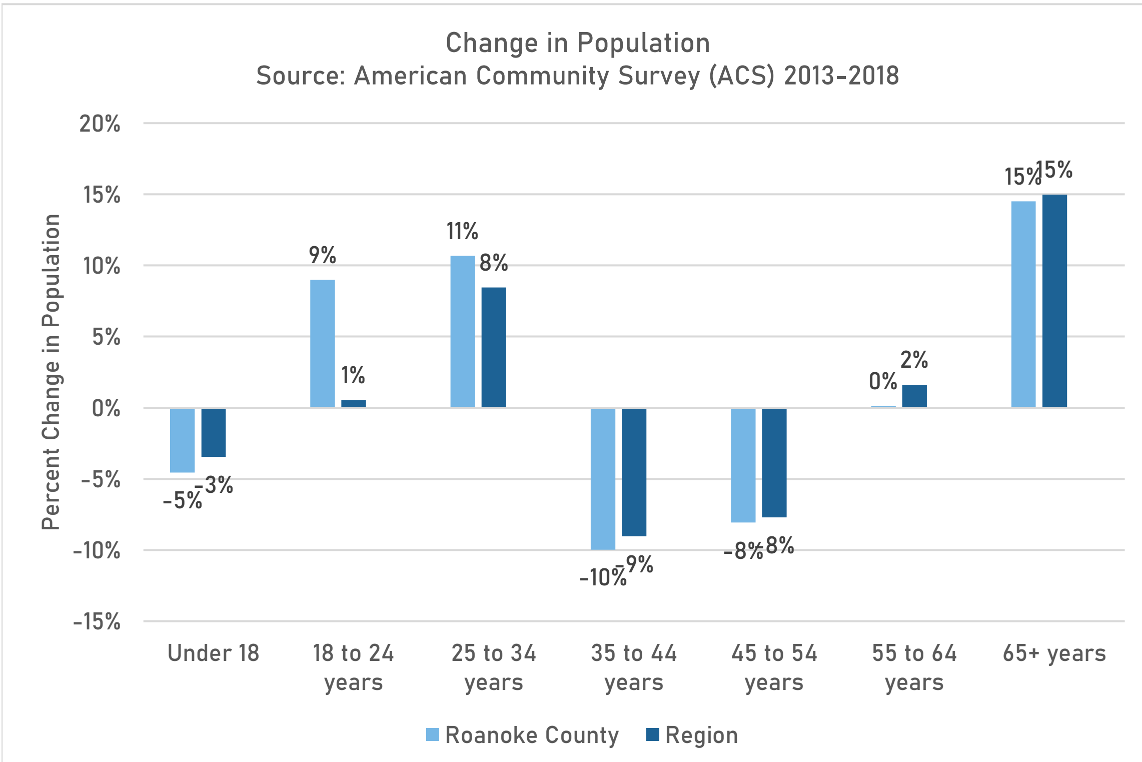
N

Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership, US Census American Community Survey 5-year estimates

Population by Age

Population by age is one way to look at the demographic makeup of a community and understand how changes in age and life stages may be driving demand for housing. Roanoke County is experiencing an aging of its population through the attrition of middle-aged residents ages 35 to 54. These age cohorts are often important to a community's economy and housing market as they are of working age, may be more likely to own a home, and may have children in the school system.

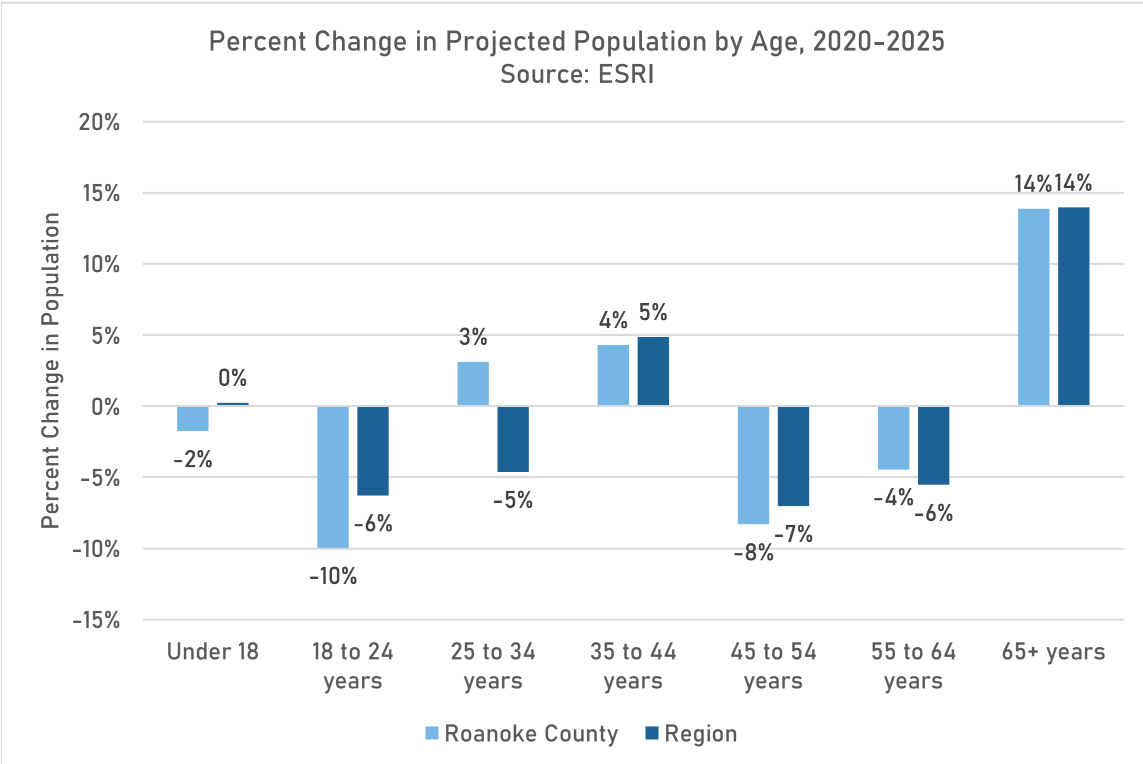
Figure 2: Change in Population



Between 2013 and 2018, the number of residents between the ages of 35 and 44 decreased by 10%, which is a trend seen throughout the region. This age cohort is typically active in the workforce, renting or purchasing homes, and entering or well within family formation years. These households are important to not only the housing market, but also the local economy by helping support the local commercial/retail market through added household spending.

Between 2013 and 2018, the number of residents between the ages of 18 and 24 increased by 9% compared to only 1% across the Region. This growth may be attributed to increasing enrollments in the many local colleges and added jobs across industry sectors in the Region. Retaining this growing cohort will be a challenge if suitable housing does not exist which meets their needs.

Figure 3: Projected Change in Population

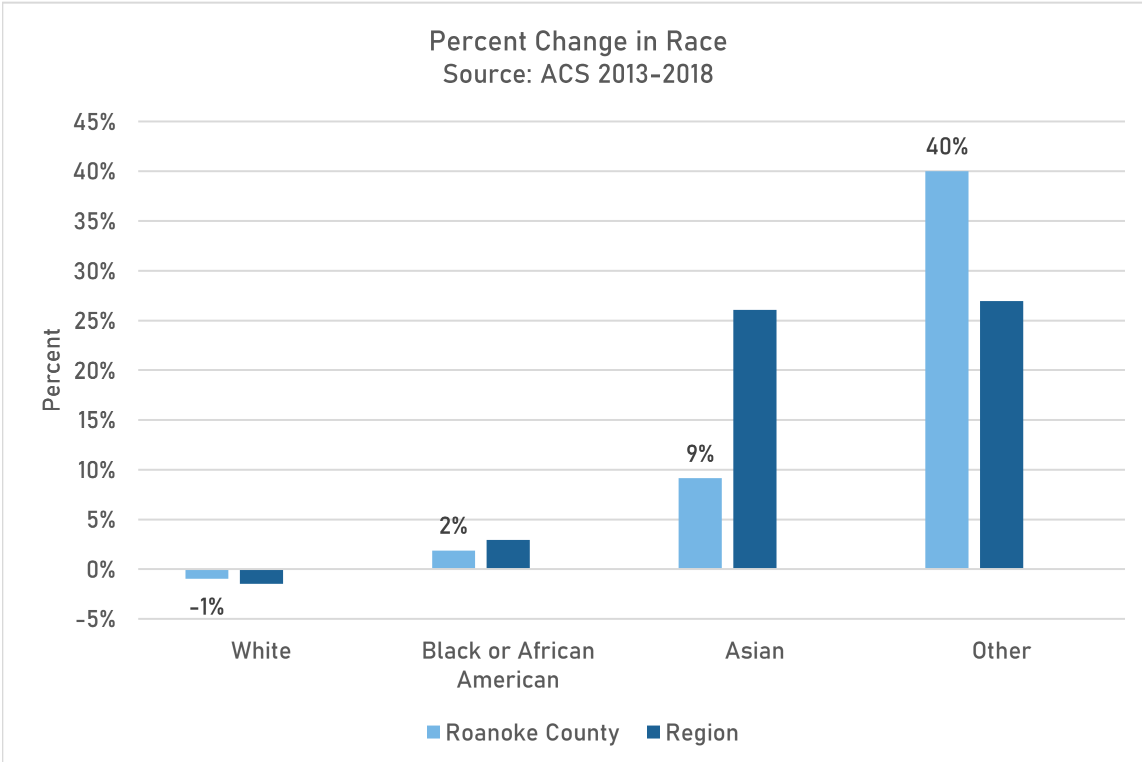


Today, senior residents (65 years and older) comprise about 18% of the population and are projected to grow 14% between 2020 and 2025. The growth in the senior population will have an impact on the housing supply as many seniors may choose to age in place so long as an adequate housing supply is available which meets their needs. If not, it could result in a lack of housing turnover and tighten the owner-occupied housing supply. Additionally, the 35 to 44 age group is expected to grow by 4% which has the potential to increase demand for ownership units, as this group may be looking for starter homes or to purchase a larger home if they are in family formation with larger household sizes.

Race and Ethnicity

In Roanoke County, 88% of the population identifies as White. Approximately 6% of the population identifies as Black, while those identifying as Asian and Other accounting for about 3%, respectively. The White population experienced a modest decline between 2013 and 2018, while those identifying as Asian and Other saw respective increases of 9% and 40%. While the percent change may be high, in absolute numbers the Asian and Other racial categories account for about 1,400 individuals in total. Figure 4 shows the change in race from 2013 to 2018.

Figure 4: Change in Race

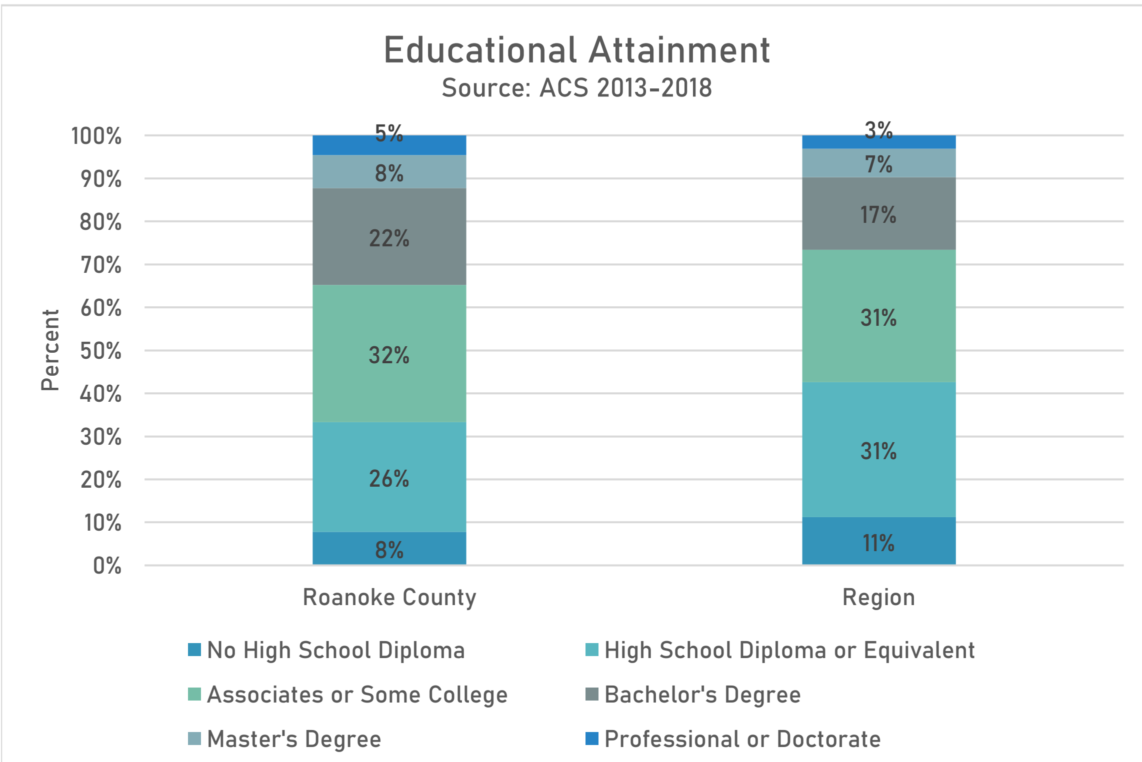


The county's Hispanic population rose by 27%, from 2,155 residents in 2013 to 2,731 in 2018. This change is much faster than the Region, which saw an increase of 16% over the same period.

Education

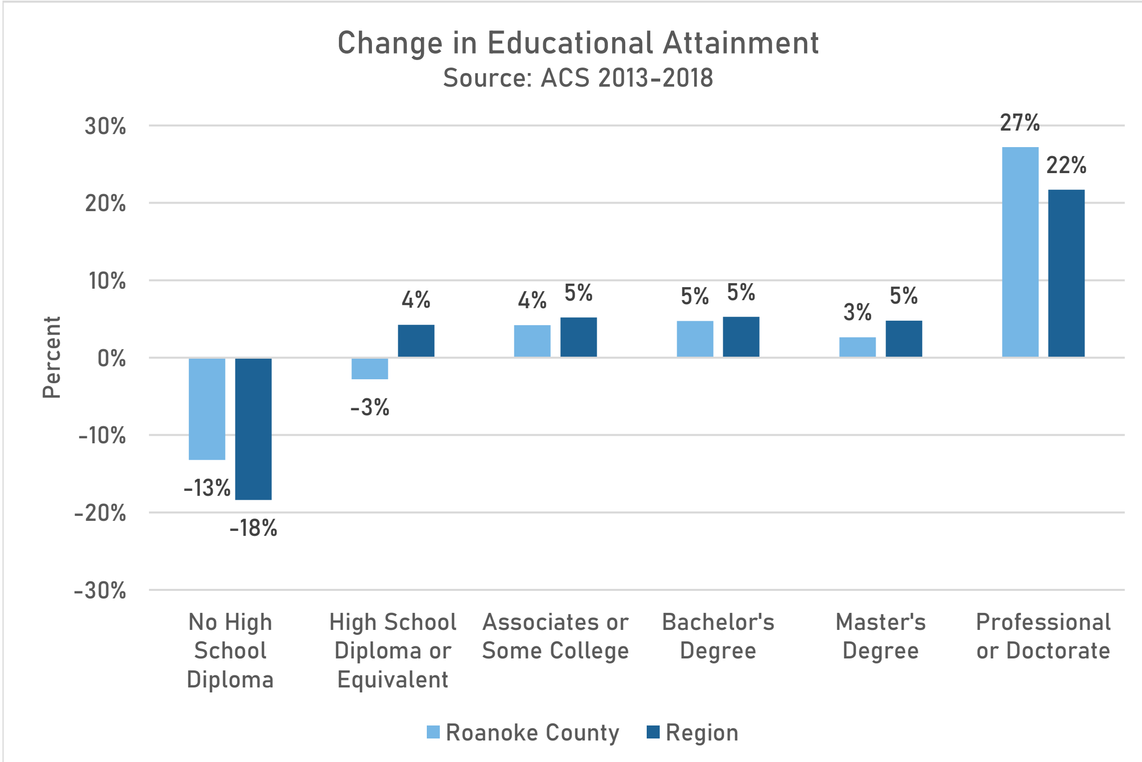
Roanoke County, in comparison to the Region, has a smaller portion of its population (33%) with only a high school diploma or less. Additionally, Roanoke County outpaces the Region in the percentage of individuals who have completed bachelor's degrees or higher. Educational attainment is often associated with higher earnings which can translate to a greater ability to pay for housing costs.

Figure 5: Educational Attainment



As jobs have changed over time, the skill sets needed for new employment opportunities required higher levels of education. Looking at changes in educational attainment over time shows Roanoke County's population with master's and professional or doctoral degrees increased by 3% and 27%, respectively. At the same time there was a decrease in the high school equivalent population. This may indicate new residents who are filling jobs in the county are more highly educated as a requirement of those jobs, and/or the county is able to retain some of the residents who are graduating from area colleges to fill jobs in the Region.

Figure 6: Change in Educational Attainment

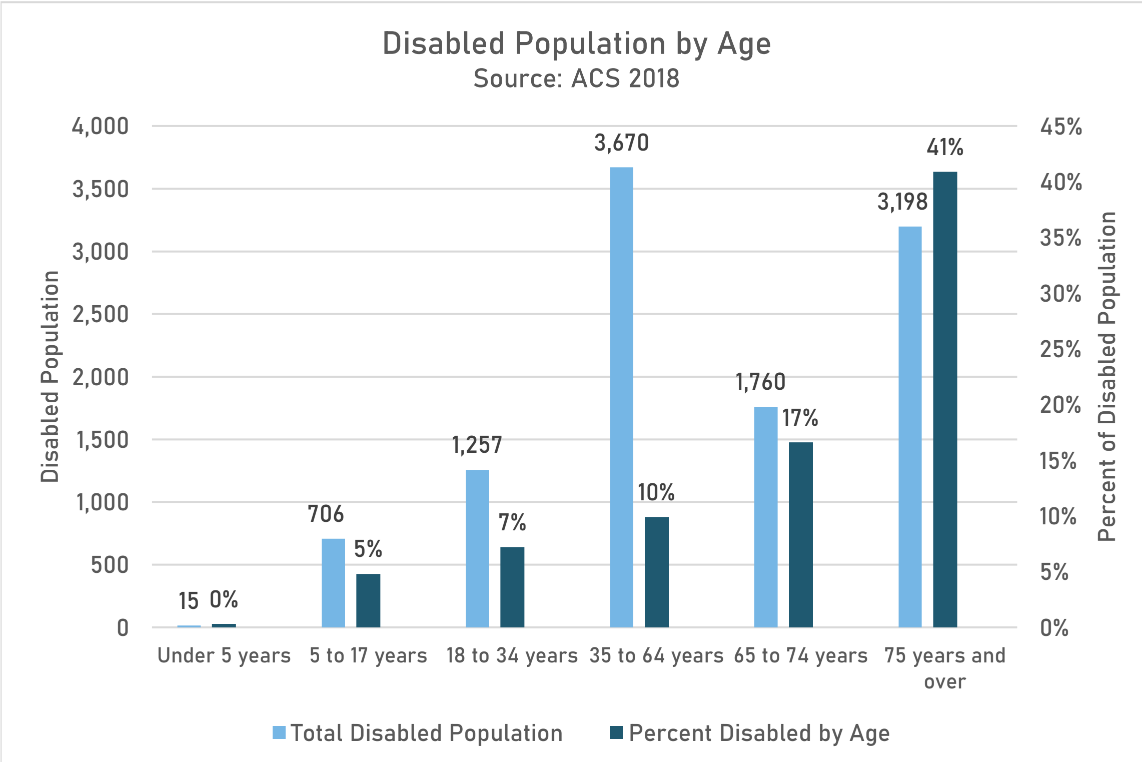


Disabled Population

Federal laws define a person with a disability as "Any person who has a physical or mental impairment that substantially limits one or more major life activities; has a record of such impairment; or is regarded as having such an impairment." The Census classifies disabilities in the following categories: those having a hearing or vision impairment, ambulatory limitation, cognitive limitation, and self-care or independent living situation.

In Roanoke County, 10,606 (12%) residents identified as having one or more of the Census defined disabilities. The largest concentration of disabled individuals can be found in the 35 to 64 age group which has 3,670 disabled individuals and accounts for 35% of all individuals with a disability in Roanoke County. Figure 7 presents data on the disabled population by age.

Figure 7: Disabled Population by Age



Not surprisingly, the senior population in Roanoke County (over 65) has the highest number of disabled residents with 4,958 residents having at least one disability. Of the senior population, 41% of individuals 75 years or older have disabilities. The senior population is of special concern as they tend to live on fixed incomes and have higher healthcare costs which may limit the amount of money they could spend on housing. Disability, in particular mental health disabilities, can make it difficult to earn enough to afford adequate housing. While those with disabilities can qualify for Supplemental Security Insurance (SSI) and Social Security Disability Insurance (SSDI), these programs alone may not prevent residents from experiencing housing instability.

The need for home accessibility and other services for people with disabilities in Roanoke County is critical given the large number of seniors and the fact that this age cohort is growing. Improved survival rates and increased longevity among persons with disabilities combined with an aging population and the inaccessibility of older homes are indicators of a growing need to locate services and housing within proximity to one another. Recognizing the housing and service needs these populations require is critically important. Disabled residents often rely on long-term care and wrap-around services. There may also be an unmet need for long-term care facilities to assist residents with disabilities.

Homeless Population

To understand the existing homeless population in the Roanoke County, data was obtained from the Department of Housing and Urban Development (HUD) which showed the demographics of the homeless population, as well as the number of beds available in the jurisdiction. The HUD data is a compilation of data provided by local Continuums of Care's (CoC) which are typically non-profit or governmental entities dealing with homelessness. The Blue Ridge Continuum of Care is a regional planning group working to end homelessness. The Blue Ridge Interagency Council on Homelessness (BRICH) is the regional governing body of the CoC. The BRICH is comprised of non-profit and governmental entities serving the Counties of Alleghany, Botetourt, Craig, and Roanoke, and the Cities of Covington, Roanoke, and Salem.

The HUD data presents, in aggregate, information from Roanoke County, and the cities of Roanoke and Salem, and it is therefore not possible to separate information strictly for Roanoke County.

Based on Point-in-Time (PIT) data there were 276 homeless individuals in the area which encompasses Roanoke County, and the cities of Roanoke and Salem. There were 213 persons in households with only adults, which accounts for 77 percent of the homeless population. While households with children accounted for 23 percent of the homeless population, translating into a total of 63 persons. About 89 percent of the homeless population is sheltered, while only 6 percent remain unsheltered. Table 1 presents data on the homeless population.

Table 1: Homelessness Population in Roanoke County, and the City of Roanoke and Salem

	Sheltered			
Homeless Categories	Emergency Shelter	Transitional Housing	Unsheltered	Total
Persons in households without children	183	0	30	213
Persons Age 18 to 24	14	0	0	14
Persons Over Age 24	169	0	28	197
Persons in households with at least one adult and one child	63	0	0	63
Children Under Age 18	37	0	0	37
Persons Age 18 to 24	2	0	0	2
Persons Over Age 24	24	0	0	24
Persons in households with only children	0	0	0	0
Total Homeless Persons	246	0	30	276

Source: BRICH Point in Time Data, 2020.

Based on data provided by CoCs operating in the Roanoke area, there were a total of 726 beds available for homeless individuals, with 62% of beds found in emergency shelters and 38% of the beds located in permanent housing facilities. Based on the number of homeless individuals found across the Roanoke region, the existing infrastructure to house the homeless is operating at less than half capacity.

Table 2: Homeless Housing Inventory in Roanoke County, and the City of Roanoke and Salem							
Unit Types	Family Units	Family Beds	Adult-Only Beds	Child-Only Beds	Total Year-Round Beds	Seasonal	Overflow/ Voucher
Emergency, Haven and Transitional Housing	26	161	288	0	449	0	2
Emergency Shelter	26	161	288	0	449	0	2
Permanent Housing	29	48	133	0	277	0	0
Permanent Supportive Housing	17	8	94	0	198	N/A	N/A
Rapid Re-Housing	12	40	39	0	79	N/A	N/A
Total	55	209	421	0	726	0	2
Source: HUD Housing Inventory County Study, VA-502 Roanoke City & County, Salem Continuum of Care (CoC), 2019							

The Roanoke Region has been effective in preventing a rise in the number of unsheltered homeless. Data from the CoCs showed a very low occurrence of unsheltered homeless with about 18% of the recorded homeless population going unsheltered, and of those unsheltered homeless, most refuse to engage in accessing resources. In many cases, mental health barriers prevent individuals from seeking and accepting housing assistance. Across the region there are non-profits that target their resources to help alleviate challenges faced by the homeless population. Services are available which help transition the homeless population to stable, permanent housing.

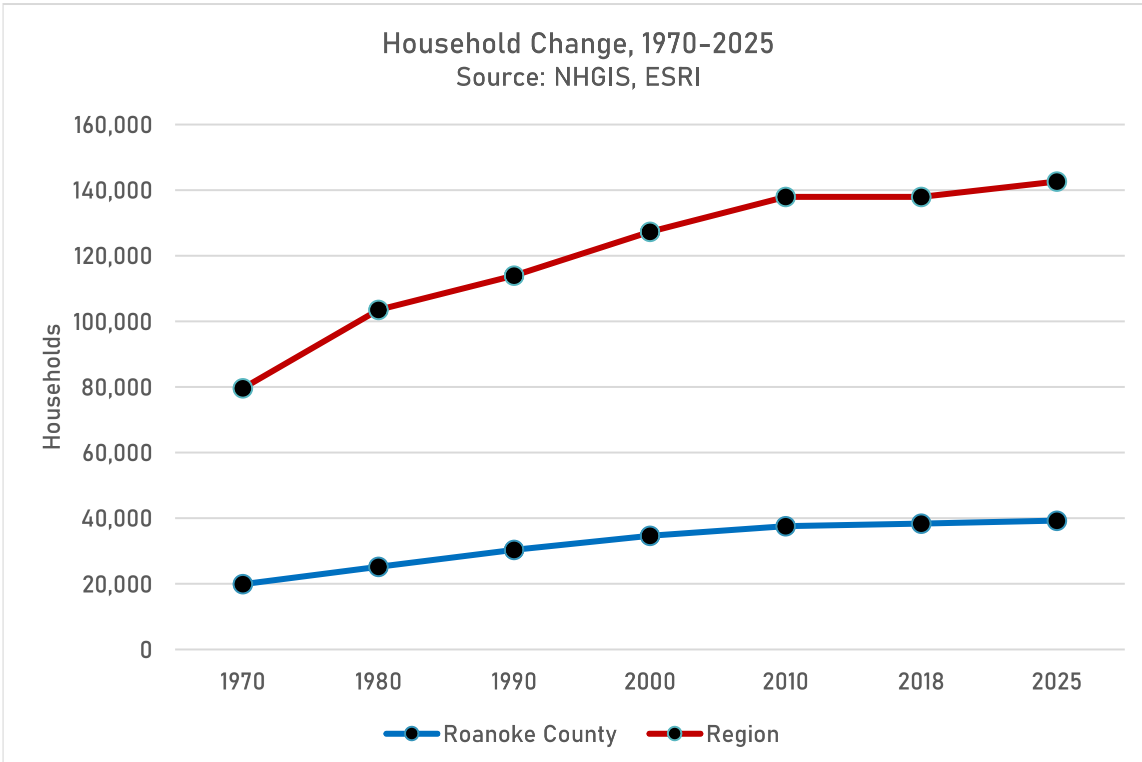
Table 3: Homelessness by Race in Roanoke County, and the City of Roanoke and Salem				
	Sheltered			
Race	Emergency Shelter	Transitional Housing	Unsheltered	Total
Black or African-American	87	0	6	93
White	137	0	20	157
Asian	0	0	0	0
American Indian or Alaska Native	2	0	2	4
Native Hawaiian or Other Pacific Islander	0	0	0	0
Multiple Races	17	0	2	19
Total	246	0	30	276
Source: BRICH Point in Time Data, 2020.				

The PIT data from the Roanoke City Roanoke County, and City of Salem CoC showed that 34 percent (93 individuals) of all sheltered and unsheltered homeless individuals were Black/African American, while 57 percent (157 individuals) of the homeless population were White. The Region has a relatively small Black/African American population, which indicates that they are overrepresented in the homeless population.

Households

The Census Bureau defines a "household" as one or more people living in a housing unit and includes a variety of living arrangements. From a historical perspective, Roanoke County experienced a spurt of household growth between 1970 and 2010, with the number of households increasing by 89%. Much of that growth occurred between 1970 and 1980. Like the population growth rate, household growth has slowed considerably over the last 10 years.

Figure 8: Household Change



In 2018, the county had 38,343 households. Future projections show the county could add an additional 940 households (2%) by 2025.[1] These same projections show households region-wide increasing by 3% over the next five years.

Table 4: Projected Total Households				
Community	2018 Estimates	2025 Projections	Change	Percent Change
Roanoke County	38,343	39,283	940	2%
Region	137,942	142,643	7,701	3%
Source: ESRI, 2020				

[1] ESRI, 2020

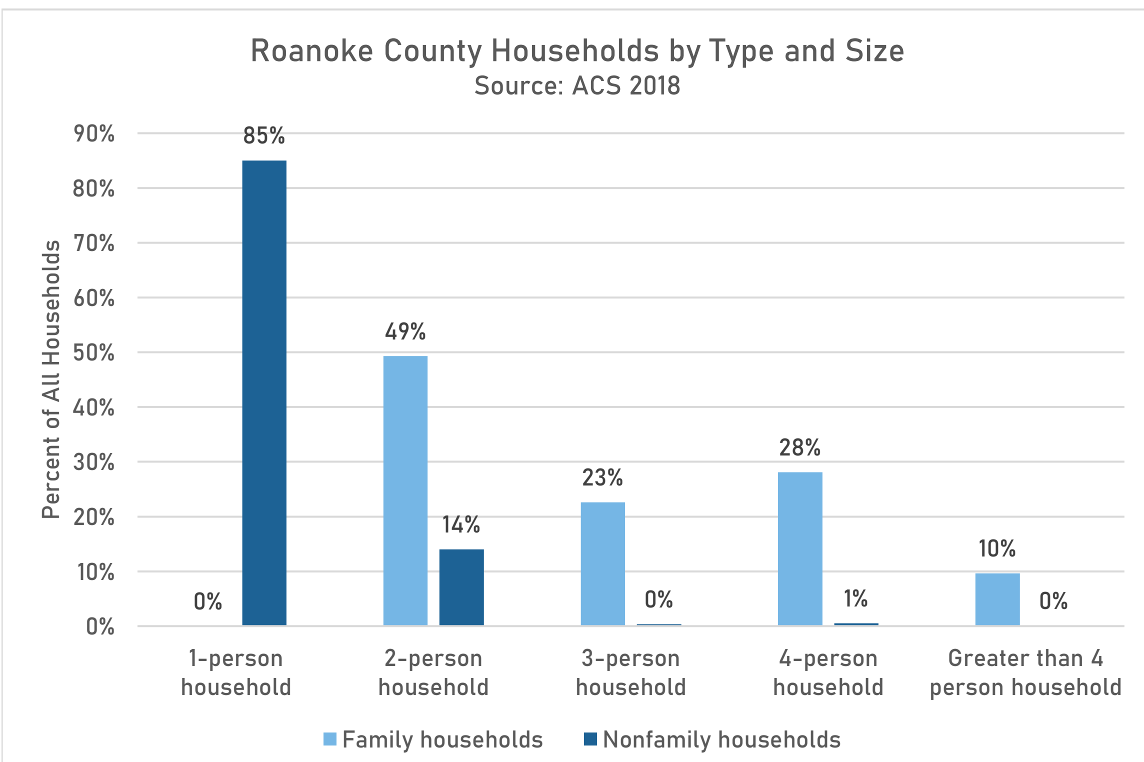
HOUSEHOLD SIZE

Household size is an important consideration as it provides insight and an understanding of what types of housing units are needed to accommodate today's residents and those who may choose to locate here in the future. An example of this is a larger five-person household would require more bedrooms than a two-person household. Traditionally in the Region, owner-occupied single family homes offer larger living spaces with more bedrooms and bathrooms, enough to accommodate the larger households. Structures with 10 or more units, which account for about 10% of all housing units in the Region, tend to have one- or two bedrooms and are priced similarly, in some instances, to a mortgage payment for a single family home.

According to the Census, households can be defined as either family or non-family. Family households are comprised of two or more related individuals where non-family households are comprised of unrelated people living together (such as housemates), and single individuals. In Roanoke County, most family households (72%) are comprised of two or three members. Most non-family households are single individuals which account for nearly 85% of non-family households.

While many households in Roanoke County are one- and two-person households, some changes in household size have occurred over the past five years. Four-person family households decreased by 4% between 2013 and 2018, and 2-person family households have increased by 2% over the same period. Similarly, the number of non-family households with two persons grew by 393, an increase of 30%.

Figure 9: Households by Type and Size



ROANOKE COUNTY HOUSING STUDY

ECONOMIC ASSESSMENT

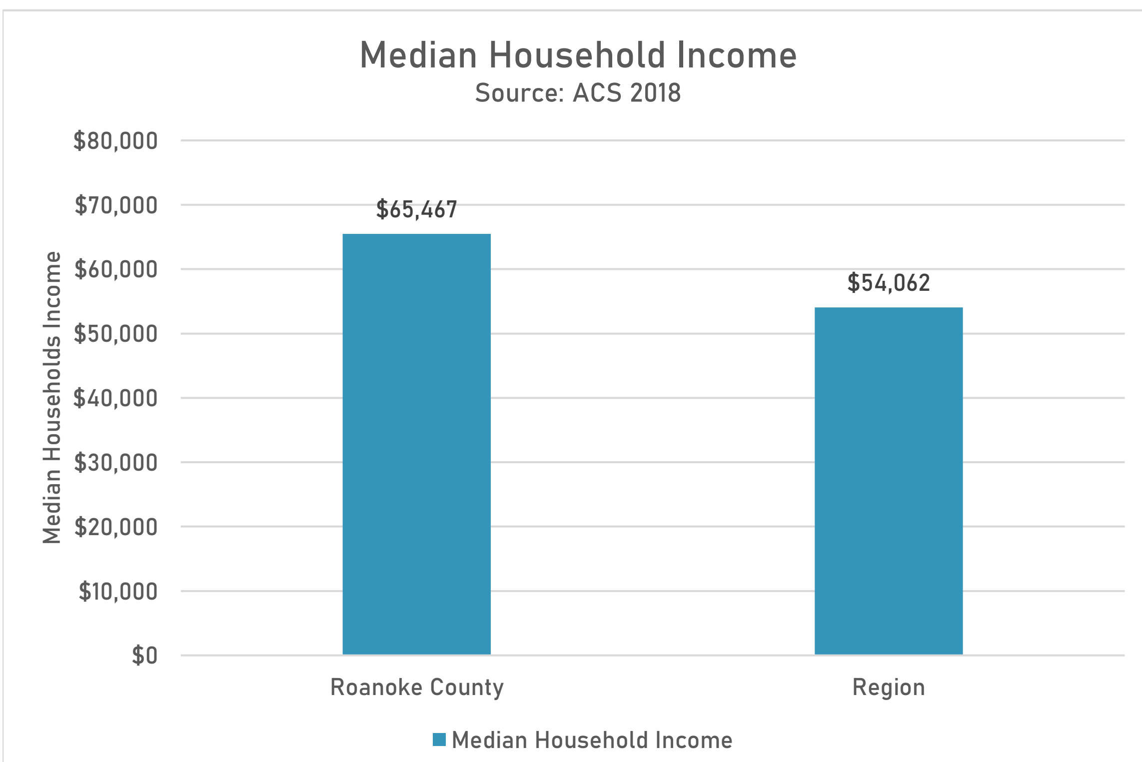
Economic issues such as changes in income, employment, commuting patterns, and the overall economy are explored in this section of the study. Much of the analysis is grounded in data which is supplemented by knowledge gained from interviews with stakeholders described in more detail throughout this section. The economic baseline analysis provides the context and history of Roanoke County to set the stage for the housing market analysis which follows.

Socioeconomics

INCOMES

Household income directly influences the ability of residents to secure housing that is affordable and available to them. Household income can influence housing prices if an influx of higher income households enters the market over time, or conversely leave the market over time. As of 2018, the median household income in the county was $65,467, which was about $11,406 more than the region's median income. This income differential is significant from a housing affordability perspective, as Roanoke County's median income adds about $317 per month in purchasing power for a renter household when compared to the Region. It is important that over time incomes are compared to housing costs to ensure increasing price points do not overburden low- and middle-income households.

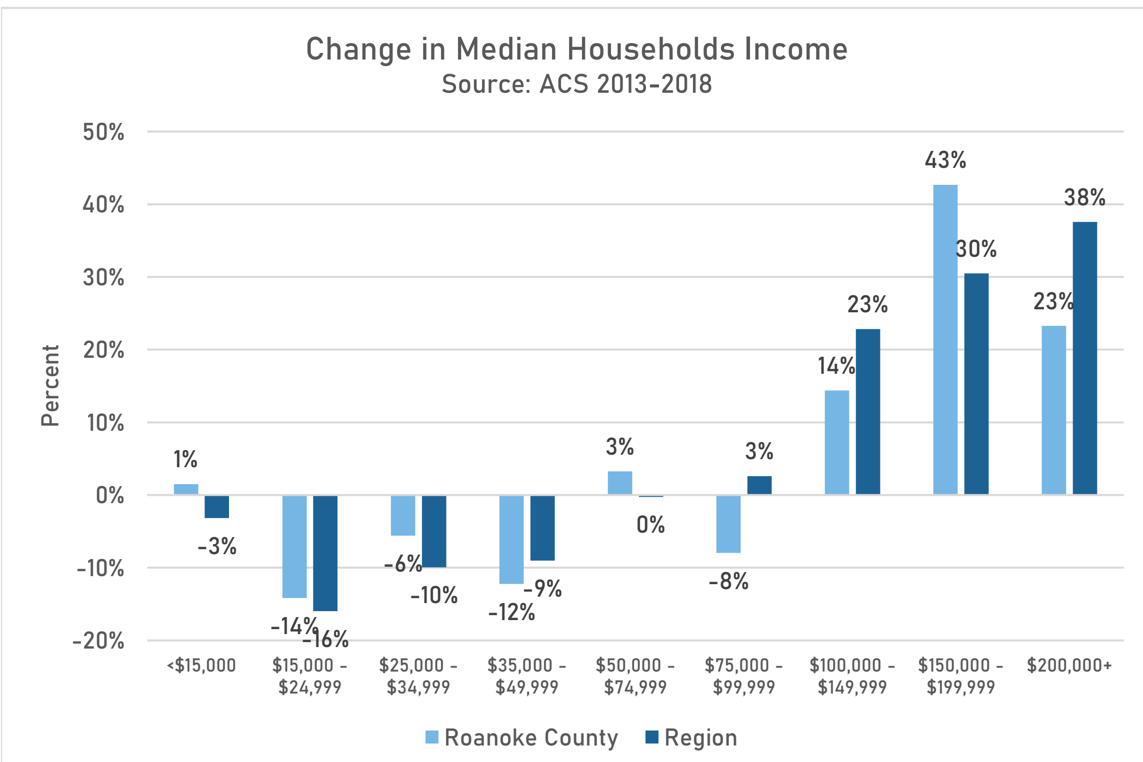
Figure 10: Median Household Income



Cost burden is a circumstance where a household pays 30% or more of their income toward housing costs and is a reality for lower-income households across the county. Higher housing costs crowd out disposable income for other necessities such as food, healthcare, and transportation. About 24% of Roanoke County households earn less than $35,000 a year, compared to 26% of households in the Region. While lower than the Region, it is still important to consider the housing needs and costs of lower-income households and ensuring proactive measures are in place to maintain safe and affordable housing.

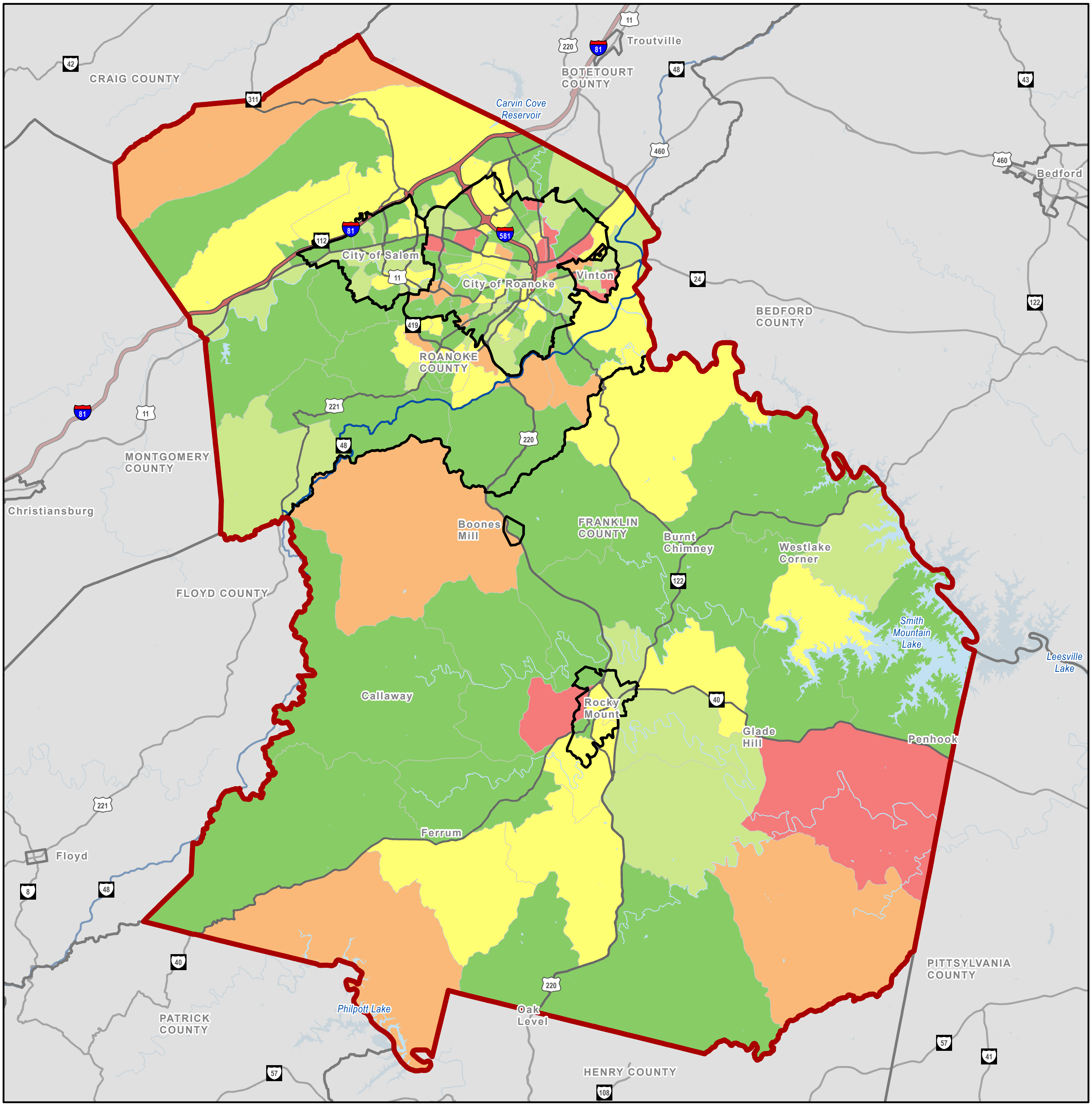
Looking at the distribution of households by income cohort over the last five years shows the county experiencing a loss of households with incomes below $50,000. Of households making less than $50,000, there was a 14% decrease within the cohort earning between $15,000 and $25,000 per year. While the county is losing households at the lower end of the income spectrum, it is gaining households earning more than $100,000 per year. The increase of higher income households can be explained in part by the expansion of higher paying industry sectors. Employers in this sector have a range of employees at various income levels, and those hired as skilled manufacturers, engineers, and managers tend to have higher earnings because of the premium associated with their skills and education.

Figure 11: Change in Median Household Incomes



Roanoke Valley Housing Study - Household Income Change

Prepared by JM Goldson LLC



Road Type

- Interstate
- Primary
- Blue Ridge Parkway
- Roanoke Valley Study Region
- Administrative Boundaries
- Water Bodies

Median Household Income Change 2013 - 2018

- -$12,000 or more
- -$6,000 to -$12,000
- $0 to -$6,000
- $0 to +$6,000
- +$6,000 or more

0 2.5 5 10 Miles

N

Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership, US Census American Community Survey 5-year estimates

Modest growth of real incomes is a challenge both in Roanoke County and across the United States as a whole. Roanoke County saw median household incomes grow by 8% between 2013 and 2018, during which the Region grew by 16%. Although incomes are higher in Roanoke County, the Region is slowly catching up. Even with the growth in income, housing prices continue to rise creating greater instances of housing cost burden.

Table 5: Growth in Median Household Income, 2008-2018

Community	Growth Rate
Roanoke County	8%
Region	16%

Source: ACS 2008- 2013, 2014-2018, B19013, "Median Household Income in the Past 12 Months", and RKG Associates, Inc.

Looking forward, incomes in Roanoke County are projected to continue to grow. Between 2020 and 2025, the county's median household income is projected to grow by 8%, slightly more than the Region's growth rate of 5%. This future growth may be attributed to the investment employers are making locally in Roanoke County and surrounding areas. As more employers paying higher wages enter the area and establish operations, opportunities for residents of the region to secure higher paying jobs will increase as well.

Table 6: Projected Median Household Incomes

Community	2020 Estimates	2025 Projections	Change	Percent Change
Roanoke County	$69,842	$75,350	$5,508	8%
Region	$53,448	$56,124	$2,676	5%

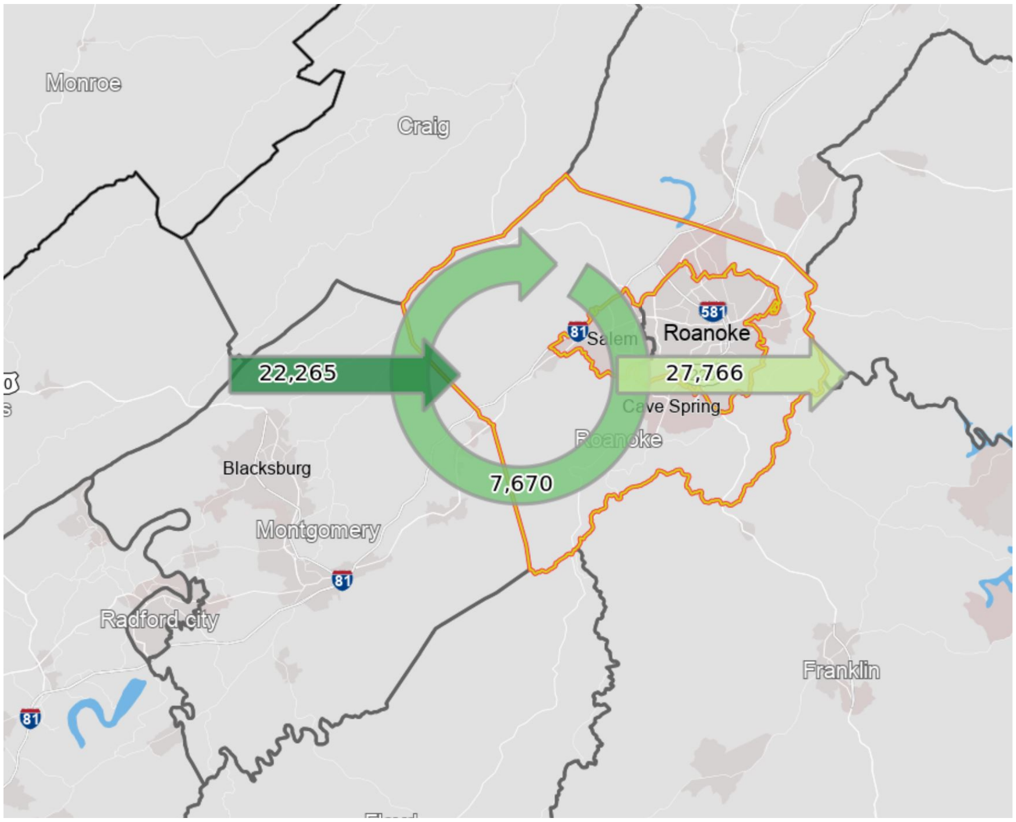
Source: ESRI, 2020

WORKERS

In Roanoke County, there are a total of 29,935 jobs which is inclusive of both private and government employment.[2] Of that total, 22,265 people come from outside the county to work, while 7,670 live and work within the county. Aside from those working within the county, approximately 27,766 residents travel outside the county for employment, making it a net exporter of labor. The large number of people leaving the county for jobs can be explained by the proximity of large employers in the City of Roanoke, City of Salem, and Franklin County.

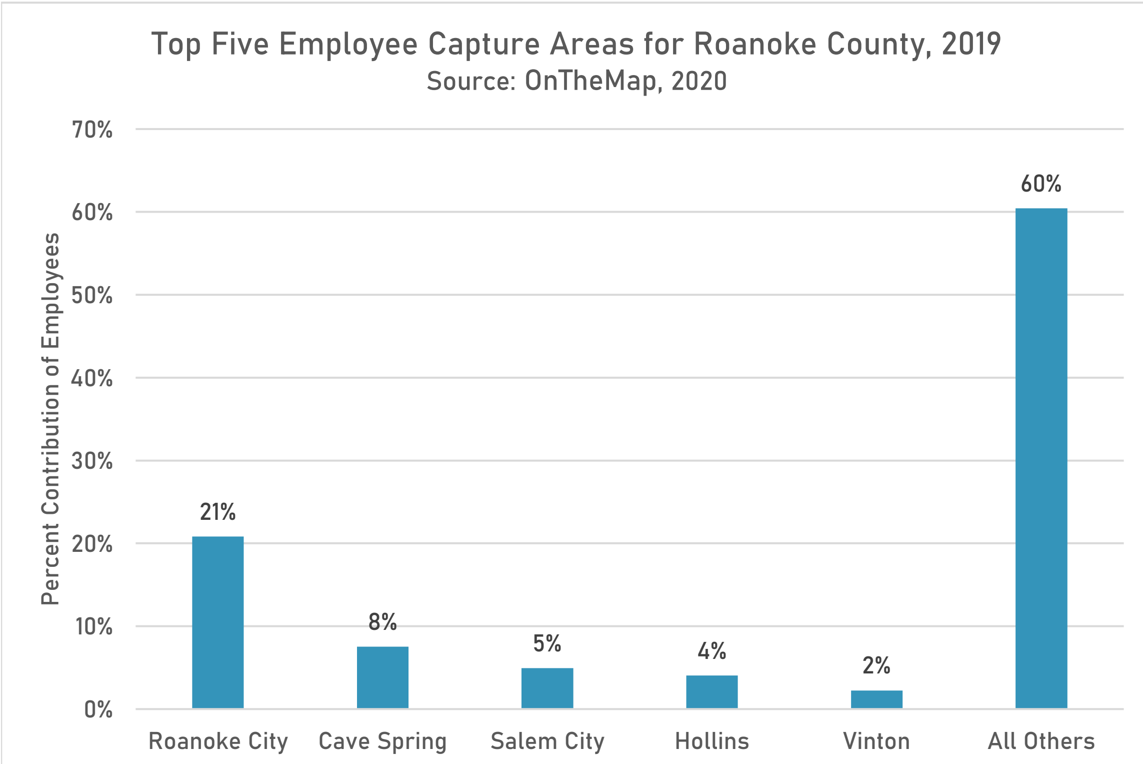
[2] OnTheMap, 2020

Figure 12: Worker Inflow and Outflow



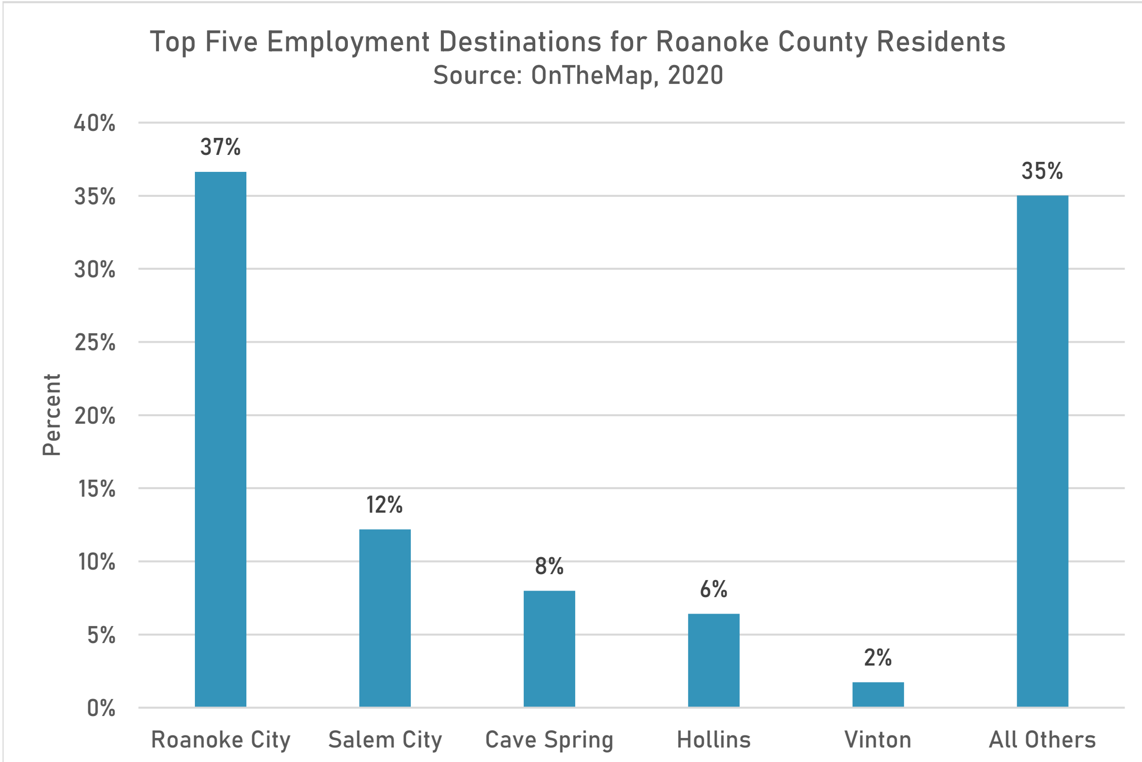
Understanding how many employees are in Roanoke County and what types of employment opportunities exist can help explain some of the activity within the housing market. One of the key linkages between employment and housing is how many individuals are employed in an area and where they commute from. This is important because it reflects whether the county can attract and retain workers locally, and what role housing may play in workers being able to live and work here. If workers are also residents, then their disposable income gets circulated locally, otherwise the county may not capture that direct impact on the local economy. In contrast, when workers commute to an employment destination, much of their personal spending does not occur in the community where they work, but rather where they live.

Figure 13: Top Five Employee Capture Areas



As mentioned previously, about 22,265 workers commute to the City of Roanoke. The vast majority live in communities adjacent to the county. Based on the data, about 6,228 individuals commute from the City of Roanoke for jobs in Roanoke County, accounting for about 21% of the total non-resident workers.

Figure 14: Top Five Employment Destinations

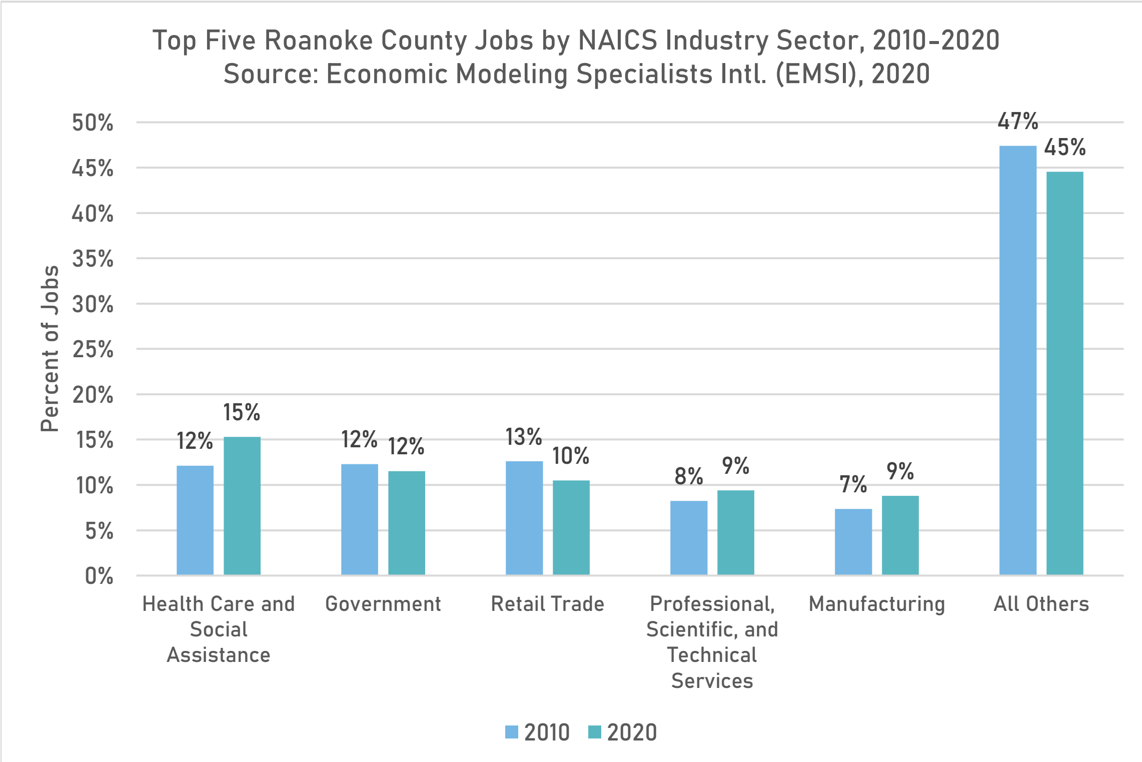


About 26% of residents live and work in Roanoke County indicating a strong employment base. The second largest employment location for Roanoke County residents is the City of Roanoke, which makes sense as it is one of the largest employment centers in southwestern Virginia with a diversity of employers such as universities, hospitals, and major corporations.

INDUSTRIES

In Roanoke County, employment is clustered in a few main industries. Figure 15 presents the top five employment sectors across the county. As a percentage of total employment, Health Care and Social Assistance is the largest industry sector with 15% of all jobs. The second largest employment sector is Government, which accounts for 12% of all jobs. The Other category is made up of the remaining North American Industrial Classification System (NAICS) sectors not in the top five job producing industries. This category accounts for 45% of the total employment in the county.

Figure 15: Top Five Jobs by NAICS Industry Sector



Most notable is manufacturing's changing role over the last 10 years. Manufacturing once accounted for 7% of the jobs in the county, but now accounts for 9%. This shift is a result of structural changes in the economy whereby greater number of jobs are being created in the manufacturing sector.

MAJOR EMPLOYERS

As indicated above, Roanoke County has a diversified employment base which helps bolster the economy and makes the county an attractive place for new residents and employers alike. Historically, Roanoke County has been linked with employment in urban areas in the cities of Salem and Roanoke, but in recent years, Roanoke County has developed its own economy which relies more heavily on health care, manufacturing, and other higher-paying industries.

Wells Fargo Bank is the largest private company in Roanoke County. Wells Fargo has a corporate operations center in the Hollins District and employs between 2,000 and 2,499 workers.[3] The workers at the facility work in many back-office roles in technical and non-technical capacities. The center services Wells Fargo's banking operations in southwest Virginia.

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[3] https://www.yesroanoke.com/253/Roanoke-Countys-25-Largest-Employers

Catawba Hospital, located in Catawba, specializes in serving adults who need mental health care. The hospital offers both short-term "acute care" units and dedicated geriatric units. Catawba Hospital is affiliated with the Virginia Tech Carilion School of Medicine, where staff psychiatrists may have faculty appointments and help train psychiatry residents and medical students.[4] As a medical institution, students can receive training in various disciplines such as nursing, psychology, social work, music therapy, recreation therapy, and food and nutritional services. The hospital attracts professionals such as physicians, nurses, and therapists, as well as many non - technical staff. The hospital which employs a range of 100 and 249 employees, has been expanding in recent years.

As indicated earlier, manufacturing firms contribute significantly to the employment base (9%) countywide. In recent years, specialized manufacturing companies have moved into the area, and rely on the highly trained local workforce. The county's largest manufacturer is Elbit Systems, a manufacturer of military hardware (night vision goggles), who purchased an existing plant in 2019 made a commitment to expand employment in the county.[5] Below is a listing of some of the largest local private employers in the area:

- Elbit Systems – 500 to 999 employees
- Integrity Windows and Doors – 250 to 499 employees
- P1 Technologies – 250 to 499 employees
- TMEIC Corporation – 250 to 499 employees

Hollins University, established in 1842 as Valley Union Seminary, is an independent liberal arts university dedicated to academic excellence and humane values.[6] Hollins University offers undergraduate liberal arts education for women, selected graduate programs for men and women, and community outreach initiatives. The Hollins curriculum and cocurricular programs prepare students for lives of active learning, fulfilling work, personal growth, achievement, and service to society. The campus is in the Hollins District, which is next to Roanoke-Blacksburg Regional Airport, and employs between 250 and 499 workers.[7] The college is a residence community with most students living in residence hall, which therefore does not significantly impact the housing market across Roanoke County.

The housing market in Roanoke County is influenced by these large employers because they provide jobs and careers which enable households to gain economic stability and generate disposable income. With steady, reliable income, households create demand for both renter and ownership units and can make decisions on housing based on what is desired and available in

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[4] http://www.catawba.dbhds.virginia.gov/

[5] https://roanoke.com/news/local/roanoke-county-night-vision-factory-lands-major-order-changes-hands/article_37c3b4ea-3a02-5edd-a9cd-6677e60d7db6.html

[6] https://hollins.edu/who-we-are/history/

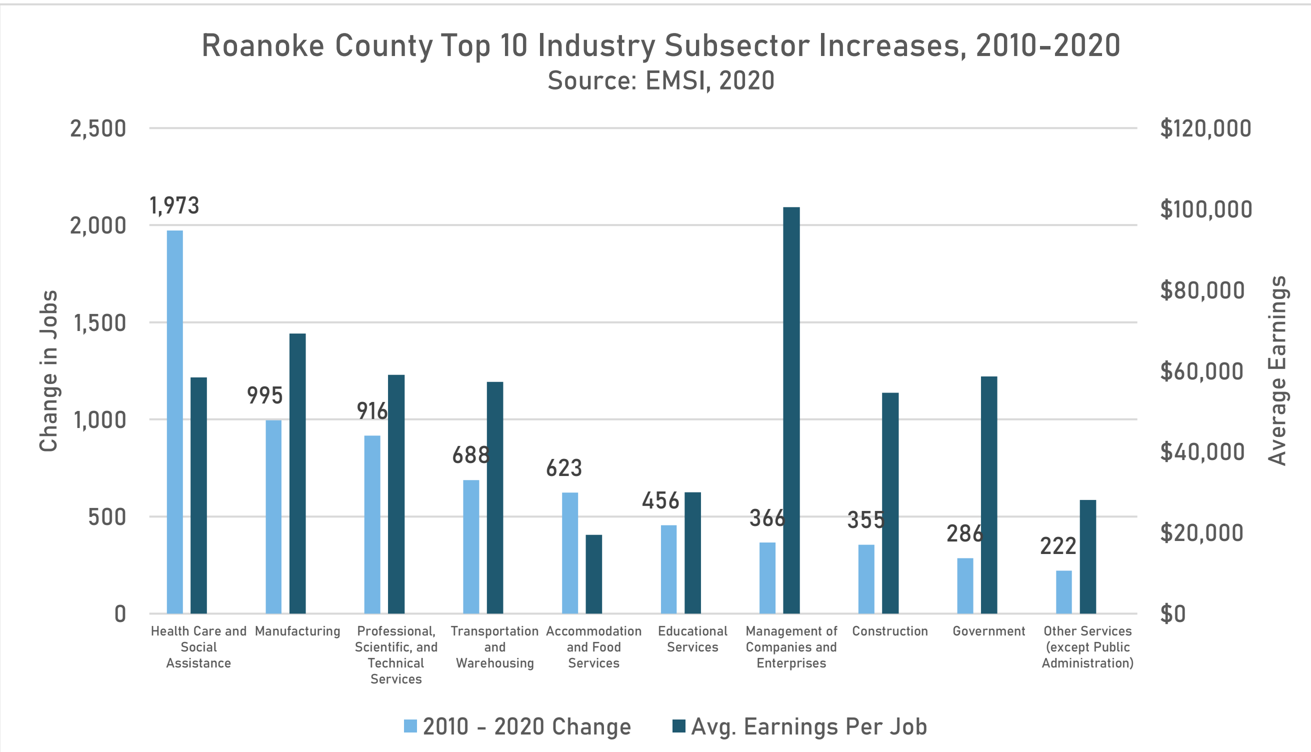
[7] https://www.yesroanoke.com/253/Roanoke-Countys-25-Largest-Employers

the market. For example, households with higher incomes may choose to purchase larger homes, while more moderate income households may choose to rent homes in either single family or multifamily units.

CHANGES IN INDUSTRY

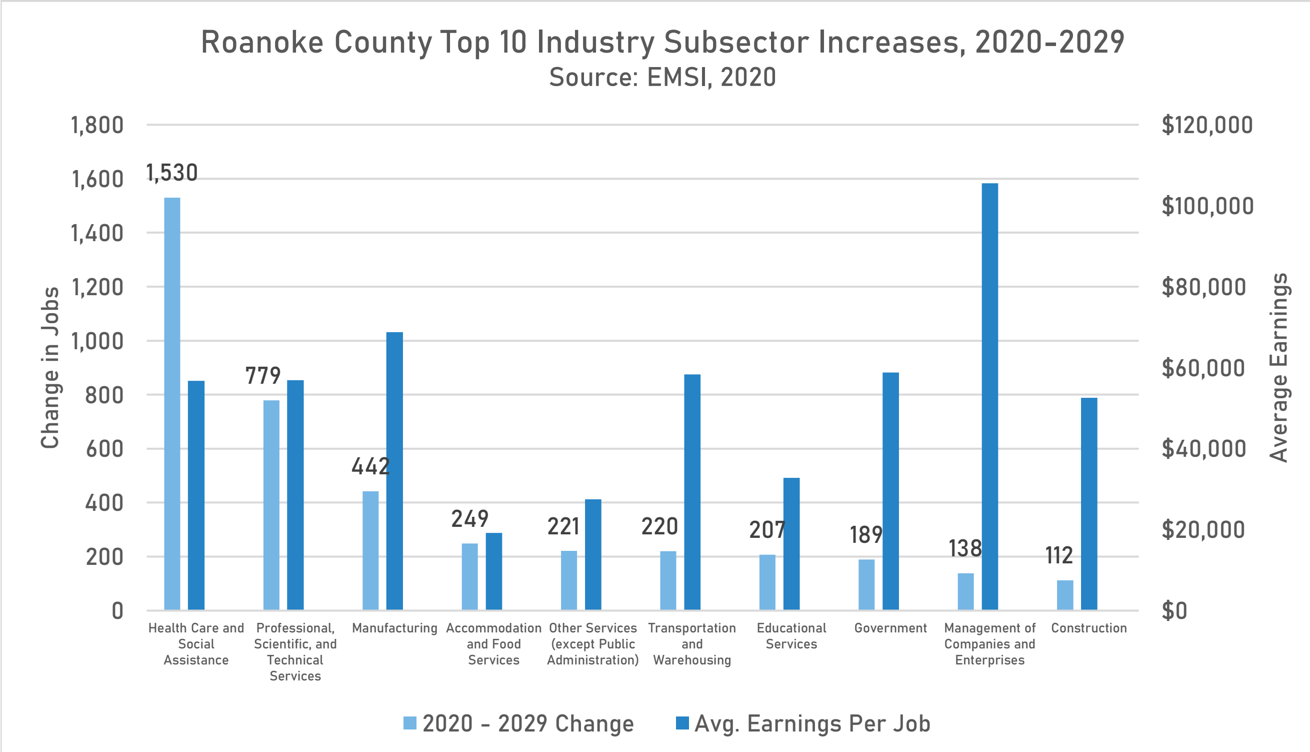
County level employment data between 2010 and 2020 shows that the top 10 employment subsectors have grown by 6,880 jobs, with an average wage of $53,510. Sectors which experienced the largest growth were related to Health Care which saw an increase of 1,973 jobs, and Manufacturing which saw an increase of 995 jobs.

Figure 16: Top Ten Industry Subsector Increases, 2010-2020



Between 2020 and 2029, Roanoke County is projected to see modest employment growth in Health Care and Social Assistance (1,530 jobs), Professional Services (779 jobs), and Manufacturing (422 jobs). Jobs in these industry sectors generally pay good wages which tend to outpace other industry sectors.

Figure 17: Top Ten Projected Industry Subsector Increases, 2020-2029



The largest losses are projected to occur in the Finance and Insurance Sectors with a decline of 329 jobs. The key difference in the future is that the average wage differential between the top jobs gained versus lost will expand. The average wage of top growth sectors is $57,508 while the average wage of the top declining sectors is $51,669. This may indicate that some employees in the future may have addition income than those jobs today which could translate into purchasing power for housing.

INDUSTRY WAGES AND HOUSING AFFORDABILITY

While the county experienced employment growth over the last decade, incomes in some industry sectors are not sufficient to cover mortgage or rent payments without placing added financial pressure on the household. Across the county, the median sales value of a home is around $213,155, while the median gross rent is about $949 per month. Based on these metrics, several of the top industries (and growing industries) do pay average wages for which employees could afford these housing prices. It is worth noting though that within certain industry sectors there is vast wage disparity across occupations. For example, within the Healthcare industry you may have physicians earning over $200,000 but janitorial staff earning less than $30,000 a year. There are also industry sectors like Retail Trade or Accommodations and Food Services that do not pay average wages high enough to cover housing costs at today's median rent or sale price.

Table 7: Housing Affordability Based on Top 10 Industry Sectors, 2020				
Industry	Industry Jobs	Average Earnings	Affordable Home Price	Affordable Rent
Health Care and Social Assistance	6,762	$56,726	$212,706	$1,576
Government	4,828	$58,807	$220,510	$1,634
Retail Trade	4,566	$33,930	$127,228	$942
Professional, Scientific, and Technical Services	4,138	$56,883	$213,295	$1,580
Manufacturing	3,958	$68,769	$257,864	$1,910
Accommodation and Food Services	3,037	$19,189	$71,953	$533
Administrative and Support and Waste Management and Remediation Services	2,507	$33,109	$124,149	$920
Other Services (except Public Administration)	2,265	$27,504	$103,132	$764
Construction	1,825	$52,555	$197,066	$1,460
Transportation and Warehousing	1,730	$58,320	$218,683	$1,620

Source: EMSI, and RKG Associates, Inc., 2020
Note: Rent payment accounts for utilities. Home price accounts for mortgage, taxes, and insurance.

The largest industry sector, Health Care and Social Assistance, pays on average about $56,726 per year which can purchase a home for around $213,000, a price nearly on par with the countywide median. Other industries such as Retail Trade pay significantly less, with individual workers able to afford homes priced at $127,000, which is nearly $70,000 less than a median priced home. As housing prices continue to outpace earnings, dual income households become more common, cost burden increases, and the amount households can save for the future diminishes.

ROANOKE COUNTY HOUSING STUDY

HOUSING MARKET ANALYSIS

The housing market analysis section describes the market characteristics associated with both owner-occupied and renter-occupied housing units in Roanoke County. This section contains a description of housing types, price points, and affordability in addition to other topics.

Countywide Housing Market

Roanoke County has 40,800 housing units of which 38,373 (94%) are occupied and 2,457 (6%) are vacant. Of the occupied housing units, 74% are owner-occupied, and 26% are renter-occupied. Housing development patterns have changed over time across the county as the population has grown. This county-wide housing market analysis examines both the historical and current market conditions and uses that information to inform strategies for addressing future housing needs.

YEAR BUILT AND HOUSING UNIT GROWTH

Roanoke County's housing growth history shows a rapid transformation over a few decades. Between 1970 and 2010, the number of housing units in Roanoke County grew by 88%, rising from 21,300 to about 40,000. Over the same period, the Region grew by 82% indicating that the growth rate in Roanoke County outpaced the Region but not by a lot. The rapid growth coincided with both population and household growth in the county. Additionally, the national trend of suburbanization and a lower cost of living (in the earlier decades) in Roanoke County helped drive the construction of new units over the last 50 years.

Figure 18: Housing Unit Change

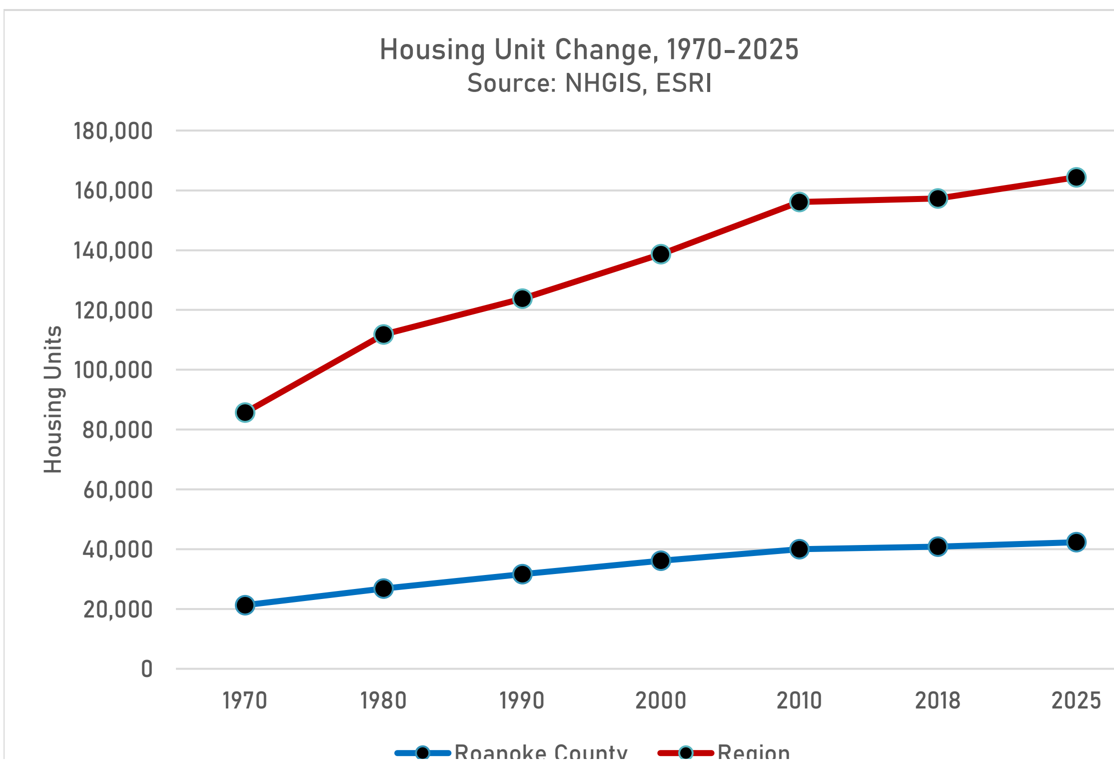
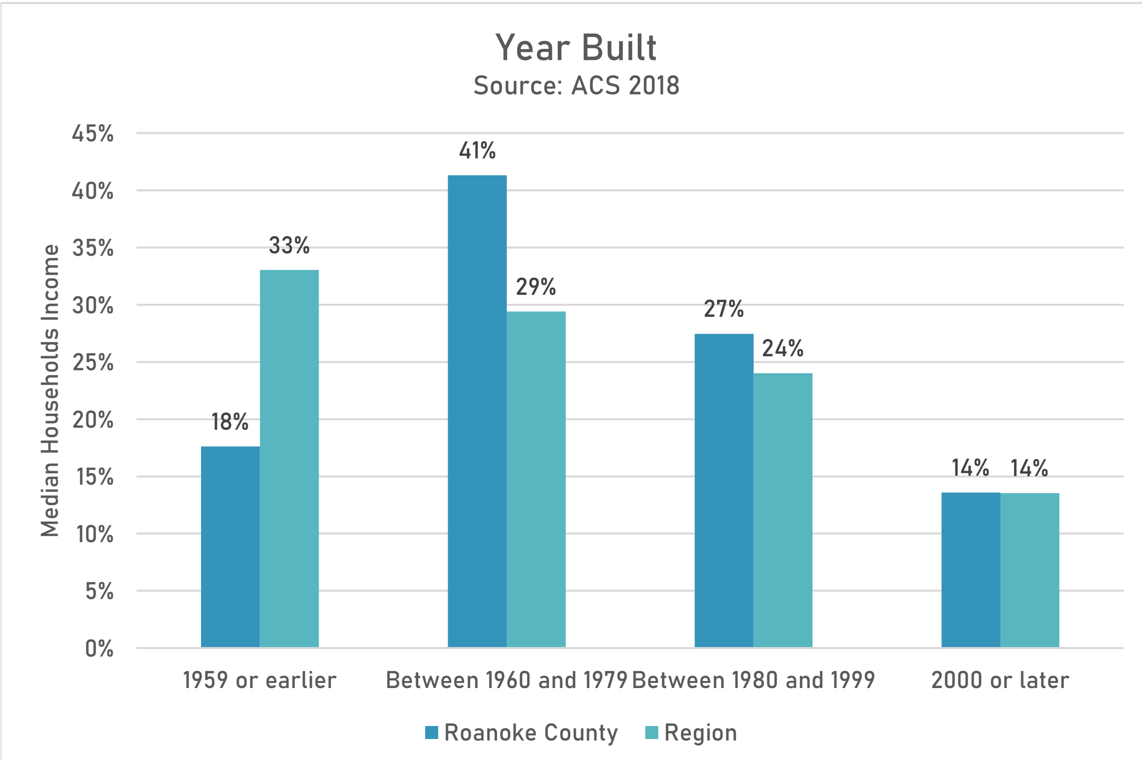


Figure 19 shows the year built for housing structures highlighting the large number of units constructed between 1960 and 1999. In Roanoke County about 41% of housing units were built between 1960 and 1980, compared to only 29% in the Region.

Figure 19: Year Built



Building Permit Activity

On average, Roanoke County permitted 155 new single family detached housing units per year since 2010.[8] Over the same period, the county also issued an average of 39 building permits per year for multifamily units in duplexes, triplexes, quadplexes, and buildings with five or more units. In Roanoke County, the largest number of single family permits were issued in 2019 when 162 housing units were built, while in 2015 there were 210 multifamily unit permits issued. Regionally, the number of building permits has fluctuated closely with the county. Figure 20 shows the number of building permits in Roanoke County and the Region.

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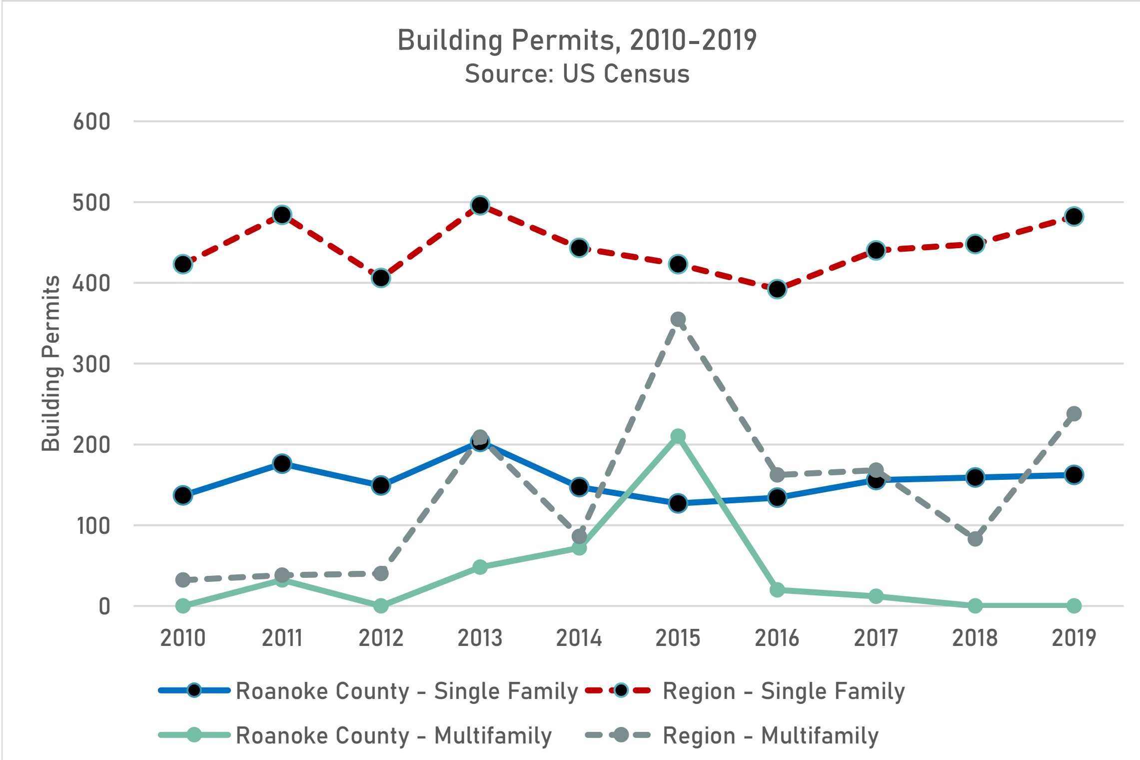
[8] U.S. Census, 2020

Figure 20: Building Permits



Housing Tenure

As of 2018, 70% of the county's housing stock was owner-occupied while 24% was renter-occupied. The county's housing stock is skewed more toward ownership than the Region where only 60% of housing units are owner occupied.

Table 8: Housing Tenure

	Roanoke County	Region
Owner-Occupied	70%	60%
Renter-Occupied	24%	27%
Vacant	6%	12%

Source: ACS 2014-2018

Units in Structure

In Roanoke County, most of the residential building stock is comprised of single family detached units. As of 2018, 81% of the county's residential stock was single family homes.[9] The second largest residential typology are mobile homes which account for 2% of all units. The Region has a much higher percentage of mobile homes (5%) than Roanoke County because the Region encompasses more rural areas like Franklin County which tend to have more mobile homes.

The breakdown of units in structures changes drastically when comparing owner-occupied units to renter-occupied units. Within Roanoke County, 96% of owner-occupied units are single family homes and only 2% are in structures containing two or more units, while 2% of units are mobile

[9] ACS 2014-2018

homes. Contrast this with renter-occupied units, where 38% are single family homes, 61% are in structures with two or more units, and mobile homes account for 1% of all rental units. As is typical for the rental market, housing diversity and choice is greater in Roanoke County for household looking to rent versus those looking to purchase.

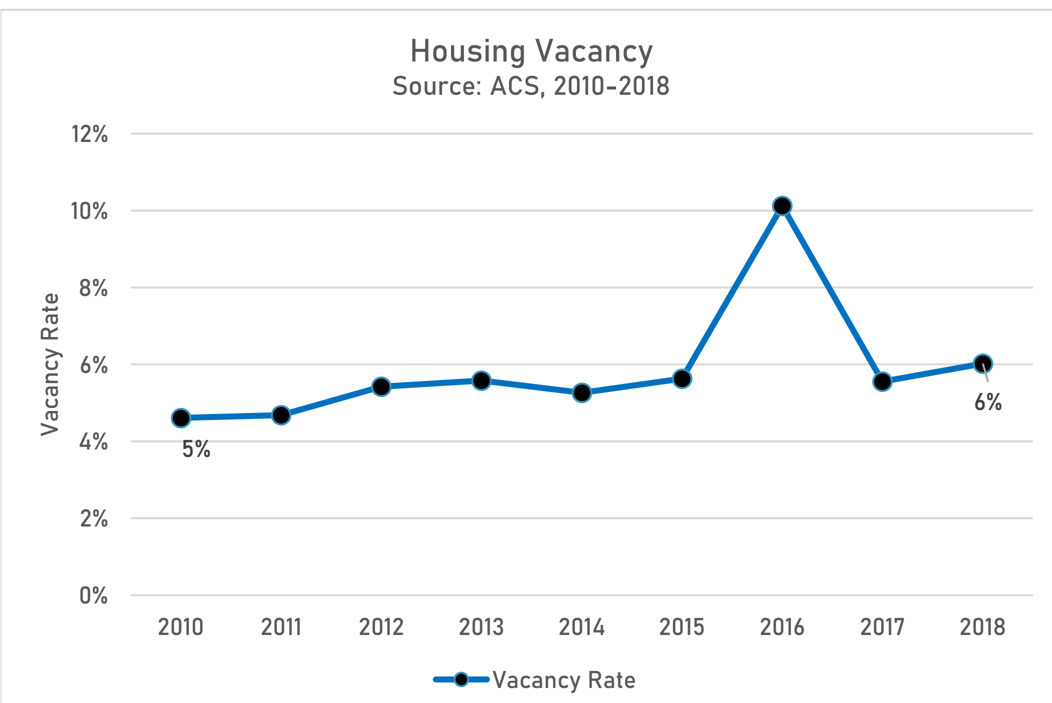
Vacancy

Roanoke County's overall housing vacancy rate has been relatively steady since 2010, except for a spike during 2016. As of 2018, the rate had increased to 6%. Part of Roanoke County's housing market story can be told through the Census' Vacancy Table. Vacancy is defined by the Census across seven different categories which include:

- Units Actively Listed for Rent
- Units Rented, but Not Yet Occupied
- Units Actively Listed for Sale
- Units Sold, but Not Yet Occupied
- Units for Seasonal/Recreational Use
- Units for Migrant Workers
- Other Vacant

To calculate total vacancy across all categories in Roanoke County, the Census sums each category together and divides by the total number of housing units in the county. This vacancy rate provides an estimate of all housing units that are not occupied at the time the Census interview takes place regardless of whether the unit is actively being marketed or even habitable.

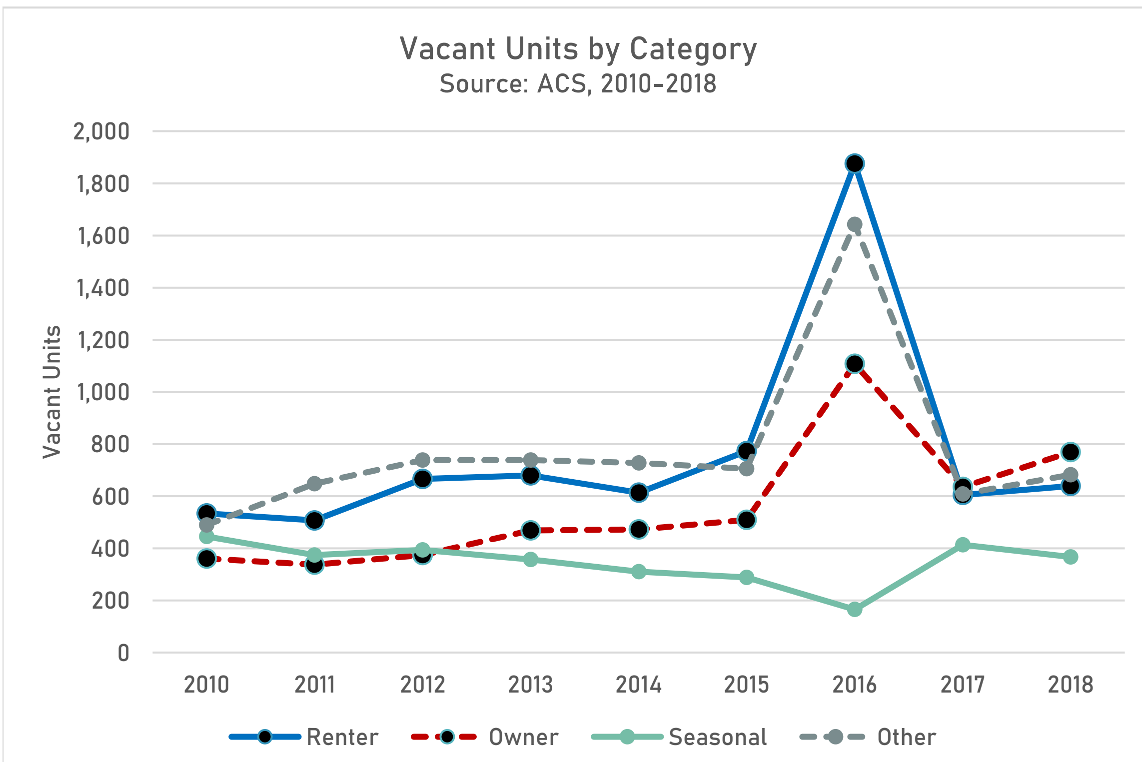
Figure 21: Overall Housing Vacancy



The Census defines "Other Vacant" using eleven categories with ones most pertinent to Roanoke County being: foreclosure, personal/family reasons, legal proceedings, preparing to rent/sell, needs repairs, abandoned/possibly to be demolished or condemned. In 2018, 28% of all vacant units in Roanoke County fell under this category which equates to about 682 housing units. Figure 22 shows how the number of vacant units in four vacancy categories changed from 2010 to 2018.

Generally, over this eight-year period the number of vacant units grew steadily except for 2016 when the number increased dramatically then declined just as rapidly. This change in 2016 is likely an error in the Census data. Between 2010 and 2018, there was a 20% increase in the number of vacant rental units, while there was a 114% increase in the number of for-sale units. Although there has been an increase in the vacancy rate, the county's overall vacancy and vacancy of available units is still quite low indicating a tight housing market and increased competition for units. This is also backed by data on sale prices, days on market, and increases in gross rent.

Figure 22: Vacant Units by Category



The second home market in Roanoke County is not particularly strong. As of 2018, only 15% (367 units) of all vacant units Roanoke County were classified as Units for Seasonal/Recreational Use. Much of the seasonal use homes in the Region are in Franklin County where about 56% of its homes are seasonal, especially those found around Smith Mountain Lake.

Owner-Occupied Housing Market

This section provides a more in-depth analysis of the owner-occupied housing market including supply, demand, and pricing across the county.

SUPPLY

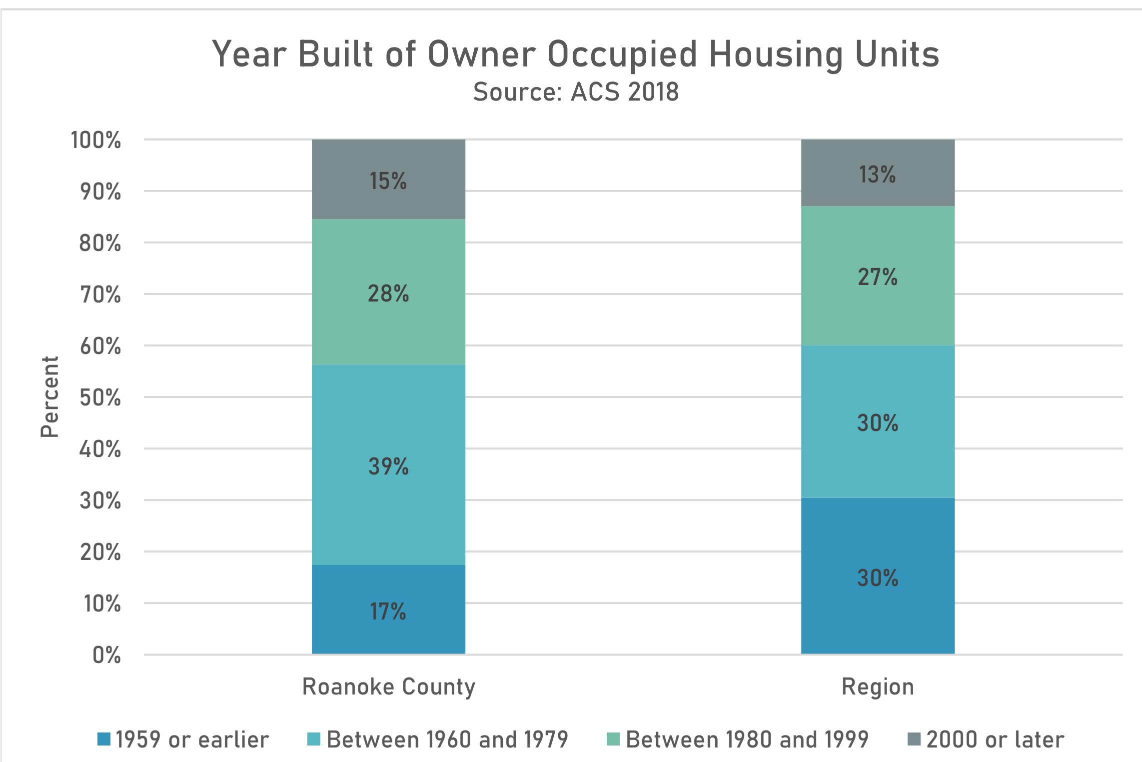
As was noted earlier, owner-occupied units comprise 70% of the county's housing stock with 96% of units being single family homes, 2% in multifamily structures, and 2% of units in mobile homes. Compared to the Region where 6% of rental housing is in mobile homes, Roanoke County has less reliance on these types of units. Between 2013 and 2018, there was a loss of 695 owner-occupied housing units in Roanoke County, many of which were converted from ownership units to rental units.

Table 9: Housing Tenure, Owner

Owner Occupied	Roanoke County	Region
Single family	96%	92%
Multifamily	2%	2%
Mobile Home/RV/Other	2%	6%
Source: ACS 2014-2018		

When compared to the Region, Roanoke County has a slightly younger housing stock with 44% of ownership units built after 1980, compared to 40% across the Region. This matches closely with the active periods of residential construction after 1970 when the county saw large increases in both housing units, households, and population. Many of the housing units built during that time were single family units, which tended to serve the needs of households moving to the county at that time.

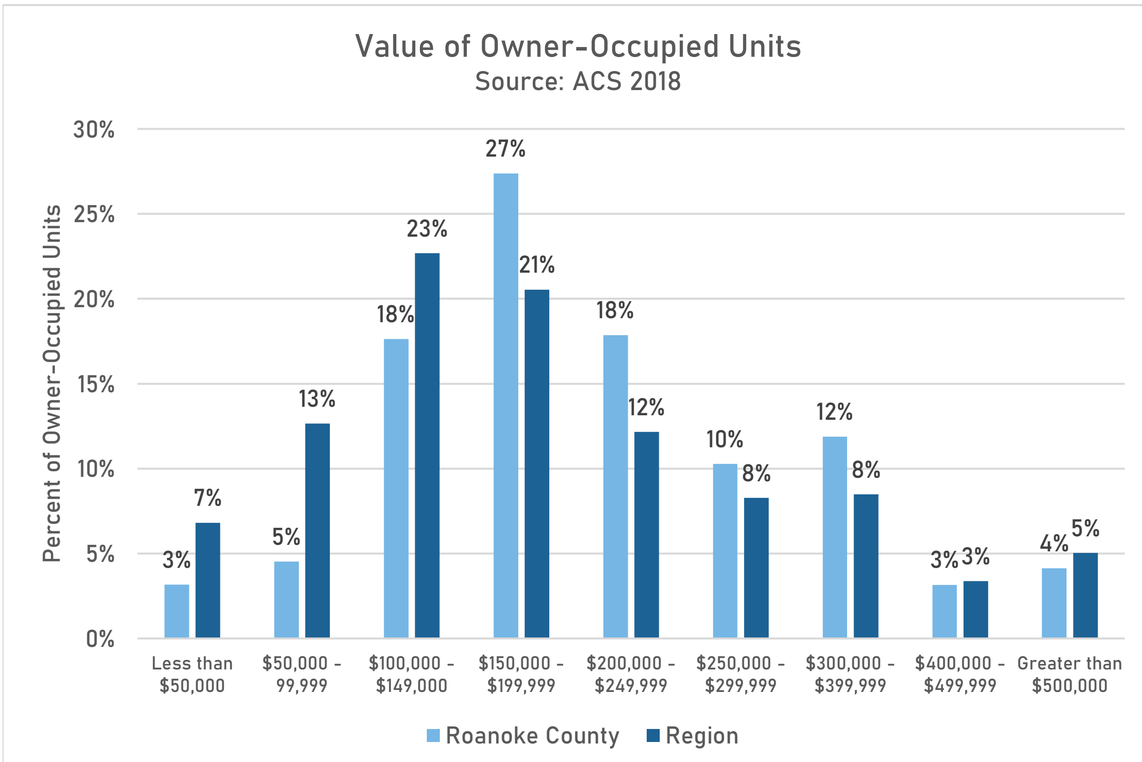
Figure 23: Year Built of Owner-Occupied Housing Units



Pricing

In 2018, the median value of an owner-occupied housing unit in Roanoke County was $194,800.[10] That figure is up only 1% over the median value from 2013 of $193,700. While prices for owner-occupied units have risen, it is important to note that 53% of the county's owner-occupied housing stock is still valued at less than $200,000 indicating some homes are valued within the reach of some households making the county median income. Figure 24 compares the number of owner-occupied housing units by value range across Roanoke County and the Region. Generally, Roanoke County's housing stock is more affordable compared to the Region as it encompasses more rural areas.

Figure 24: Percent of Owner-Occupied Units by Value



To provide accurate data on owner-occupied sales in Roanoke County, Multiple Listing Service (MLS) data for the period 2010 to 2019 was analyzed.[11] Over the 10-year period, there were about 12,921 sales with an average of 1,292 sales per year. The Great Recession impacted the county's ownership market dropping the total number of yearly sales as well as the median sale price of ownership units. Sale prices and total sales declined hitting a low in 2012 before the recovery began to take place. The median sales price between 2010 and 2012 dropped by 13% from $221,300 to $193,200. Prices, number of sales, and days on market have all improved since then.

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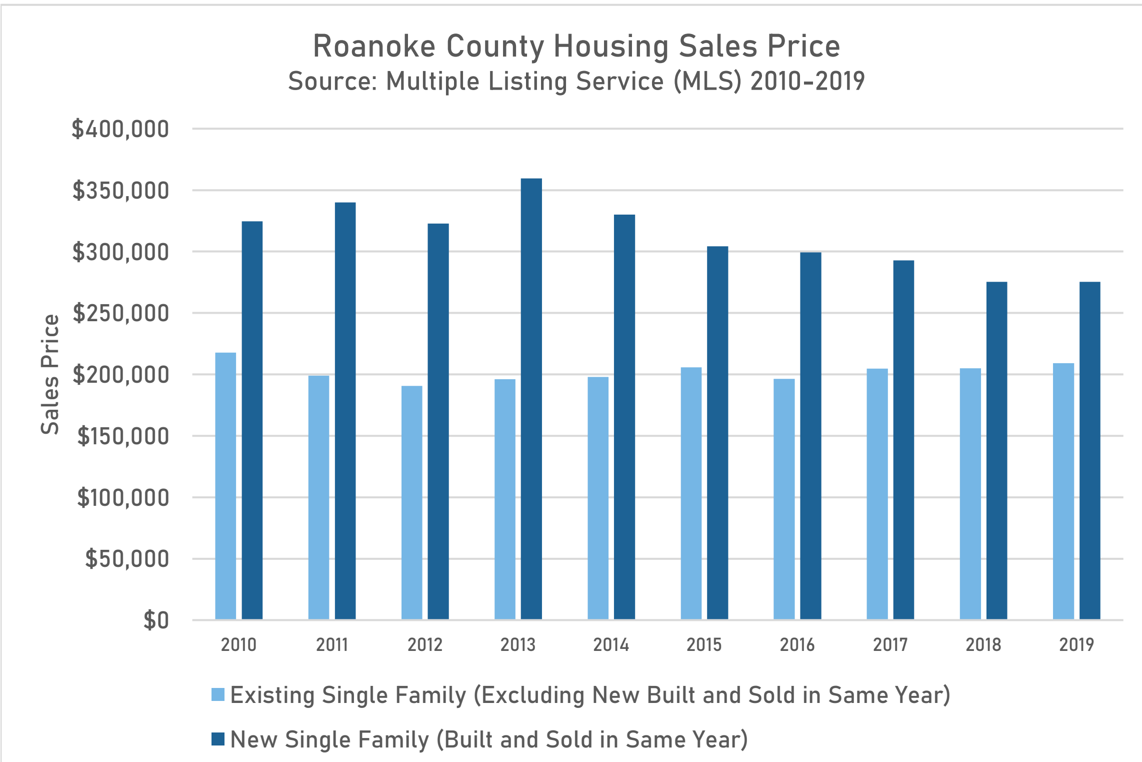
[10] ACS, 2014-2018.

[11] MLS data provided by Roanoke Valley Association of Realtors.

RKG also looked at a comparison of sales for existing single family homes that sold versus brand new single family homes (ones that were built and sold in the same year) to better understand the price differential between the two. In 2019, new single family homes on average sold for 32% more than existing single family homes. The median sales price of a new home in 2019 was $275,349 compared to $209,100 for an existing home. Figure 25 shows median sales price for existing and new homes by year sold.

Figure 25: Sales Price



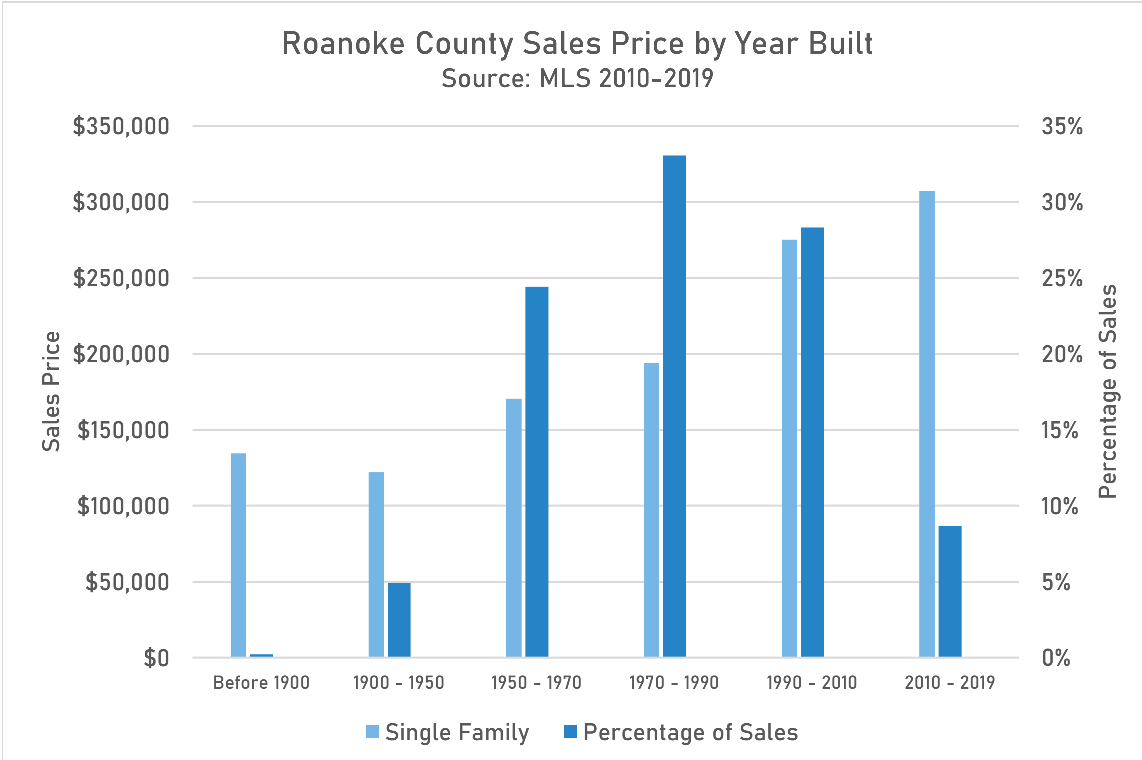
Homes built between 1970 and 2010 account for nearly 61% of all sales activity. Both the size and price of homes on a per square foot basis vary depending on the age of the home. On a price per square foot basis, the median sales price of a home built between 1950 and 1970 was $77 per square foot, compared to $134 a square foot for homes built after 2010. This shows that older homes do not garner nearly the same price for a variety of reasons including overall size, potential rehabilitation needs, location or school district, and modernized layout and amenities.

The homes built in recent years are generally the same size as those built prior to the 1990's. Homes built between 1970 and 1990, averaged 2,188 square feet and sold for around $111 per square foot. Whereas between 2010 and 2019 homes averaged 2,223 square feet and sold for $134 a square foot.

The average days on market varies by product type with new homes taking longer to sell than existing homes, which is not surprising given the significant price differential between the two.

Overall, the total days on market has declined since 2010 when on average it took an average of 65 days for a unit to sell compared to only 17 days in 2019.

Figure 26: Sale Price by Year Built

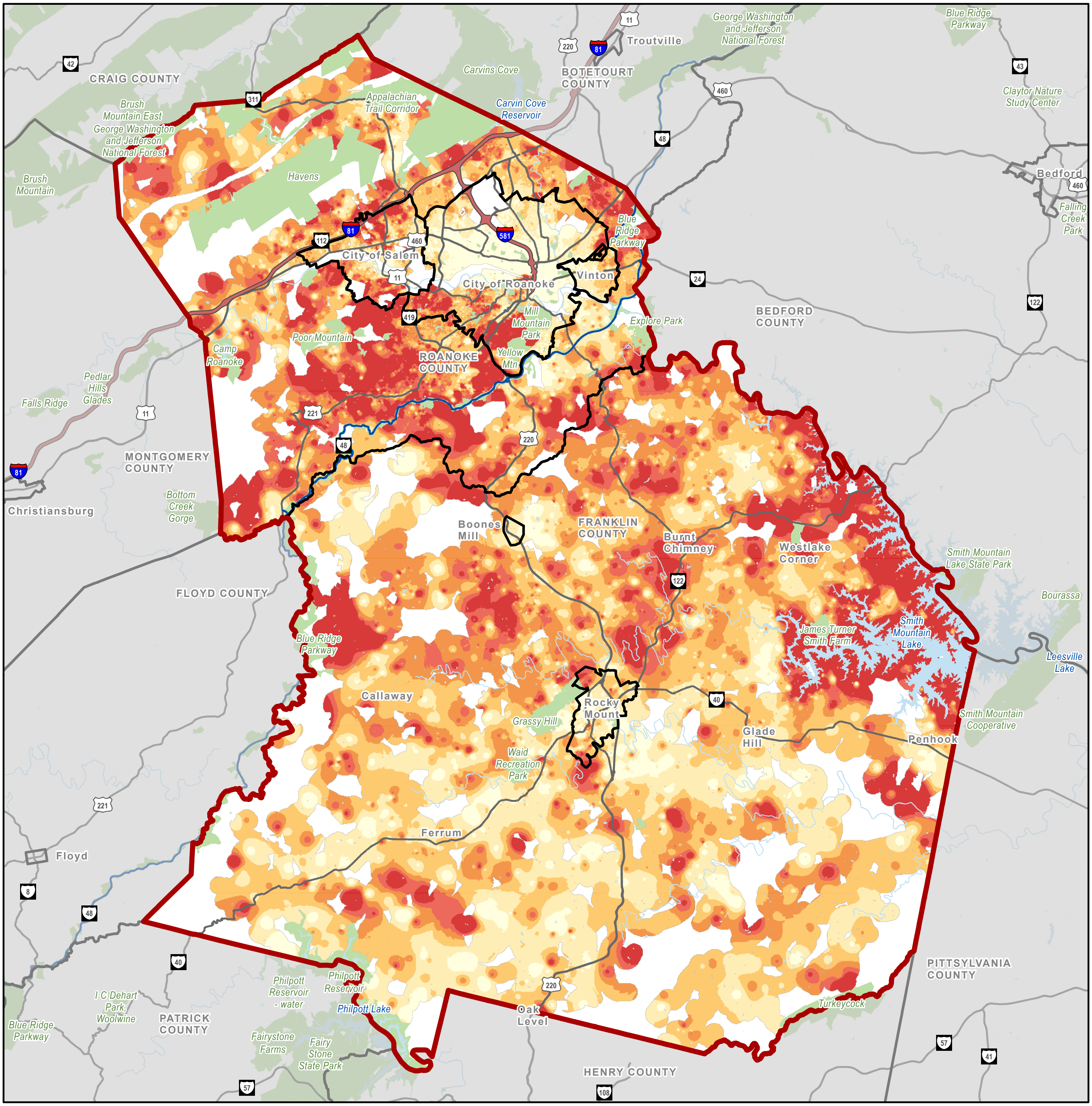


The maps on the following pages show the prices of homes sold between 2010 and 2020 at the regional level. The highest priced markets are across much of Roanoke County and around Smith Mountain Lake in Franklin County. Interestingly, the lowest concentrations of sales prices are in the incorporated cities and towns like Roanoke, Salem, and Rocky Mount. While there are pockets of higher priced neighborhoods in each of those locations, their overall sales values tend to be lower than those found in the counties. This may be explained by the older housing stock, desire for larger lots in the county, and real or perceived school quality.

The second map shows sale prices over the same period for Roanoke County.

Roanoke Valley Housing Study - Home Sales 2010-2020

Prepared by JM Goldson LLC



Road Type

- Interstate
- Primary
- Blue Ridge Parkway
- Roanoke Valley Study Region
- Administrative Boundaries
- Water Bodies
- Conservation Land

MLS Sales 2010-2020

Sale Price (CPI-Adjusted)

- $100,000 or less
- $100,000 to $150,000
- $150,000 to $200,000
- $200,000 to $250,000
- $250,000 to $300,000
- $350,000 or more

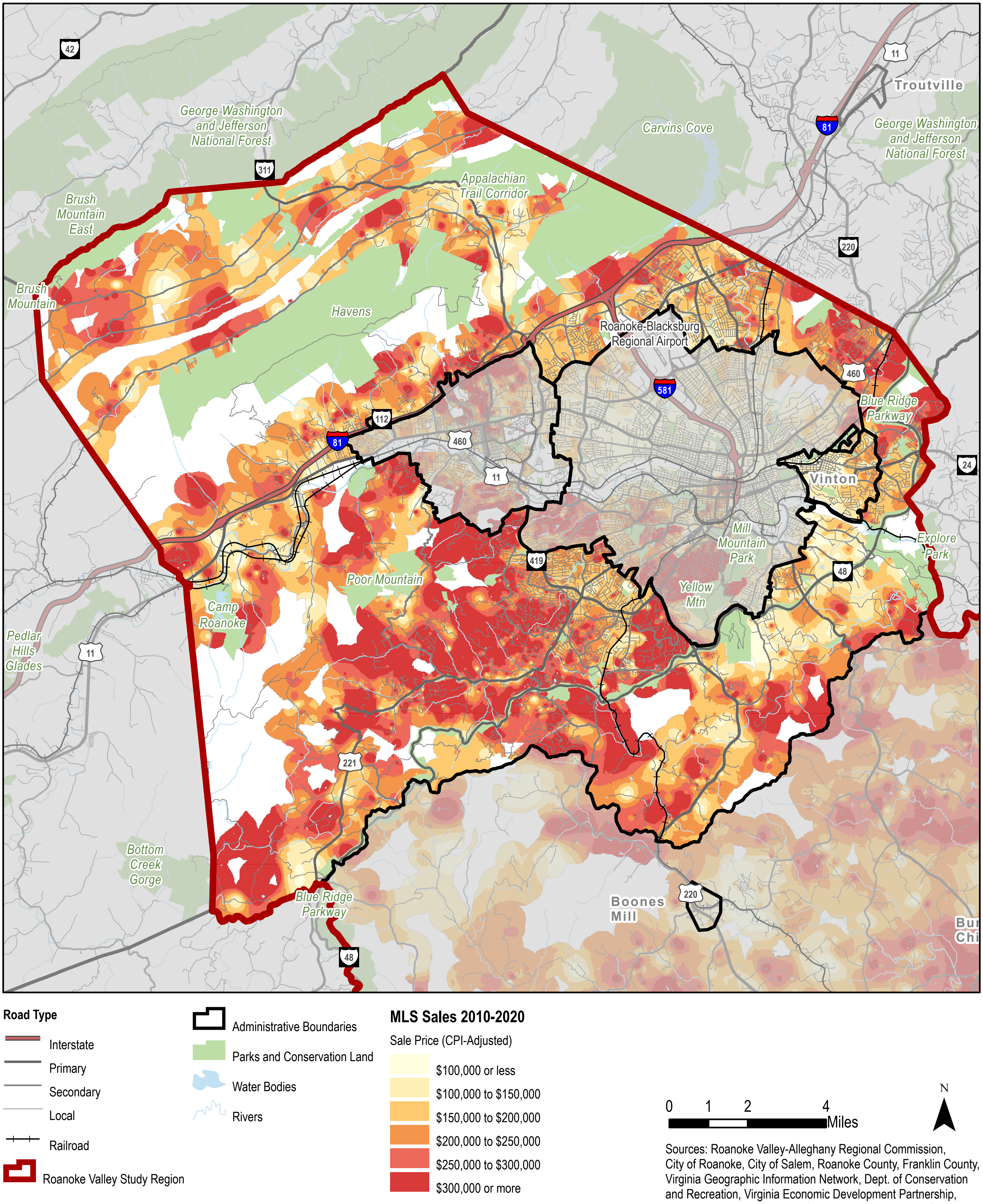
0 2.5 5 10 Miles

N

Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership, Roanoke Valley Association of Realtors Multiple Listing Service

Roanoke County, Virginia - Home Sales 2010-2020

Prepared by JM Goldson LLC



Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership, Roanoke Valley Association of Realtors Multiple Listing Service

SECOND HOME MARKET

While the Region attracts nature lovers, retirees, and those looking for more space and recreational opportunities, the second home market in Roanoke County is not as strong as the Region. As indicated earlier, only 15% of vacant housing units are classified as Seasonal which accounts for 367 units. While there are some second homes/seasonal units in the county, the total number of seasonal units does not distort pricing associated with the year-round housing market. As mentioned above, the median sales price in 2019 was only $213,155 for an existing home. The price points found in Roanoke County are significantly lower than those found in true second home markets such as Smith Mountain Lake, where units can easily sell for $500,000.

Renter-Occupied Housing Market

This section provides an analysis of the renter-occupied housing market including supply, demand, and pricing across the county.

SUPPLY

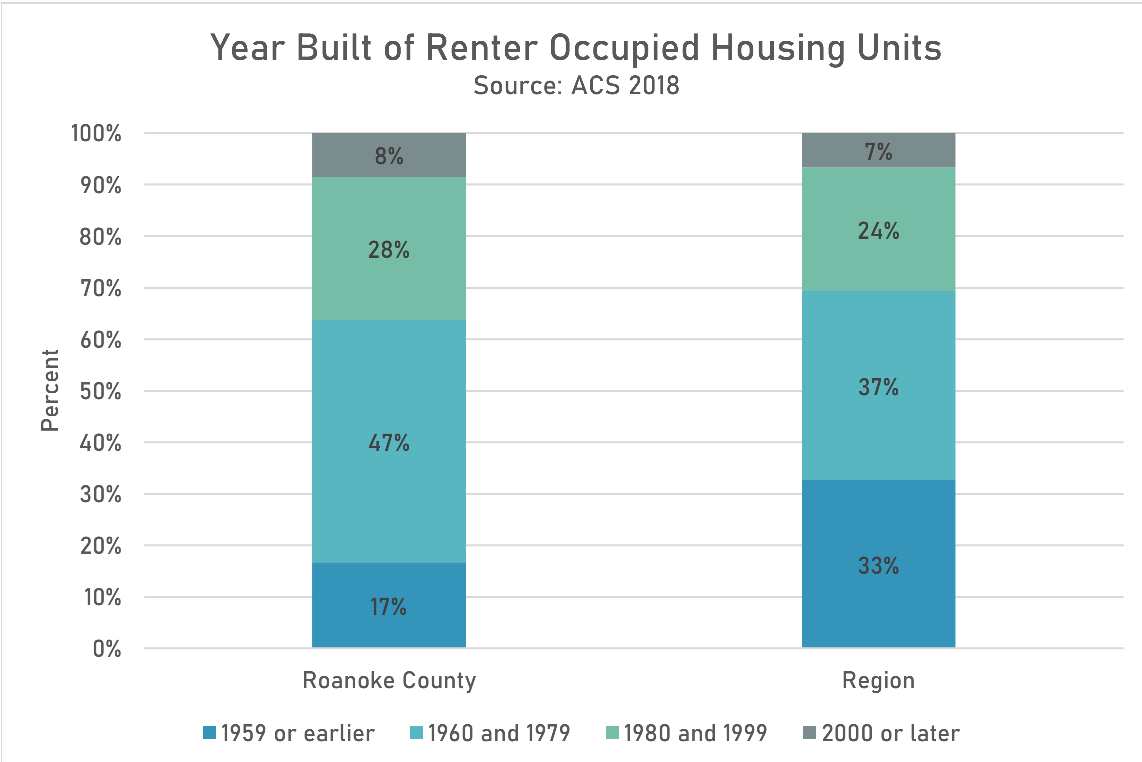
In 2018 only 26% of the county's households were renters, with 38% of rental units in single family homes, 61% in multi-unit structures, and 2% of units in mobile homes. Compared to the region where only 52% of rental housing is in multifamily units, Roanoke County has a larger share of these types of rental units which can offer lower costs, less maintenance, and a variety of housing types.

Table 10: Housing Tenure, Rental

Renter Occupied	Roanoke County	Region
Single family	38%	44%
Multifamily	61%	52%
Mobile Home/RV/Other	2%	4%
Source: ACS 2014-2018		

The rental housing stock across the county is slightly newer with about 36% of rental housing units were built after 1980. This compares to the Region where only 31% of rental units were built after 1980. Older rental units tend to require greater maintenance and sometimes result in less than ideal conditions for tenants.

Figure 27: Rental Structures by Year Built



Pricing

In 2018, the median gross rent in the county was $949 which was an increase of 15% from 2013.[12] Gross rent is a measure of the monthly contract rent plus an estimated average utility cost paid by the renter. Utilities factored in include electric, gas, water, sewer, and fuel. Figure 28 shows the change in gross rent between 2013 and 2018 by price range. The number of households paying rent at the very low end (less than $500 a month) has declined by 24%, while the number of households paying rent at the higher end (over $1,500 a month) has grown by 147%. Households paying moderate rents, between $500 and $1,000 per month, have also declined reinforcing the trend toward higher monthly rent payments.

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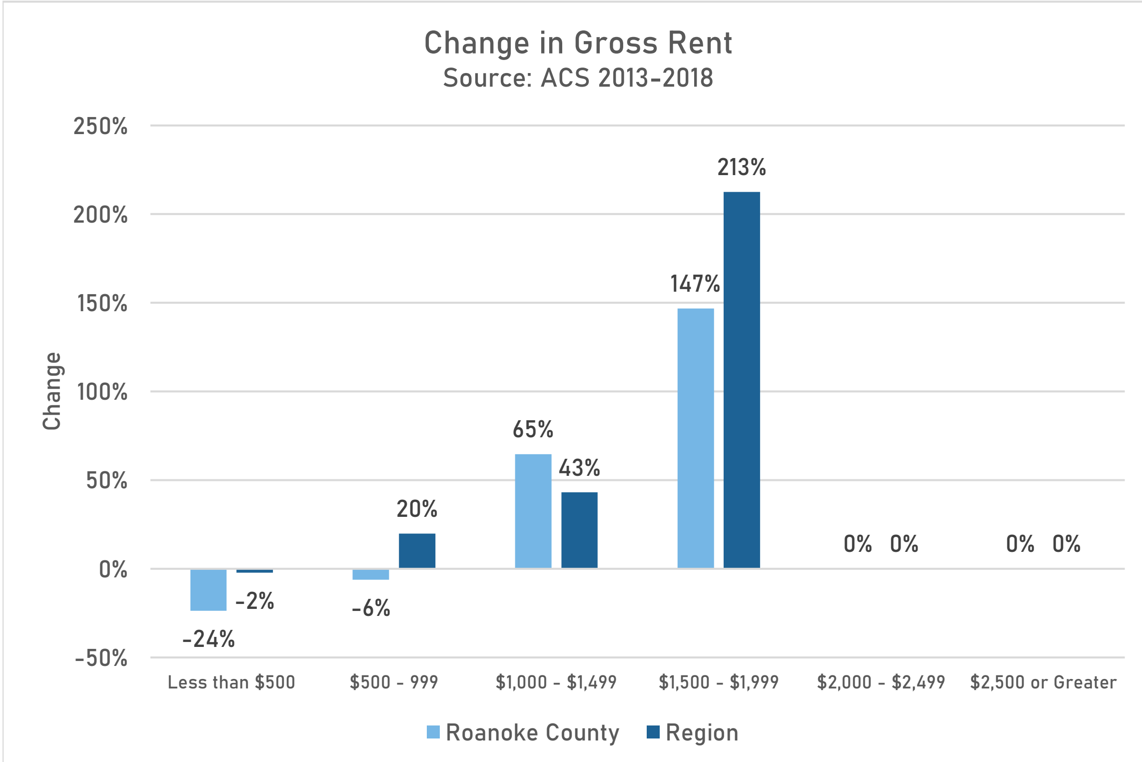
[12] ACS 2013 and 2018.

Figure 28: Change in Gross Rent



A recent scan of rental listings showed the average rent for a single family home to be around $1,200 per month, while rents in multifamily buildings averaged $1,150 per month.[13] Rental prices in the larger apartment complexes vary significantly depending on the location, quality, and amenities offered.

Affordable Rental Units

In addition to market rate rental units, there are four apartment complexes in the county which have income restricted affordable units. As of 2020, the county has 332 low income rental apartment units, of which 332 of the tenants receive rental assistance.[14] The median rent in these units is $872. Rental assistance comes in the form of the Section 8 Voucher program which is administered by STEP, Inc. and Virginia Housing. These vouchers are targeted to low-income households, generally those at or below 30% of area median income (AMI). For a household of three, the expected rent would be no more than $680 for a two-bedroom or $897 for a three-bedroom unit.

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[13] Apartments.com, November 2020.

[14] https://affordablehousingonline.com/housing-search/Virginia/Roanoke-County

Future Housing Demand

The population of Roanoke County is projected to grow by 2,906 new residents between 2018 and 2025, a 3% increase. To accommodate this new population growth, RKG Associates developed a methodology for calculating the number of new households based on the increase in population which then translates into estimates for future housing demand. RKG assumes that future household composition and housing tenure will follow a similar pattern today and used household sizes and tenure splits to allocate future household growth.

To accommodate the increase in population projected for 2025, RKG estimates the county may need to produce an additional 940 housing units above what exists today. This assumes current housing vacancy rates continue to hold steady. RKG also assumed that the split between owner and renter households would remain at its current split of 74% owner-occupied and 26% renter-occupied. Under these assumptions, RKG projects the county would need to add another 696 owner-occupied housing units and 244 renter-occupied units.

Table 11 shows the allocation of households by household size for the projected new households across the county. This allocation assumes that trends will remain constant out to the year 2025. For example, in 2018, 27% of all households were 1-person and 38% were 2-person. These percentages are applied in the same way to the total households projected for 2025 which results in 612 additional 1- and 2-person households over the next five years. Since 3, 4, and 5+ person households comprise a lower percentage of Roanoke County's household composition those percentages are lower than 1- and 2-person households.

Table 11: 2030 Projections if 2018 Household Composition Held Constant

Household Size	Households	% of Total
1-person household	254	27%
2-person household	358	38%
3-person household	146	16%
4-person household	120	13%
5-or-more person household	62	7%
Total	940	100%

Source: ESRI, ACS 2013, 2018, RKG Associates

Table 12 shows the breakdown of owner and renter households by household size. With housing tenure held at the 74/26 split based on 2018 data, there is a projected need for an additional 696 owner-occupied housing units and 244 renter-occupied housing units through the year 2025. The new households are skewed toward 1- and 2-person households which are the two predominant household size categories in Roanoke County as of 2018.

Table 12: 2030 Projections if 2018 Household Composition Held Constant				
Household Size	Owner Households	Total % of Renter	Renter Households	Total % of Renter
1-person household	159	23%	95	39%
2-person household	285	41%	73	30%
3-person household	113	16%	33	14%
4-person household	95	14%	25	10%
5-or-more person household	45	6%	17	7%
Total	696	100%	244	100%
Source: ESRI, ACS 2013, 2018, RKG Associates				

Based on the projection data, Roanoke County will need to consider how to increase the production of smaller units to accommodate the increase in 1- and 2-person owner-occupied households. Based on the number of vacant units, the county could encourage the rehabilitation units as one way to help facilitate the production and preservation of housing. Part of the county's housing strategy will also need to focus on diversifying product type including some production of larger-scale multifamily housing to accommodate renter households.

ROANOKE COUNTY HOUSING STUDY

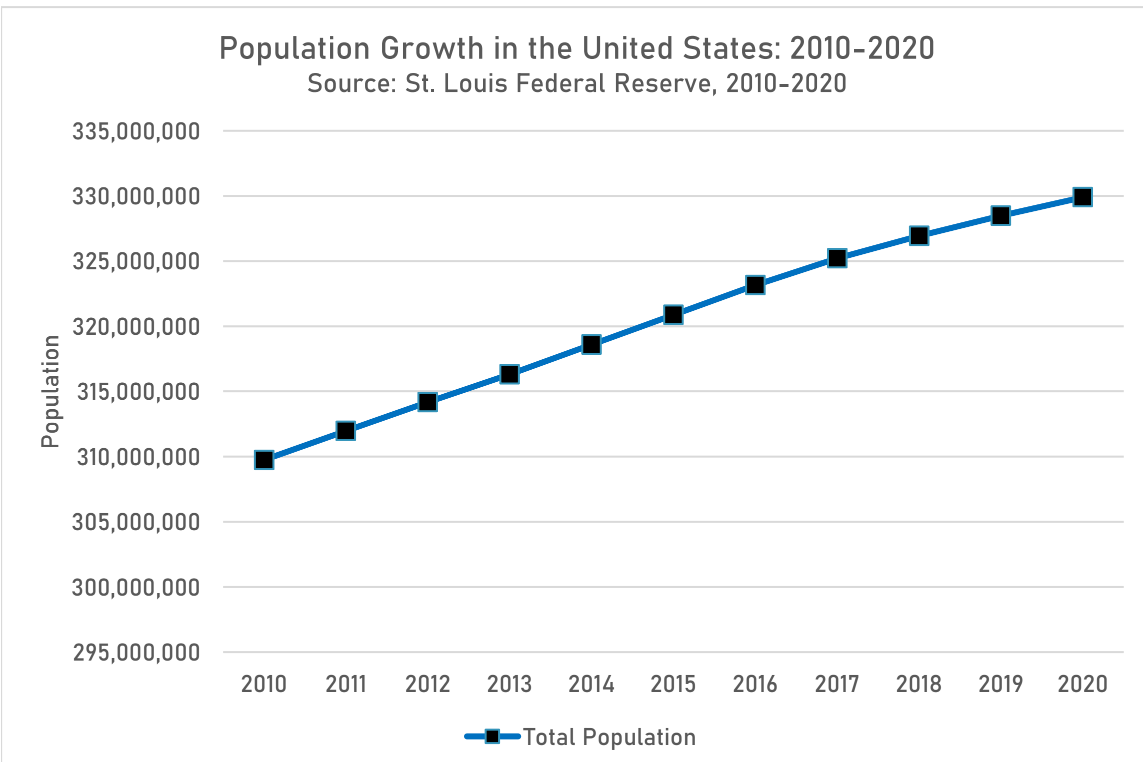
NATIONAL TRENDS

This section describes national trends in demographics such as population and household growth, as well as trends in both owner- and renter-occupied housing. The trends related to housing include an examination of issues affecting housing types, price points, and affordability. This section also discusses the relationship of national trends to those seen in Roanoke County.

Population

The population of the United States has grown by 7% over the last decade, rising from 310 million to nearly 330 million. This population growth is driven in part by overall longer life expectancies, population reproduction rates, and immigration. The growth in population impacts the demographics associated with the housing market.

Figure 29: Population Growth in the United States

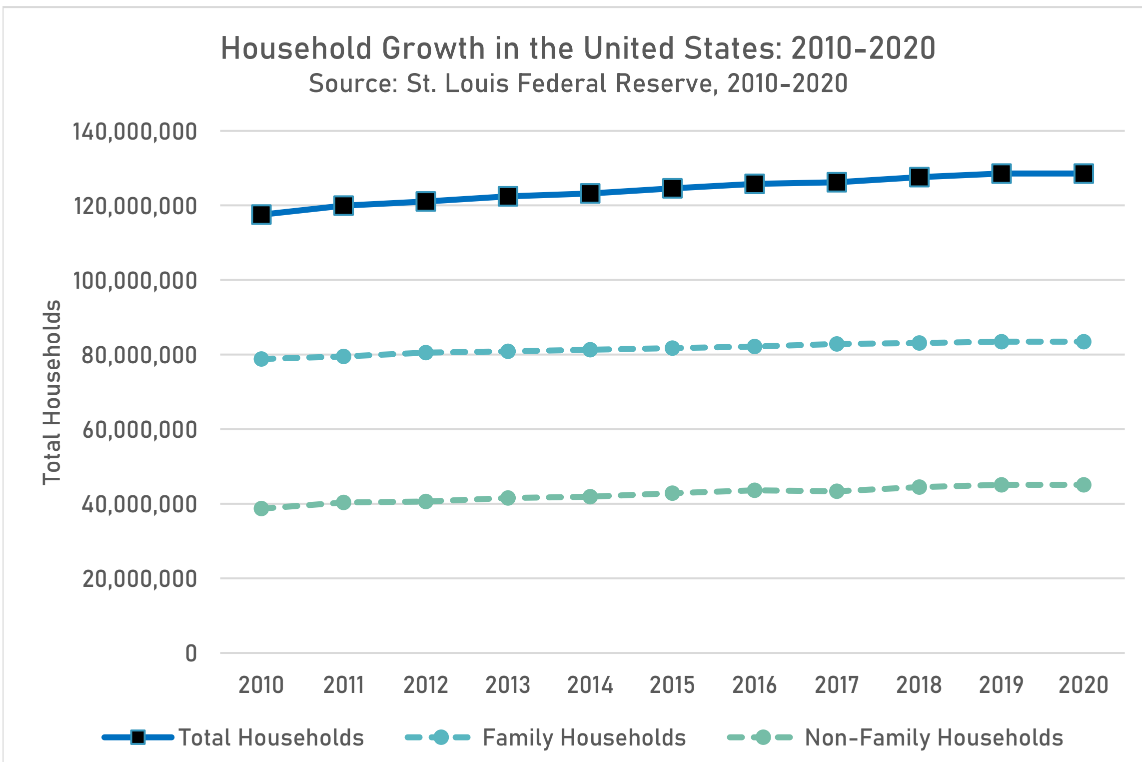


Roanoke County has seen significant population growth over the last 50 years. Between 1970 and 2010, the county's population grew by 37%, rising from around 67,000 to about 82,000. However, this population growth has leveled-off off with the population only growing by 1% since 2010. Even with a slow population growth, the demographic changes occurring in Roanoke County impact the housing market.

Households

The number of households in the United States has increased by 11 million over the last decade. In 2020, there are 129 million households, an increase of 9% over 2010. The growth in households is driven by demographic changes within household composition. Households can be classified as family or non-family, with non-family households being defined as unrelated individuals living together, either through partnership or a roommate type situation. Over the last decade the growth in non-family households is nearly three times that of family households. Between 2010 and 2020 non-family households grew by 17%, rising from 39 million to 45 million, compared to family households which grew by 6% over the same period. The change in household composition is partially a result of a changing social structure (e.g. delayed marriage, longer life expectancy) as well as the economics associated with housing. Housing prices and rents have escalated in recent years, such that non-family households are formed so that they can afford housing. This generally occurs in highly urban areas where the cost of housing is substantial relative to incomes.

Figure 30: Households in the United States

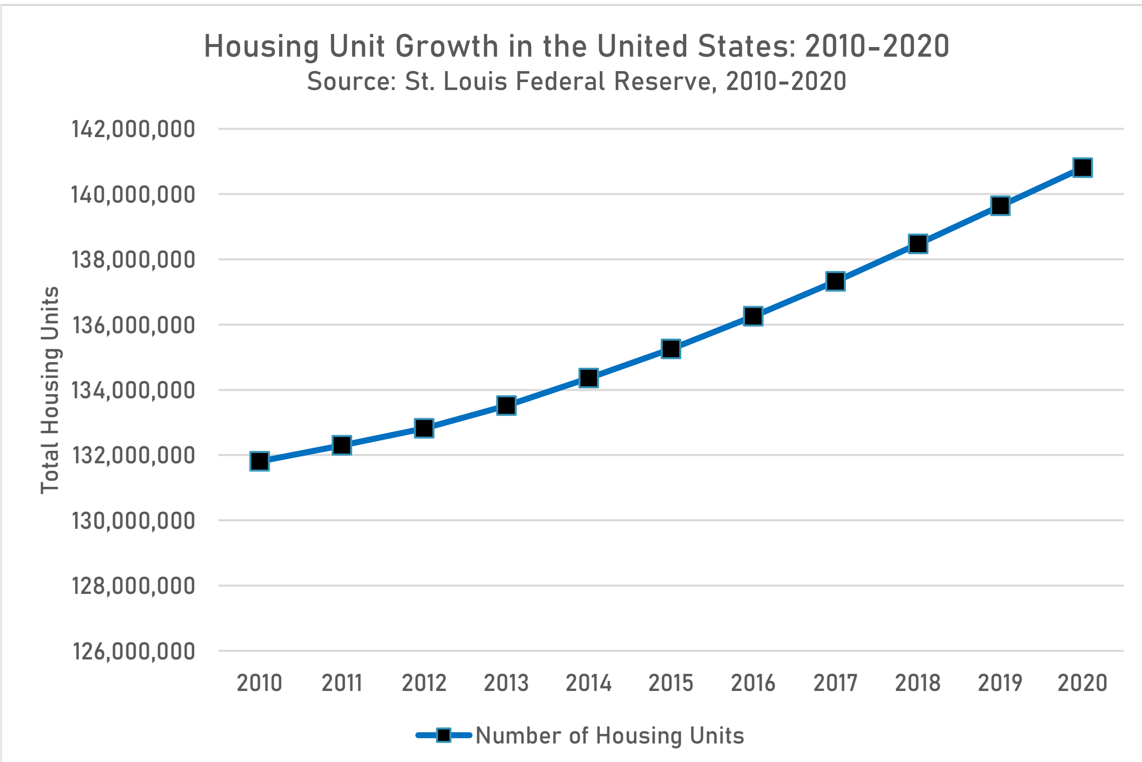


In Roanoke County, the total number of households has remains nearly unchanged over the last five years. However, when looking at changes within family and non-family households, patterns like national trends exist. In the county, non-family households grew by 3% while family households essentially stayed the same. This shows that the county will need to adapt to its housing strategies to meet the needs of the growing non-family segment.

Housing Units

The number of housing units in the United States has increased by 9 million over the last decade. In 2020, there are 140 million housing units, an increase of 7% over 2010. The growth in housing units is driven by demographic demand as total households are increasing. This growth in housing units also coincides with the recovery from the Great Recession, and the expansion of both the economy and monetary policy (i.e. low interest rates). This period also coincided with the revitalization of many cities, where dense housing development help transform underdeveloped areas.

Figure 31: Housing Unit Growth in the United States

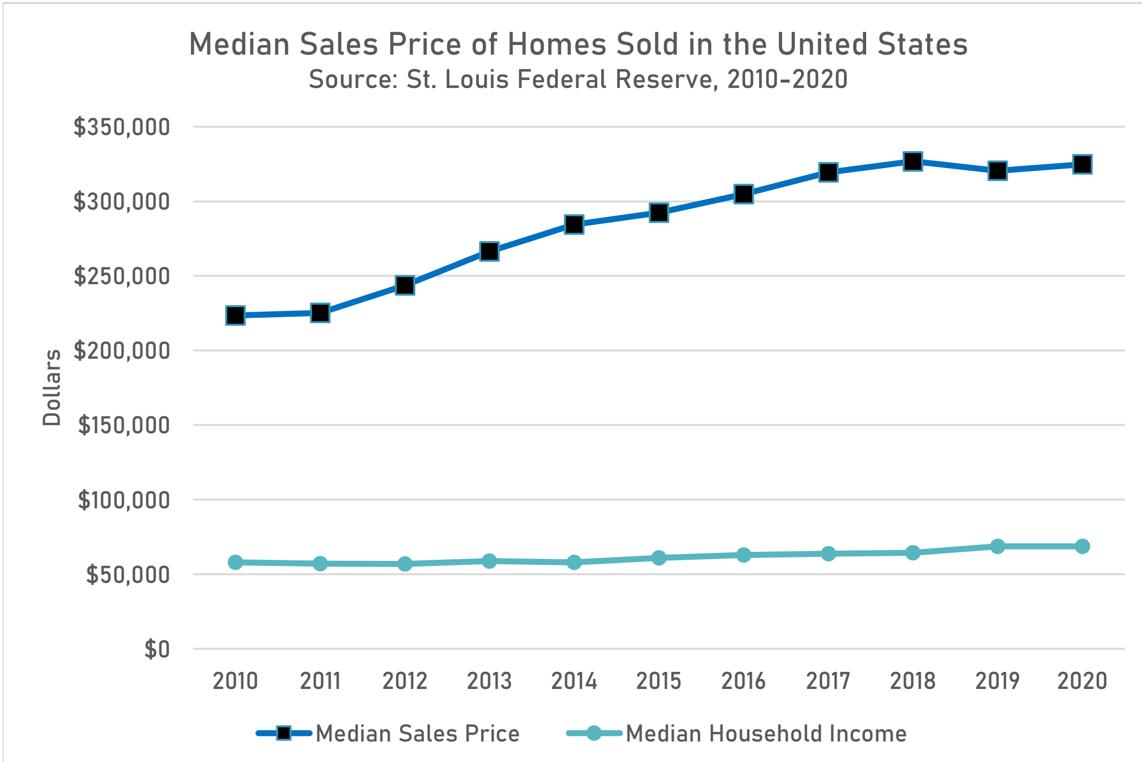


Roanoke County has not experienced such housing unit growth over the last decade. Across the county, the total number of housing units declined by 2% between 2010 and 2018. However, based on the analysis preceding this section, demand for housing in Roanoke County remains strong, as prices have risen considerably over the past decade.

Single family Market

Across the United States single family home prices have escalated substantially since the Great Recession. Key contributing factors include demographic changes, low interest rates, lack of supply, and a lag in new construction which has resulted in increasing prices. Since 2010, home prices have risen by 49%, or $101,000 nationally. In 2016, the national median sale price eclipsed $300,000 for the first time. The continual growth in home prices creates challenges for many households across the nation as the median home price is now out of reach for households at or below the nation's median income. During the same 10-year period, median household income grew by only 19%, or $10,800, indicating homes prices are rising faster than wages.

Figure 32: Median Sales Prices of Homes Sold in the United States

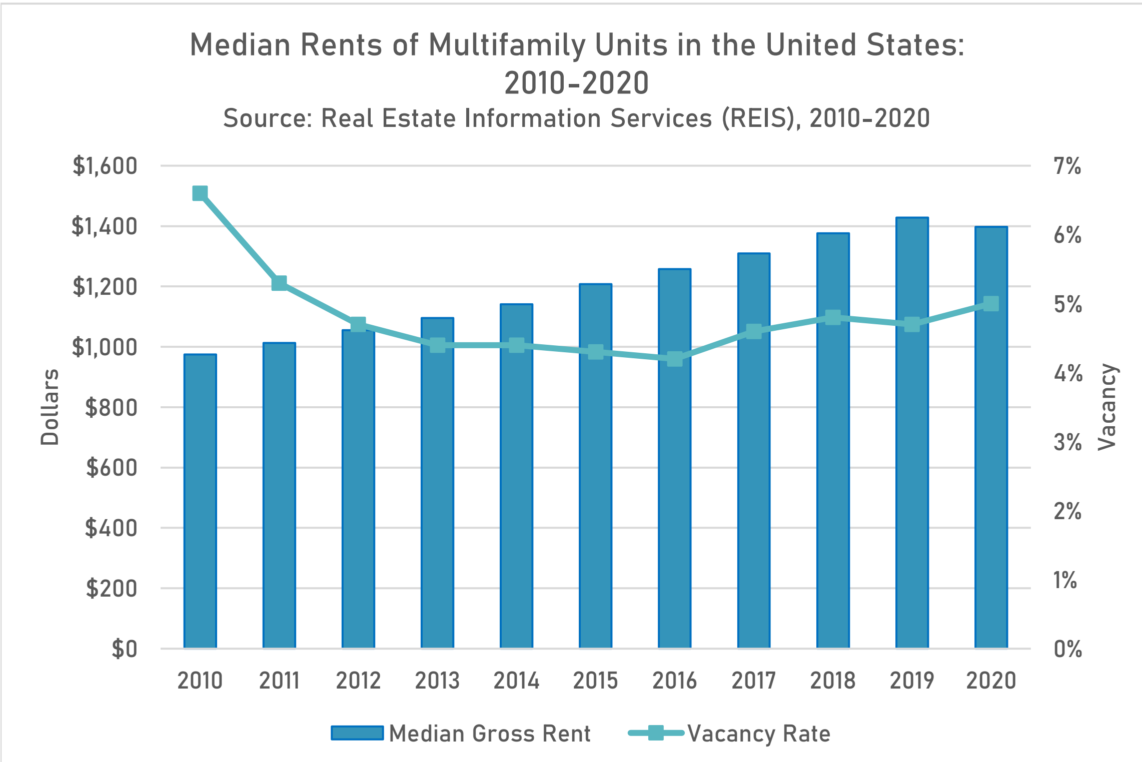


Roanoke County experienced a similar trend of home prices outpacing growth in incomes. Home prices have increased across Roanoke County with a median sales price of around $213,155 which is within reasonable reach of what a household earning the median income could afford. Like the issues at the national level, Roanoke County has seen a change in demographics as well as market dynamics which have limited the amount and type of housing being built. These changes include an increasing senior population who tend to age-in-place which limits housing turnover in marketplace, and a lack of multifamily developments which enable different types of households to attain affordable housing.

Multifamily Market

Like the national for-sale housing market, the multifamily rental market has also seen prices escalate since the Great Recession. Since 2010, rents nationally have risen by 43%, or $422 per month. The continued growth in rent is a perennial challenge for renter-households as there is a higher propensity of lower-income households and cost burdened households comprising the renter market versus the owner market. As rents continue to climb, added financial burdens on renter households force a reallocation of household income from other spending categories like food, transportation, and healthcare over to housing. Contributing factors to increasing prices in rental housing include demographic and economic changes placing more renters in the market, regulatory barriers for new construction keeping supply low, and high costs of construction requiring higher rents in certain markets.

Figure 33: Median Rents of Multifamily Units in the United States

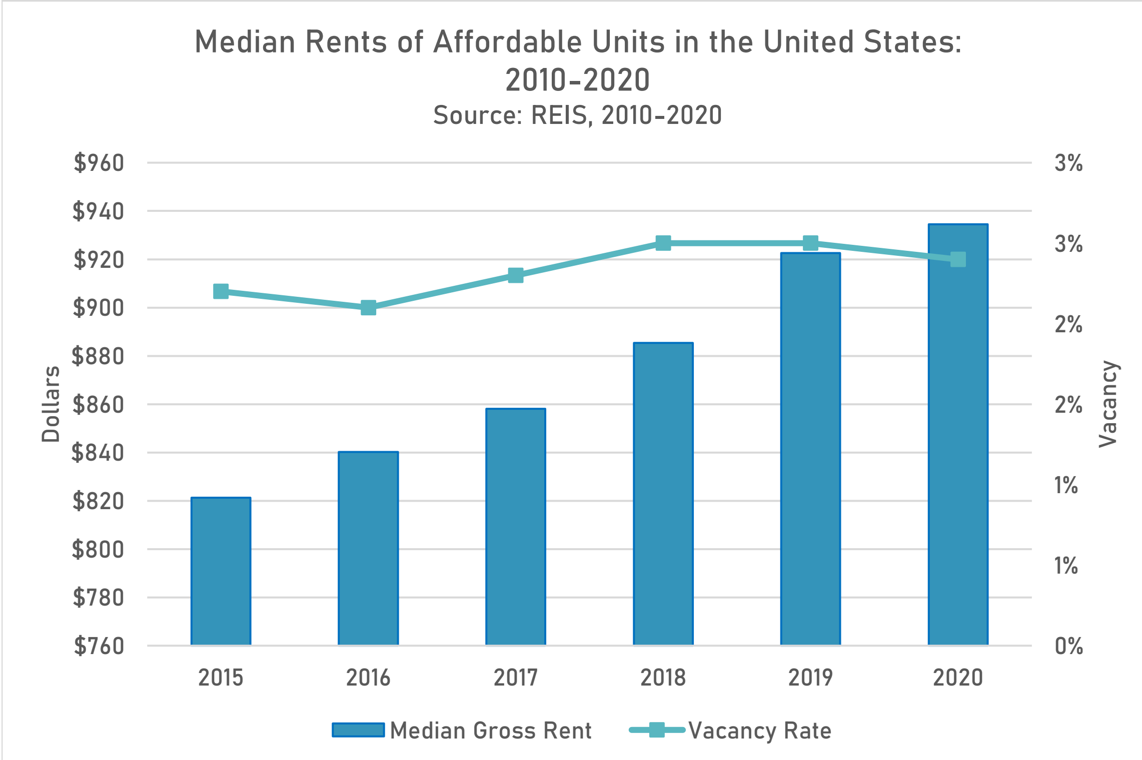


Compounding the problem in the rental market are low levels of vacancy across the board. Vacancy rates have remained close to 6% over the last 10 years. Low vacancy levels push rental prices upward as greater competition develops amongst households looking to secure available units. In Roanoke County, the average rent for a single family home is around $1,200 per month, while rents in multifamily buildings averaged $1,150 per month. The multifamily sector is a relatively large component of the market as 39% of rental units are in buildings with greater than 10 units, while nearly 40% of rental units are in single family or mobile homes.

Affordable Housing Market

Access to affordable housing across the United States is a pressing issue. The production of truly affordable housing units has lagged demand for such units. There are a variety of reasons for this occurrence, primarily a lack of funding for affordable housing at the Federal and State levels, the competitive nature of tax credits as a key source of financing, regulatory barriers regarding density at the local level, and the long-term financial feasibility of constructing and operating affordable units without subsidies. Since 2015 rents of affordable units have risen by 14%, or $113 nationally. The continued rent growth has the potential to increase the number of households experiencing cost burdening impacting our lowest income households and households most vulnerable to displacement and homelessness.

Figure 34: Median Rents of Affordable Units in the United States



Compounding the problem in the affordable rental market are low levels of vacancy across the board. Vacancy rates remained under 3% for the last five years. Low vacancy levels and the lack of new affordable housing create competition amongst households looking to secure available units. Waiting lists for affordable housing and housing vouchers have become longer in many markets as more households apply for the few units that may turnover each year.

ROANOKE COUNTY HOUSING STUDY

HOUSING MARKET GAPS

This section explores key housing market gaps based on the demographic analysis and owner and renter market analysis. Gaps focus on the type of housing that may be needed in Roanoke County going forward and the price points that appear to be underserved in today's market.

Low- and Moderate-Income Limits and Affordable Housing Costs

Most communities have some modestly priced housing that is more affordable to low- and moderate-income households: small, older single family homes that are naturally less expensive than new homes; multifamily condominiums; or apartments that are leased for lower monthly rents. This type of affordable housing often stays affordable where the market will allow it and redevelopment or rehabilitation pressures are not as high. In the county today, there is a mix of housing at a variety of price points some of which is income restricted and others that are at a price point that is affordable to low- and moderate-income households.

Permanently affordable housing for low-income households provides protection from higher price increases than those households could otherwise afford. These units remain affordable because their resale prices and rents are governed by a deed restriction that lasts for many years, if not in perpetuity. There are other differences, too. For example, any household – regardless of income – may purchase or rent an unrestricted affordable unit, but only a low- or moderate-income household is eligible to purchase or rent a deed restricted unit. Both types of affordable housing meet a variety of needs. The primary difference is that the market determines the price of unrestricted affordable units, while a recorded legal instrument determines the price of deed restricted units.

Low and moderate incomes are based on percentages of the U.S. Department of Housing and Urban Development (HUD) Area Median Family Income (HAMFI) and adjusted for household size. Table 13 illustrates HUD's income breaks for Roanoke County studying income limits by household size and the maximum housing payment that is affordable in each tier.

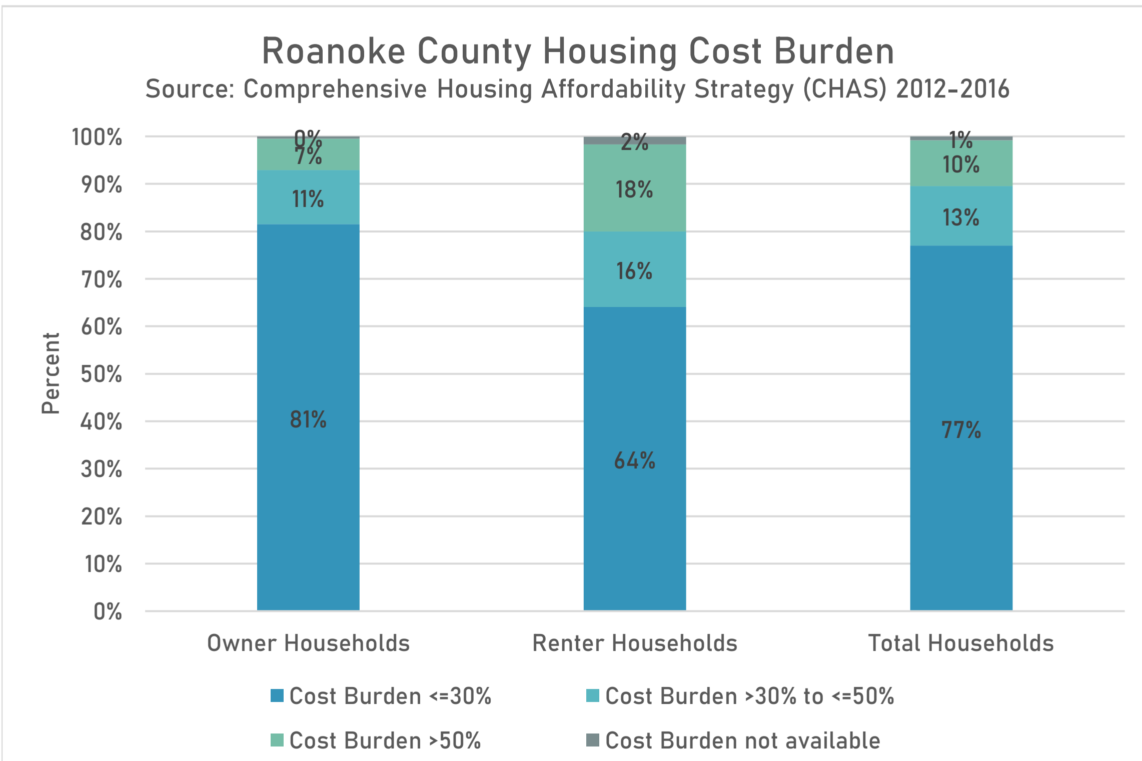
Table 13: HUD Income Limits	Persons in Family							
FY 2020 Income Limit Category	1	2	3	4	5	6	7	8
Extremely Low (30%) Income Limits ($)	$16,100	$18,400	$21,720	$26,200	$30,680	$35,160	$39,640	$44,120
Very Low (50%) Income Limits ($)	$26,850	$30,700	$34,550	$38,350	$41,450	$44,500	$47,600	$50,650
Low (80%) Income Limits ($)	$42,950	$49,100	$55,250	$61,350	$66,300	$71,200	$76,100	$81,000

For example, in Roanoke County, if the household income for a three-person household did not exceed $55,250 that household could qualify for a deed restricted affordable unit. Maximum housing payments are typically set by HUD at no more than 30% of household income, or in this case $1,381 per month. The income limitations and maximum payment thresholds ensure that households are not unduly burdened with housing expenses.

Affordability Analysis

Rapid growth in housing prices coupled with slow growth, if not declines, in incomes contributes to a housing affordability problem known as housing cost burden. HUD defines housing cost burden as the condition in which households spend more than 30% of their gross income on housing. When low- or moderate-income households are spending more than 50% of their income on housing costs, they are severely housing cost burdened.

Figure 35: Housing Cost Burden



In Roanoke County, only 13% of all households are considered cost burdened under HUD's definition and 10% are considered severely cost burdened. This is very similar to the Region with 14% of households are considered cost burdened and 12% are severely cost burdened. Table 14 shows the percentage of cost burdened owner and renter households. Renters in Roanoke County have a higher tendency to be cost burdened than owners which is typical in most markets as well as nationally. In the case of the county, 16% of renter households are cost burdened and 18% of households are severely cost burdened which is a higher rate than owner households.

Table 14: Housing Cost Burden Overview, Roanoke County, 2012-2016						
Cost Burden	Owner Households		Renter Households		Total Households	
	Est.	% of Total	Est.	% of Total	Est.	% of Total
<= 30%	23,215	81%	6,300	64%	29,515	77%
>30% to <=50%	3,245	11%	1,560	16%	4,805	13%
>50%	1,890	7%	1,800	18%	3,690	10%
Cost burden not available	135	0%	165	2%	300	1%
Total:	28,490	100%	9,830	100%	38,320	100%
Source: HUD Comprehensive Housing Affordability Strategy (CHAS) Data; Note: Totals may not sum due to statistical error in CHAS data; and RKG Assoc.						

AFFORDABILITY MISMATCH

While most communities have some older, more modestly priced homes and units with lower monthly rents these units are not necessarily occupied by low- or moderate-income households. HUD reports data for an affordable housing measure known as affordability mismatch which can be used to compare household income to housing prices. This measure can be used to identify housing price points where there may be an undersupply or oversupply and point to market opportunities where gaps could be filled. Affordability mismatch measures:

- The number of housing units in a community with rents or home values affordable to households in various income tiers;
- The number of households in each income tier;
- The number of households living in housing priced above their income tier

Viewing housing affordability in terms of income and cost (affordability threshold) serves as a proxy for understanding the challenges households face to afford adequate housing. To gauge whether owner and renter units in the Region are aligned with household AMI and affordability, RKG calculated the number of households that fall into each AMI category and compared it to the number of owner and renter units affordable at those income limits.

Table 15 shows the affordability analysis based on a three-person owner-occupied household. Given that about 46% of all owner households in the county earn at or above 120% of AMI, there is a shortage of units priced to what those households could technically afford. Some of this is related to Roanoke County's market dynamics where many owner units are currently valued at less than the average sales price due to the dynamics described in the market analysis section. Many homes across the county are valued between $100,000 and $200,000 making the ownership market more affordable to a wider range of incomes. Just because a household can afford to spend more does not mean that they will; some households in Roanoke County can choose to live below their means because sufficient housing is available at lower price points.

Although this analysis does show a surplus of housing available to households at middle income tiers, many households at 30% of AMI struggle to enter the homeownership market without some assistance. They may lack the down payment necessary to cover mortgage requirements, they may not have a high enough credit score, and if they are able to enter the market the homes available to them may need substantial rehabilitation and upgrades.

It is also worth noting this analysis was completed for a three-person household which carries higher income thresholds across each AMI category than one- or two-person households. If singles or two people wanted to purchase a home, it is likely their choices at the 30% and 50% of AMI categories would be extremely limited and likely show a deficit. With the growth in one- and two-person households countywide, homeownership options for smaller households should be a consideration going forward.

Table 15: Owner Price to Affordability Comparison

Category	Income Threshold	Owner Households	Percent	Fee Simple Home Price	Owner-Occupied Units	Surplus/Deficit
30% AMI	$21,720	2,415	8.5%	$80,663	1,765	-650
50% AMI	$34,550	2,632	9.3%	$128,311	3,257	625
80% AMI	$55,250	4,486	15.8%	$205,186	10,361	5,875
100% AMI	$76,700	4,814	16.9%	$256,622	3,897	-917
120% AMI	$82,875	1,077	3.8%	$307,779	3,943	2,865
120%+ AMI	$82,876	12,979	45.7%	$307,780	5,180	-7,799
Source: ACS 2014-2018, HUD						

On the rental unit side, Table 16 shows a surplus of almost 2,521 units priced to households earning at or below 80% of AMI. At the upper end of the rental market there is a deficit of 1,797 units priced for households at or above 120% of AMI. Again, this is the result of most rental units countywide being priced between $500 and $1,000 a month. While there may be a few households that could afford higher rents, it does not mean they are going to pay those rents especially when higher-end rental product is not prevalent throughout the market.

Households earning 30% of AMI or below are finding it increasingly more difficult to find housing priced to their income. This is a trend seen not only in Roanoke County, but nationally as well. These units tend to be deed restricted and managed by public entities such as housing authorities. With limited funds for constructing and preserving these units, there are typically affordability gaps at this income level. Like what was described in the owner-occupied affordability section above, the renter analysis is also set to a three-person household with higher income thresholds. A one- or two-person household earing at or below 30% of AMI would have even more difficulty finding an affordable unit as their income would be lower and therefore could afford fewer rental units countywide.

Table 16: Renter Price to Affordability Comparison						
Category	Income Threshold	Renter Households	Percent	Monthly Rent	Rental Units	Surplus/Deficit
30% AMI	$21,720	2,440	26%	$543	1,370	-1,070
50% AMI	$34,550	1,508	15%	$864	2,956	1,448
80% AMI	$55,250	1,999	20%	$1,381	4,142	2,143
100% AMI	$76,700	418	4%	$1,918	1,119	701
120% AMI	$82,875	1,579	16%	$2,072	154	-1,425
120%+ AMI	$82,876	1,996	20%	$2,072	199	-1,797
Source: ACS 2014-2018, HUD						

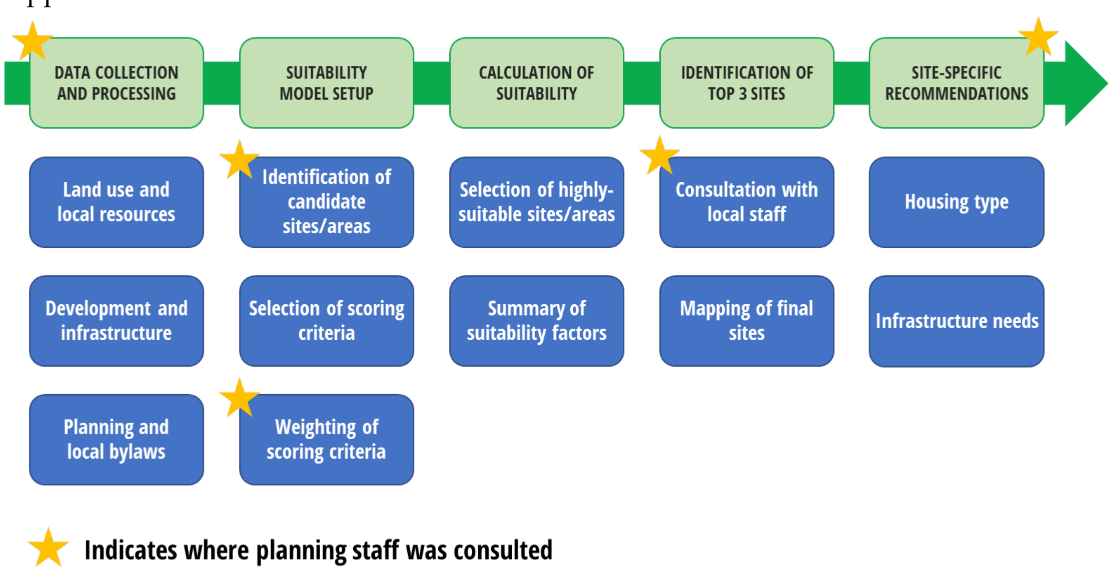
ROANOKE COUNTY HOUSING STUDY

LAND SUITABILITY ANLAYSIS

Planning for land use change and future development must consider a wide range of factors that include environmental conditions and hazards, local plans and regulations, and the availability of critical infrastructure and services to support urban expansion and redevelopment. Land suitability models provide a framework that can incorporate these variables - and represent them geographically - to identify and prioritize areas that can support new housing, and potential constraints to development. This type of model is often employed in local and regional planning efforts using geospatial analysis techniques to process and integrate existing Geographic Information Systems (GIS) data. Thanks to the availability of high-resolution and regularly updated GIS databases, it has become possible to evaluate land suitability at the neighborhood and site scale while providing a reasonably accurate representation of local conditions.

Overview

For this study, the objective was to assess the suitability of land for residential development across four jurisdictions in the Roanoke Valley-Allegheny Region: Roanoke County, Franklin County, City of Roanoke, and City of Salem. Because each locality has unique physical characteristics, local bylaws, and planning priorities, it was critical to customize the suitability model within the boundaries of these areas. Part of the objective of this study was to prioritize three specific sites for each locality from a list of potential development sites, which were identified by land use and development planning staff. Additional details on the process of engaging local planners in the land suitability analysis can be found later in this chapter. The following diagram summarizes the stages of model development, from compiling planning documents and GIS data to developing final recommendations for the selected sites, including the critical points where local feedback was solicited on the model inputs and results. The full land suitability methodology can be found in Appendix A at the end of this document.



Data Collection and Processing

The information included in a land suitability model takes many forms, from GIS datasets representing linear infrastructure networks, administrative boundaries, and nodes of activity, to tables documenting details from assessors' databases and the dimensional requirements of local zoning bylaws. Data was collected from public data portals, RVARC's Director of Information Services, GIS managers from each city and county, and multiple agencies of the Commonwealth of Virginia.

In addition to GIS data sources, other location-specific data and variables were derived from local reports and planning documents, including comprehensive plans, area plans, zoning ordinances, housing assessments, and digital map documents produced by municipal and county planning offices.

Suitability Scores and Weights

The land suitability model was designed based on established land use assessment techniques that apply spatial analysis tools to assign scores to a range of categorical and numerical variables. These scores are then combined into an index that indicates the relative suitability for a particular land use.

There are many ways to implement this type of model using GIS – in this case a raster-based model was used, in which each study area is divided into a grid of cells and suitability scores are assigned to each cell based on:

- proximity (ex. within 50 feet of a road)
- category (ex. land use or zoning)
- or a simple binary score (0 or 1) indicating location within an area of interest (ex. UDAs).

For this housing study, suitability criteria were selected based on a review of local planning documents and consultation with planning staff, with a focus on conditions that could support residential development in each jurisdiction. Numerical scores were assigned to each factor according to the level of development suitability, from high (score = 3) to low (score = 1), or not suitable at all (score = 0). Total scores were calculated using a weighted sum to combine the score of each factor.

The weight values range from Low (weight = 1) to Very High (weight = 7), and were based on initial discussions with local planners, then refined through further validation of the initial model results. The table below presents a summary of the suitability criteria, assumptions for each score, and the relative weights used in the model for each jurisdiction. Certain criteria were not factored into the analysis in some areas, for example, because some zoning or water resource protections were unique to the City of Roanoke they did not apply in other areas. Because of the scale of the regions and differences in mobility, the distance from public schools used wider ranges (1 to 5 miles) in the county geographies and smaller ranges (0.5 to 1.5 miles) in the cities. In total, the Roanoke County model included 13 criteria, 12 for Franklin County, 16 for the City of Roanoke, and 15 for the City of Salem.

Assumptions and Limitations

As with any model, some simplifications were necessary to represent real-world conditions using this conceptual approach to evaluating land suitability. The break values selected for distance from critical infrastructure and scores assigned to different types of land cover, for example, represent assumptions made as part of the model development. Site-specific factors may change the applicability of these assumptions, but they are considered representative of potential development conditions at the regional and neighborhood scale.

Additionally, errors or omissions may be present in the GIS data and documents used to develop the model. One such known data gap is the water and sewer infrastructure in eastern Roanoke County. Data was collected for these infrastructure networks in Vinton, but it did not cover the areas connected to this system east of the Vinton border. Also, cemetery locations were included in the data for Roanoke County, but not other areas.

Overall, this model represents a regional decision support tool, using the best available data at the time of this document's writing. For more detailed parcel-level assessment of suitability and constraints, additional site surveys and mapping should be performed by qualified professionals. These models are intended to prioritize pre-selected development sites and identify potential infrastructure needs and other factors that could facilitate housing production. Other uses of this model should consider the assumptions and limitations outlined in this document.

Site Identification

Development of the land suitability model was organized to capture local planning and development knowledge at critical stages in the process, specifically:

- **Data collection and processing:** determining key datasets and relevant local plans and bylaws
- **Suitability model configuration:** identifying potential development areas and discussing initial weights for suitability factors
- **Selection of final sites:** providing feedback on the suitability and constraints of selected sites
- **Site recommendations:** offering input on types of housing, zoning, incentives, and infrastructure

At each stage more of this local knowledge of land use, planning, and development conditions was integrated into the land suitability model configuration and helped to refine the areas suggested as sites of potential housing development.

Site Selection

The ultimate objective of model is to evaluate the development potential of an initial list of sites, with the goal of prioritizing three sites within each jurisdiction. The sites were identified as follows:

1. Initial discussions with planning staff (August 2020)
   - The model development team conducted Zoom calls with planners from Vinton, Rocky Mount, City of Roanoke, Roanoke County, and Franklin County.
   - Discussions centered on recent development trends and sites with potential for residential development, based on local knowledge and interest from developers. Initial locations were marked on a custom Google Map and saved to a GIS file.
   - Planners were also asked to provide a preliminary distribution of importance to each category of suitability criteria.
2. Site delineation and validation (September 2020)
   - Based on the locations identified with planners, parcels and larger areas were identified and assigned an ID. Associated parcel numbers and addresses were tabulated for each site.
   - Information on the preliminary sites was sent back to planning staff for validation
3. Development site refinement and consolidation (October-November 2020)
   - After reviewing the additional feedback, potential development area boundaries were adjusted, and ID numbers were updated to reflect the final selected sites.

Site Evaluation

The final sites identified for each jurisdiction were incorporated into their respective suitability and constraint models to calculate the scores and compare the development potential within each site boundary. Because the model employed a grid-based approach, the suitability and constraints scores vary across each site. To account for the range of scores, the average suitability and constraint scores were tabulated. Based on feedback from the project steering committee, there was interest in reviewing the suitability of each site without considering current zoning, which would lower the score in areas where limited housing types are permitted by right.

The following section presents a summary of the scores for each version of the model, organized by jurisdiction. Final selection of potential housing development sites also considered the area and configuration of the parcels within each site, as well as local housing market conditions and the type of housing each site would be likely to support. At the end of each section, a summary of the top three sites is presented, including a close-up view of the site, a map of key constraints, and other important details, including: site area, zoning, and location relative to UDAs, zoning overlays, and historic districts.

Roanoke County Priority Sites

The map below shows the locations of the selected potential development sites, along with the results of the land suitability analysis, specifically the version including zoning in the overall score. Higher suitability areas are located around the perimeter of the cities of Roanoke and Salem, including Hollins, Vinton, Bonsack, and Cave Spring. These areas have access to a dense road network and water and sewer infrastructure and are also Designated Growth Areas. Lower suitability scores are spread across rural areas with steeper terrain, primarily in the west and south of the county. The maximum suitability score for the model including zoning is 173, and the average score is 88.5.

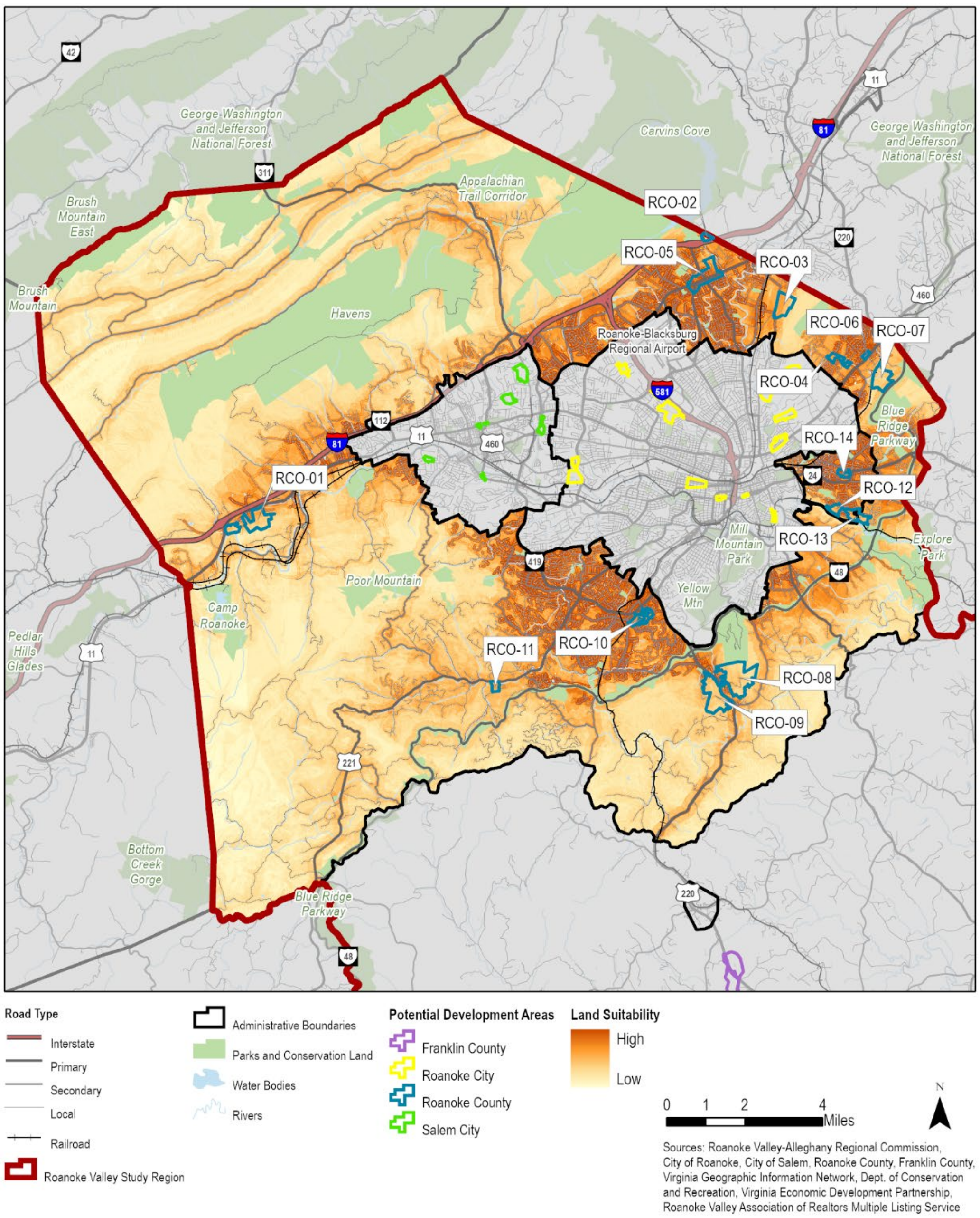


Figure 36: Roanoke County Land Suitability

Areas of higher constraints are generally the inverse of the high suitability areas, in most cases showing regions where steep slopes, protected open space, and water resource areas overlap. Existing development areas and zoning districts that do not allow residential by right were also constraints in more urbanized areas of the county. Looking at the county as a whole, the highest constraint score was 6, and the average score was 0.69. The following map shows the distribution of constraints, with bright red indicating areas with the highest number of constraints.

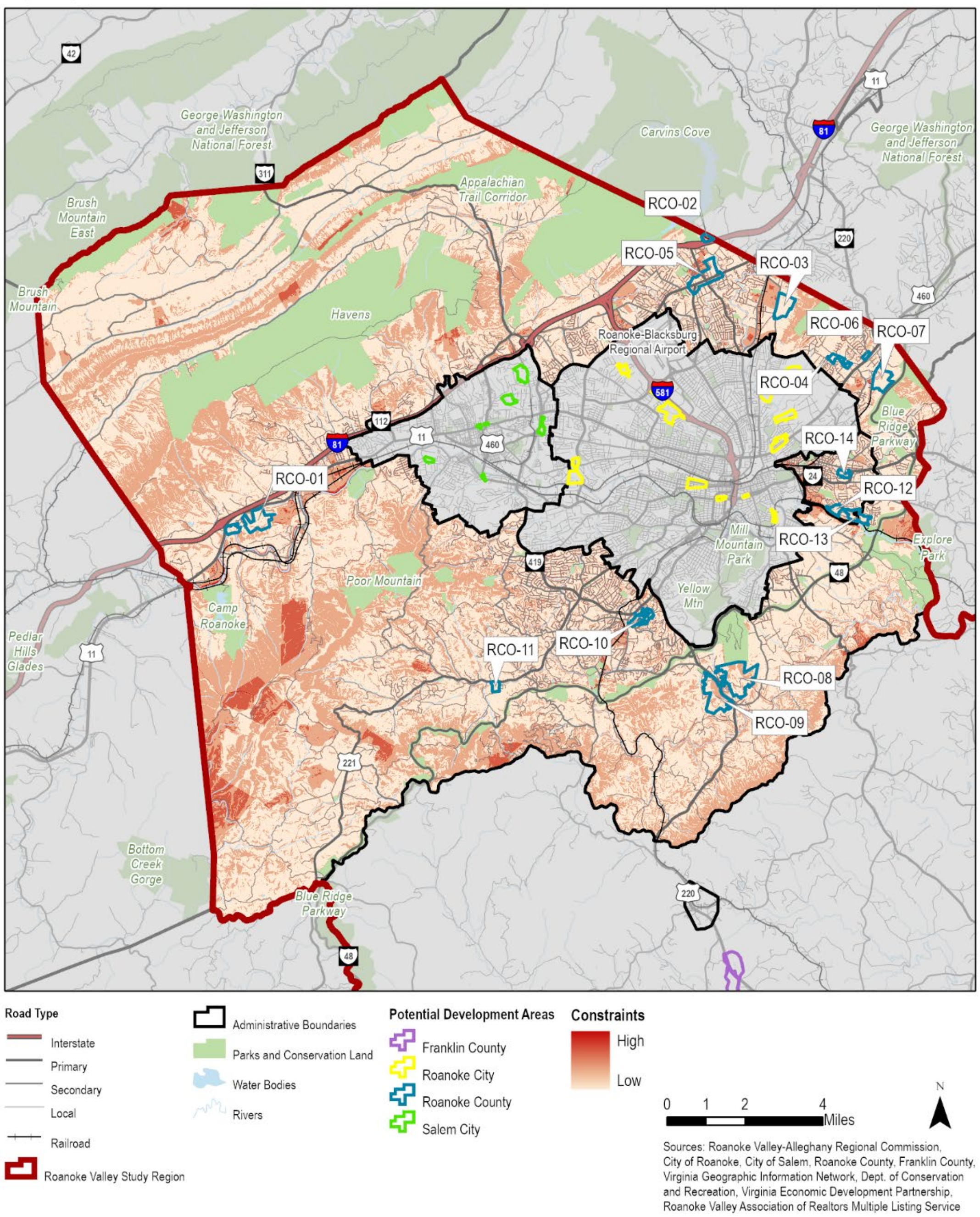


Figure 37: Roanoke County Development Constraints

Comparing each site to the countywide suitability scores, all sites were above the average suitability score, and all but one were below the average constraint score. Comparing the "Primary" model to the "No Zoning" model, it is important to note that the scores without zoning will be lower overall because there was one less factor contributing to the total score. The table below presents the suitability and constraint score for each site, both including and excluding zoning as a factor.

Table 17: Roanoke County Site Suitability Scores

Site ID	Site Description	Area (Acres)	Primary Model			No Zoning Model		
			Suitability	Constraints	Rank	Suitability	Constraints	Rank
RCO-01	Riverside - Exit 132	209.27	96.4	0.17	11	91.4	0.17	11
RCO-02	Hollins University - Tinker Creek	23.24	97.7	1.09	10	97.7	0.09	9
RCO-03	Old Mountain Rd. - Bradshaw Property	136.82	103.9	0.03	7	98.9	0.03	6
RCO-04	Bonsack - East Ruritan Road	45.73	111.5	0.15	5	106.5	0.15	5
RCO-05	Hollins Center – Mixed Use	199.11	135.2	0.62	2	123.0	0.56	2
RCO-06	Bonsack - Jim Battles Park	13.17	135.2	0.04	1	120.2	0.04	3
RCO-07	Bonsack - Layman Road	146.52	91.2	0.19	13	86.2	0.19	13
RCO-08	Cave Spring - 220 Corridor East	341.26	90.4	0.39	14	85.4	0.39	14
RCO-09	Cave Spring - 220 Corridor West	246.10	95.5	0.44	12	89.9	0.44	12
RCO-10	Cave Spring - The Ridges	80.05	124.4	0.31	4	109.5	0.31	4
RCO-11	School Board property - 221 Corridor	31.52	103.2	0.27	8	98.3	0.27	7
RCO-12	Vinton - Wyndham Drive	40.63	108.2	0.20	6	98.2	0.20	8
RCO-13	Vinton - Niagara Road	85.57	99.8	0.45	9	94.8	0.45	10
RCO-14	Vinton - River Park Shopping Center	27.47	133.7	0.20	3	126.9	0.20	1

There was agreement between both models on the top three sites, although the ranking changed when zoning was taken out of the equation. These sites were RCO-06 (Jim Battles Park), RCO-05 (Hollins Center – Mixed Use) and RCO-14 (Vinton – River Park Shopping Center). Each of these sites is located along a major thoroughfare, in a Designated Growth Area, with good access to water infrastructure. The lowest suitability sites, RCO-07 in Bonsack and RCO-08 and 09 on Rt. 220 in Cave Spring, scored lower due to steep slope and flood constraints, as well as more limited infrastructure access.

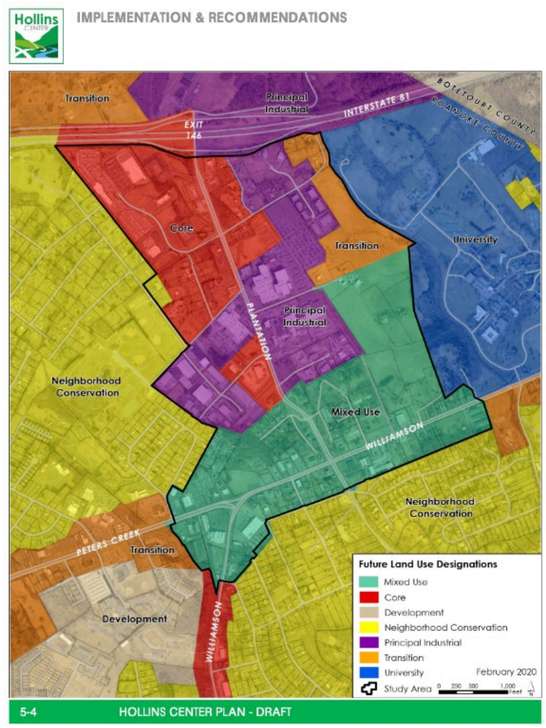
Because each of the top three sites have potential for a range of housing types and enough area to support more than a few housing units, they were considered good candidates for the final evaluation. The following table provides some additional details about the top three sites for Roanoke County, and additional maps of these sites are included on the following pages.

Table 18: Roanoke County - Top Three Development Sites

Site ID	Site Description	Acres	Zoning	Overlays	UDA	Historic District
RCO-05	Hollins Center – Mixed Use	199.11	C2	None	Yes	No
RCO-06	Bonsack – Jim Battles Park	13.17	C2	None	Yes	No
RCO-14	Vinton – River Park Shopping Center	27.47	R3	None	Yes	No

RCO-05: HOLLINS CENTER – MIXED USE

According to the Hollins Center Plan (2018), Roanoke County Planning and Development staff identified several centers throughout the County that were appropriate for new commercial and residential redevelopment or infill. The Hollins Center study area was included for its proximity to Interstate 81 and Hollins University, the highest concentration of employment in the County. The Hollins Center Plan considers a larger study area that includes industrial and commercial uses as well as lower-density residential. For the purposes of this study, the analysis identifies only the area designated for mixed-use to encourage development of more diverse housing options including multifamily apartments/condominiums.



Note, according to mapping data from the Western Virginia Water Authority, this area appears to have public water and sewer infrastructure in close proximity.

This study's analysis of the market for this area indicates that there is a need for a diversity of housing options, by type and price, which meets the needs of growing populations. While mixed-use development is not traditionally found across the county, proximity to the university and major employers makes this site a potentially viable location for such a housing typology. The site could capitalize on the growing young professional population across the county. Additionally, mixed use development is also attractive to the growing senior population, as they may be looking to downsize, and looking for walkability and amenities.

Recommendations:

- Support implementation of the Hollins Center Plan recommendations to create mixed-use development with a mix of housing types and commercial uses as designated on the Future Land Use map.

- Invest in public improvements and infrastructure to support the plan including rebuilding the Hollins Branch Library, improving recreation facilities and trails, improving key intersections and multimodal accommodations, installing streetscape amenities, seeking public art installations.
- As described in the Hollins Center Plan, consider public-private partnerships for redevelopment revitalization opportunities including financial incentives as well as zoning changes to allow and encourage housing diversity and mixed use development.
- Actively seek out development partners through marketing efforts, networking, and requests for qualification.

RCO-05: Hollins Center - Mixed-Use

Image sources: USDA FSA, GeoEye, Maxar

Locality: Roanoke County

Area (Acres): 199.11

Zoning District:
C2 (Roanoke Co.)

Other Base Zoning:
R3, R1 (Roanoke Co.)

Zoning Overlay:
N/A

In a UDA?
Yes

In a Historic District?
No

N

1,000
Feet

Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership

Constraints

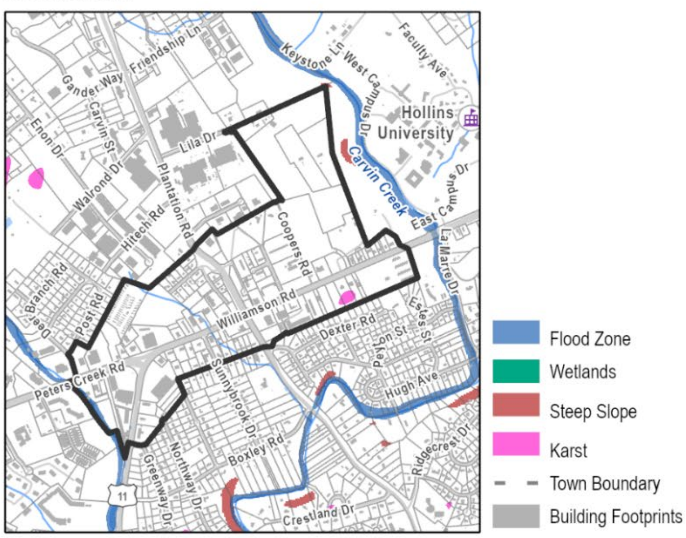
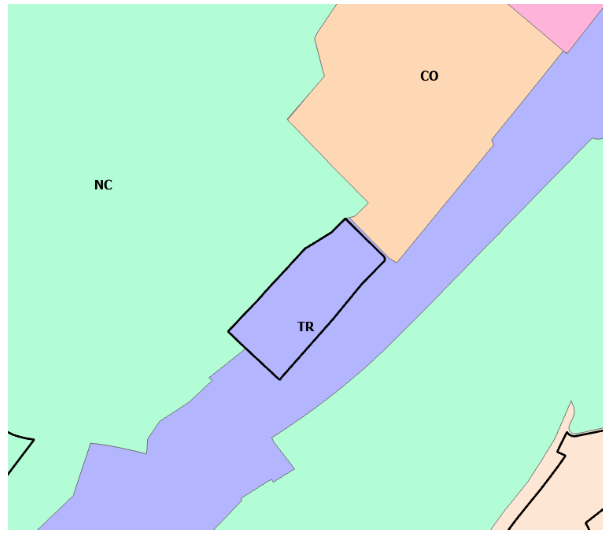


Figure 38: RCO-05 Site Summary

RCO-06: BONSACK – JIM BATTLES PARK



This site located on the corner of Route 480 and Huntridge Road in Roanoke County is just over 13 acres and located in the County's Commercial 2 (C-2) zoning district. The C-2 district allows commercial development as well as two-family, multifamily, and mixed use development. The area is part of the Route 460 East/Bonsack Urban Development Area (UDA).

Multifamily housing and duplexes have additional regulations in the C-2 district per Article IV of Roanoke's Zoning Ordinance which outlines additional design and use standards for specific uses in some districts. They must include a commercial, civic, or office use and cannot account for more than 50 percent of the gross floor area on the site. Otherwise, a special permit is required from the Board of Supervisors.

The 2005 Roanoke County Community Plan (Chapter 7) identifies the Route 460 corridor in Bonsack as an area to promote the use of planned commercial developments and/or nodes of commercial development and emphasizes that the appropriate balance between residential, commercial, industrial, and agricultural land uses is key to Bonsack becoming a sustainable community. This site is surrounded by a single family neighborhood to the southwest and west and a medical office use to the northeast (on Huntridge Road).

The Future Land Use map (see image above) identifies this site as Transitional (TR) due to its location between the single family neighborhood (designated Neighborhood Conservation (NC)) and the highway. As defined in Chapter 6 of the Roanoke County Community Plan, transition areas generally serve as developed buffers between highways and nearby or adjacent lower intensity development. Intense retail and highway oriented commercial uses are discouraged in transition areas, which are more suitable for office, institutional and small-scale, coordinated retail uses as well as multifamily residential (12-24 units per acre) and townhouses (single family attached residential of six or more units per acre).

The site could provide an opportunity for both non-residential uses along Huntridge Road, similar to the use across the street, and medium-density residential uses such as townhouses or duplexes. If approximately 25 percent of the site were used for non-residential uses, there would be about 10 acres that could be used for residential uses. If assuming multifamily residential at 12 units per acre, the site could potentially yield 120 units. If assuming townhouses at 6 units per acre, the site could potentially yield 60 units.

Note, according to mapping data from the Western Virginia Water Authority, this area appears to have public water and sewer infrastructure in close proximity.

This site could provide a mix of housing, both duplexes and townhouses, which could appeal to many households in the area. As household composition continues to favor smaller household sizes, ownership units like these could appeal to a wide range of householders, particularly small family households. There is demand within the for entry-level ownership housing, and this location offers potential opportunity to capitalize on the market. Based on local sales prices in this area of the county, the market is quite strong and new housing product has the potential to meet the growing demand.

Recommendations:

- Consider development proposals in alignment with the Future Land Use map that include a mixture of non-residential and medium-density residential uses for this transitional area that could sufficiently buffer the NC area from the highway.

RCO-06: Bonsack - Jim Battles Park

Locality: Roanoke County

Area (Acres): 13.17

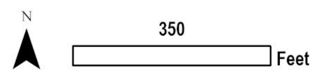
Zoning District:
C2 (Roanoke Co.)

Other Base Zoning:
N/A

Zoning Overlay:
N/A

In a UDA?
Yes

In a Historic District?
No



Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership

Image sources: GeoEye, Maxar, Microsoft

Constraints

Figure 39: RCO-06 Site Summary

RCO-14: VINTON – RIVER PARK SHOPPING CENTER

The Vinton River Park Shopping Center is located on about 27 acres in Vinton and lies within two Vinton zoning districts: GB and R3. The site is also located in a UDA. The eastern portion of the site, which has frontage on Route 24 and Washington Avenue is developed as a shopping center. The western portion of the site appears to be primarily forested. The site is surrounded primarily by single family residential uses with some commercial uses along Route 24.

The R3 district, which covers about 10 acres on the western side of the site, allows single and two-family dwellings and townhouses by right and multifamily dwellings by special permit. Building heights in the R3 district can reach up to 45 ft and buildings cannot cover more than 35 percent of the lot. The minimum lot size for multifamily dwellings in the R3 district on lots with water and sewer access is 12,000 square feet.

Note, according to mapping data from Roanoke County, this area appears to have public water and sewer infrastructure in close proximity.

The GB district, which covers just over 17 acres on the eastern portion of the site, permits mixed use development and residential uses must be located above the first floor or in the rear of other permitted commercial uses and the amount of floor area for residential uses cannot be more than twice the floor area of other uses. In the GB district, buildings can be built up to 60 ft, except where lots are located within 100 ft of a residential district. Here they can only reach up to 35 ft.

This study's analysis of the market for this area indicates that there is a need for a diversity of housing options, by type and price, which meets the needs of growing populations. While mixed-use development is not traditionally found across the county, proximity to the shopping and employment opportunities makes this site a potentially viable location for such a housing typology. The site could capitalize on the growing young professional population across the county. Additionally, mixed-use development is also attractive to the growing senior population, as they may be looking to downsize, and looking for walkability and amenities. The market could also accommodate duplexes and townhouses which appeals to younger family households. There is demand within the for entry-level ownership housing, and this location offers potential opportunity to capitalize on that market.

Recommendations:

- Consider development proposals in alignment with the current zoning that include redevelopment of the shopping center to mixed-use with commercial uses on the first floor and apartments or condominiums above on the eastern portion of the lot (the area zoned GB)
- Consider proposals for a medium-density transitional residential use on the western portion of the lot (zoned R3) such as two-family dwellings or townhouses.

RCO-14: Vinton - River Park Shopping Center

Image sources: USDA FSA, GeoEye, Maxar

Locality: Roanoke County

Area (Acres): 27.47

Zoning District:
C2 (Vinton)

Other Base Zoning:
R3 (Vinton)

Zoning Overlay:
N/A

In a UDA?
Yes

In a Historic District?
No

Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership

Constraints

Figure 40: RCO-14 Site Summary

ROANOKE COUNTY HOUSING STUDY

BARRIERS TO ADDRESSING HOUSING

To address gaps across Roanoke County's housing market, several barriers will need to be addressed. For the purposes of this analysis and to inform future strategies, we have organized current barriers into four categories: Market, Financial, Regulatory, and Coordination.

Market Barriers

Market barriers refer to constraints placed on the housing market or factors that drive the market to respond in a certain way. In Roanoke County, there are several market-based barriers affecting housing which include:

- **Reduction in Local Building Capacity** – The Great Recession had some negative effects on the housing market in Roanoke County, but by-in-large prices and rents have rebounded back to pre-recession levels. A bigger impact of the recession that continues today is the reduction in local building capacity as there are only a few larger sized developers within the Region. These developers tend to look for projects which are likely to be permitted, require less risk and offer acceptable financial returns.

- **Decline in 35 to 44-Yyear Old Population** – Between 2013 and 2018, the number of residents between the ages of 35 and 44 decreased by 10%, which is slightly greater than the regional trend. Historically, this age cohort is at peak family formation and are a potential buyer pool for starter homes or larger homes representing a move up in the market. The continued decline in this population could potentially impact home purchases, home prices, and the vacancy rates across the county.

- **Lack of Diversity in Housing Types** – The predominate housing type for both renters and owners in Roanoke County are single family homes and multifamily homes. Multifamily housing units are limited across the county but offer an important price and size distinction in the market compared to single family homes. The demographic shifts to an aging population will continue to influence the market and likely drive demand for more diversified housing types like townhomes, patio homes, and potentially condos to retain the senior population while also bringing affordability to younger households. Nationally, there is an alignment of housing preferences between younger and older generations in terms of both product type, locations, and amenities. Universal design is also an important factor to consider for new units so they can be design or easily adapted to meet the needs of owners and renters regardless of age or ability.

Financial Barriers

Financial barriers refer to the access to capital needed to fund housing development, access to financing to purchase a home, resources to address housing inequities and challenges, and the financial feasibility of rehabilitating the existing housing stock in certain parts of the county. Financial barriers to housing development include:

- **Rehab and Acquisition** - Rehabilitation of the older housing stock is difficult to execute because it requires a concerted effort on the part of homeowners, the availability of financing, and coordinated efforts by municipal officials. Rehabilitation is difficult from the homebuyer side because financial resources are not always available for renovation projects. While some lenders offer construction financing, lending terms may not be favorable to low- to moderate-income households who are unable to pay the loan back on top of an existing mortgage. While there are county, state, and non-profit programs which help homeowners finance rehabilitation costs, these funds are limited.

  There are also challenges for potential buyers of homes that need rehabilitation work. In areas where housing rehabilitation has not occurred and home values are lower, it can be difficult for lenders to find comparable properties to justify a combined rehab and acquisition loan. Oftentimes, gap financing is needed through a flexible funding source to help make up the difference between what a lender is willing to offer and the amount the homebuyer needs for repairs. This may also disproportionately impact low- to moderate-income households who may not have cash on hand to complete the needed rehabilitation on the home.

- **Development Feasibility** – The financial feasibility of revitalizing and redeveloping older areas, building on in-fill lots, or undertaking new greenfield/subdivision development is a major barrier. The cost of land, materials, and construction are significant, especially with the topographic challenges in parts of the county and the availability of infrastructure and utilities. The risks associated with larger projects is can be high, particularly in untested markets where there are fewer local builders willing to take risks. Financial feasibility concerns limit the potential of new developments to include affordability components, as developers opt to build higher priced housing to mitigate risk and increase returns.

- **County/State/Federal Resources** – Funding to support housing programs and initiatives is limited in many cases to those available through local taxation or development fees, state funding dedicated to housing, tax credit programs, and federal housing programs like Community Development Block Grant (CDBG) or HOME funds. Providing new affordable housing options will take a concerted effort and leveraging a variety of funding resources. This will be a key barrier to implementation and one that will require a coalition of government, non-profits, faith-based organizations, and private investors.

- **Lending Criteria and Access to Financing** – Homebuyers are challenged by increasing levels of personal debt, diminished savings, and stricter lending requirements by financial institutions due to the housing crisis. Purchasing power constraints limit the ability of households to buy homes or undertake major renovations to existing homes. Younger householders who carry large student loan debt coupled with price escalations in the housing market make homeownership difficult to attain and can result in greater numbers of renter households. For low- and moderate-income households, obtaining and maintaining a qualifying credit score can also be a challenge to accessing financing.

Regulatory Barriers

Regulatory barriers refer to the policies and regulations placed on residential development by local, county, and/or state government that may be impeding the construction of certain types of housing product. This may be related to zoning, subdivision controls, permitting, or building codes. Regulatory barriers to housing development include:

- **County Zoning Ordinance** – The County's Zoning Ordinance currently offers property owners quite a bit of flexibility from a residential perspective, including allowing a range of housing types to be built. Residential development in Roanoke County is primarily allowed in its five residential districts (R-1, R-2, R-3, R-4, and R-MH), its Planned Residential Development District (PRD), and in its four agricultural districts (AG-3, AG-1, AR, and AV). Single family is allowed by-right in all these districts except the Residential Manufactured Homes District (R-MH). Many of the County's site development regulations are influenced by the availability of water and sewer access. Generally, the maximum building height in districts is 45 ft unless noted.

- **Restrictions on Dense Development** - Multifamily and townhouses are allowed by special permit from the Board of Supervisors and have additional regulations in the AV district per Article IV of Roanoke's Zoning Ordinance which outlines additional design and use standards for specific uses in some districts. For multifamily housing, the minimum lot size is 20,000 square feet for the first unit plus 5,000 sf for each additional unit. For townhouses, the minimum lot size is 20,000 sf for the first unit plus 5,445 sf for each additional unit. No more than eight townhouse units are permitted per acre and no more than 4 townhouse units can be in a single group or block. Each individual lot size for a townhouse must be at least 2,000 sf for interior lots and 2,500 sf for end lots—and a minimum width of 20 ft.

- **Adaptive Reuse and Code Compliance** – Adapting older buildings to meet today's building codes and accessibility requirements can be very expensive, particularly for those buildings that could host a mix of uses. Improvements such as adding sprinklers, providing elevator access to upper floors, and making accessibility improvements often require a large amount of upfront capital that may take a long time to recapture in an area with lower residential and commercial rents. These required improvements can sometimes force property owners to keep upper stories vacant or limit the ability to fit out spaces for a different mix of tenants.

Coordination Barriers

Coordination barriers refer to the ability of stakeholders to come together and focus efforts and resources to help with the county's housing challenges. Change is never easy nor is identifying funding to address challenging issues, but both require a coalition of leaders to come together and agree on priorities and direction. Potential coordination barriers include:

- **Identify Funding Sources** – To address housing issues identified in this study, additional funding sources are going to be needed. The housing market, while growing, is not necessarily meeting the needs of residents. The market may not course correct on its own in the short-term and there may be a need to identify subsidies to prime the market in areas that have not seen new investment or may not be supplying the diversity of housing choices needed to serve residents today and into the future. Raising additional funds, leveraging resources, or reallocating existing funding is never easy but may be necessary to address housing needs across the county.

- **Regional Collaboration** – Over the last two decades, private corporations such as financial institutions, major employers, and anchor institutions such as hospitals and universities have played an increasingly important role in improving and expanding affordable housing. Investments in low-income housing tax credit projects have been a primary contributor to building multifamily affordable rental units across the country. Roanoke County has a need to expand both the amount and type of affordable housing as well as the pool of funding available for such projects. The challenge now is for the County to take charge of those challenges and begin seeking a larger partnership between government, philanthropy, and the private sector. This is a best practice in many places across the country who are working collaboratively to invest in larger, more complex community and economic development solutions.

  The concept of leveraged capital, when a small amount of initial capital is made available to attract additional resources, is not new to the affordable housing industry. Most affordable housing built since the early 1990s has been financed by private equity investments seeking low-income housing tax credits and market rate returns. What is new to the community development sector are the innovations created through co-investment opportunities between the public and private sectors.

  In Roanoke County, partnership between the County, affordable housing providers, institutions, employers, non-profits, Virginia Housing, and the RVARC will be critical to addressing housing needs going forward.

ROANOKE COUNTY HOUSING STUDY

STRATEGIES

To address of the housing issues and opportunities noted in this study, RKG compiled a set of strategies each informed by the countywide data analyses, interviews and focus groups, and an assessment of existing housing programs. The strategies presented are targeted toward addressing the identified gaps and barriers in the current housing market and have been organized under headings which group similar strategy types and an estimated timeframe for implementation. The strategies are also intended to help address housing typology gaps identified in Roanoke County's market and easing restrictions or putting forth incentives to help produce that product in the future.

It is crucial that strategies focus on initiatives the county and its partners can undertake within the first few years to address key issues and opportunities in the housing market. Undertaking incremental steps in the beginning stages of an implementation strategy can build momentum and give residents and investors the confidence in the potential of the plan. Short-term implementation recommendations (0-5 years) can include organizational restructuring, policy and regulatory changes, realignment or consolidation of funding sources, or small investment projects. Mid- and long-term recommendations (6-10 and 10+ years) may take more time, additional or creative financing, complex partnerships, political will, and patience as the market adjusts to changes in policy, regulation, and/or funding priorities.

Regulatory Strategies Barriers

The County and its local partners should consider zoning changes that allow and potentially incentivize new housing types where appropriate. The County's growing population is concentrated in two primary age cohorts – younger professionals and seniors. National trends show housing preferences of both groups in close alignment with a preference toward housing in walkable locations with amenities nearby, attached ownership units or multifamily rental structures with minimal maintenance responsibilities, and amenitized buildings. These housing preferences were not only noted in this study and backed up by interviews and focus groups, but also by other recent studies such as the 2016 Route 419 Town Center Study, the 2008 Hollins Area Plan, and the 2005 Comprehensive Plan. If the County wants to continue to attract people to live here and retain the residents who are here already, increasing housing choice and diversity should be a key goal moving forward.

UTILIZE ZONING TO ALLOW OR INCENTIVIZE HOUSING PRODUCTION

Zoning changes should respond to resident needs and desires for new housing types and structures that provide additional housing choices yet are still compatible with the built environment in which they are placed. Zoning is one of the few tools the county and local partners can change almost immediately and at very little cost that can have a direct impact on housing production. Zoning can also be used to integrate new housing types across a wide variety of area or neighborhood types in the county from rural areas to vacant land along transportation corridors to downtowns with mixed use and upper story residential. The following zoning recommendations should be considered by the county and local partners to help diversify housing types and address housing affordability at different price points.

Zoning for Housing Choice (Near-Term)

The housing market study and focus group interviews point to a lack of housing choice throughout the county, particularly for housing typologies that offer slightly higher densities. While the County does allow townhomes and multifamily units in the AV, R-2, R-3, R-4, PDF, C-1, C-2, PCD/PTD, and CVOD zoning districts, by Special Permit or with added regulations, lot coverages and density restrictions may be making it less attractive to pursue these options. The County should revisit the regulations for these districts and review minimum parcel size requirements, land coverage/open space requirements, density regulations, and allowable housing types.

The County and its local partners should also look at options for integrating other housing types into neighborhoods where appropriate. The idea of "missing middle" housing is one where different housing types such as duplexes, triplexes, townhomes, or smaller six-to-10 unit multifamily structures are integrated within existing neighborhoods, downtowns, and commercial districts to provide added housing choice and affordability. The County should look at its residential districts where only single family homes are allowed and determine if other housing types could be allowed, possibly accompanied by design guidelines where appropriate. Housing typologies such as two-families, three-families, patio homes, and townhomes are only allowed in the AV, R-2, R-3, R-4, PDF, C-1, C-2, PCD/PTD, and CVOD districts today, and developing these typologies require either a Special Permit, or have additional regulations per Article IV of Roanoke's Zoning Ordinance.

Cluster Zoning (Near-Term)

Cluster zoning can be an excellent way to both increase density and housing choice while also achieving goals around the preservation of open space. The County currently allows residential cluster development in the R-1, R-2, R-3, and R-4 districts, as well as in the PCD/PTD district. The minimum tract size for cluster subdivisions is 10 acres with maximum density of 5.5 units per acre and 48 feet of frontage. All lots in the subdivision must have access to public water and sewer, while at least 45% of contiguous land in the subdivision must be used as open space and conservation land with a trail or sidewalk for public access.

The County may wish to consider how different housing types could be integrated into a cluster development, possibly expanding cluster development to other zoning districts with different requirements and offering a density bonus or reduction in open space preservation in return for affordable housing set asides.

Accessory Dwelling Units (Near-Term)

An accessory dwelling unit (ADU) is an independent residential living area that is on the same property as a larger, primary dwelling unit. The term "accessory" is purposely meant to describe the unit as secondary to the primary unit, in the same way a garage is of secondary importance to the home. These units cannot be sold separately and are typically limited in size to help reduce impacts on neighbors and blend in with surrounding homes. These units can help meet a wide range of living arrangements, provide an affordable housing option to family or friends, or create an opportunity for the primary homeowner to generate additional income through rent.

An accessory dwelling unit generally takes three forms:

1. **Re-purposed space:** e.g. above the garage or in the basement.
2. **Stand-alone unit:** separate from the primary home.
3. **Attached:** addition to the primary home.

Some states and municipalities across the country have taken additional steps to make the approval and permitting of ADUs as streamlined as possible while still considering the impacts on surrounding property owners. For example, the City of Seattle has been working for several years to streamline the ADU permitting system and reduce as many barriers to cost and construction as possible. A study from the City's Planning Director in 2016 identified several barriers to address to improve the delivery of ADUs. These included:

- Removal of off-street parking requirements for ADUs
- Reduce minimum lot sizes for detached ADUs
- Allow the same gross square foot limits for attached and detached ADUs
- Allow flexibility for placing primary entrances
- Allow modified roof lines/features that create useable spaces
- Allow an ADU structure to be placed within the rear setback

ADUs in Roanoke County could play an important role in the overall housing stock based on what we know from the demographic and market data:

- ADUs offer an affordable housing option for smaller households
- ADUs could provide seniors, especially those living alone, with another housing option and allows older owners to age in place
- ADUs could also provide a lower cost housing option for younger residents
- ADUs offer a quicker and easier way to boost housing production

The County currently allows ADUs in nearly all zoning districts, except for PRD, R-MH, CN, CVOD, I-1, and I-2. In all zoning districts where ADUs are permissible, except for PCD/PTD where they are allowed by-right, the units must comply with modified or more stringent standards as listed in *Article IV, Use and Design Standards* in the Roanoke County Code. The County should consider ways to ease restrictions on ADUs where appropriate, particularly the family unit restriction. ADUs can be an excellent option for younger and older single-person households who can rent from the owner of the primary structure. This could also help supplement the owner's income, particularly if they are a low to moderate income household. The County could also consider developing a set of pre-approved ADU architectural plans whereby an owner agrees to use a pre-approved plan and is not required to go through the special permit process. This could help save time and money on the part of the owner and the County.

Transfer of Development Rights (Mid-Term)

Transfer of Development Rights (TDR) is a zoning technique that helps conserve land by redirecting development that would have otherwise been allowed on a piece of land to another area of a town or county that is more suitable for a higher level of density and development. For the program to work there usually are two key mechanisms or considerations that must be accommodated:

- There must be a designated "receiving area" where new development will be directed, and that new development must be at a density that will allow the developer to purchase the development rights from the owner of the other property (sending area).
- The receiving area must have zoning in place that allows for sufficient density and mix of uses or in this case, mix of housing types, so the developer can achieve adequate financial returns. In addition to the typical costs associated with development (land, permitting, construction costs, etc.), with TDR the developer also must purchase the development credits from the sending area property owner.

A TDR regulation is not only helpful from the development perspective, but it could also help the County and local partners with goals around protection and preservation of farmland or open space that might have otherwise been developed.

INCENTIVIZE HOUSING PRODUCTION (NEAR-TERM)

The County and its local partners should consider creating a fast-tracked permitting process for development that includes a permanent, deed restriction on affordable housing units. In addition to removing or reducing zoning hurdles, the permitting process for housing can also be time consuming and costly in many localities. Coupling zoning changes with expedited permitting could make housing development more attractive, increase financial returns, and increase the production of affordable housing.

Policy and Coordination Strategies

To advance the implementation of both market-rate and affordable housing strategies, the County should consider policies and coordination strategies to broaden partnerships with other organizations and agencies focused on housing. The County and its local partners should also consider broader policies and principles that would guide the types, and locations of, housing in the future.

COORDINATION TO ADVANCE HOUSING PRODUCTION AND PRESERVATION

Successful housing production and preservation outcomes typically rely on a robust partnership between government, non-profits, housing authorities, developers, property owners, and financial institutions. These partnerships or coordinated efforts help expand the capacity of county and local governments to add staffing, financing, and knowledge to share the responsibility of successfully implementing housing strategies, which is often a multi-jurisdiction, long-term process. The following strategies aim to broaden housing coordination within Roanoke County.

Establish a Regional Coordinating Body or Group (Near-Term)

Housing is an issue that often extends beyond the boundary lines of any one locality as residents and capital tend to flow to where market opportunities are or are created. Therefore, a regional body that meets regularly to discuss housing issues, opportunities, best practices, grant and funding opportunities, and ideas for new programs or policies would be a benefit to all localities within the Roanoke Valley-Alleghany Region. With the RVARC already in place and serving as a regional coordinating body for other purposes, the infrastructure is likely in place to create a housing council and expand its membership to include other organizations and agencies that may not regularly participate in other functions of the RVARC. These should include major employers, developers, financial institutions, colleges and universities, non-profits, funders, housing authorities, and representatives from county and local government. This group could organize around some or all of the following topic areas:

- Educating elected leaders, staff, and the public about the important role housing plays in the region and ways to talk about housing choice, affordability, and density that bring people together rather than being a divisive issue.
- Look for ways to leverage staff and financial resources to address housing issues. This could result in new pools of funding, new vehicles for distributing funds, or supporting grant application efforts as a region rather than as individual entities.
- Create a marketing push to major employers and commuters coming into the region and showcasing the different communities and counties as great places to live and work.

Developer Recruitment (Mid-Term)

The County and local partners should create market materials advertising the preeminent development sites to the development community and make a determined effort to market the County and the sites to developers. Marketing materials should also include information about progressive zoning, allowable housing typologies, infrastructure availability, and any incentives that may exist supporting residential development. The County should use the land suitability analysis from this study as a starting point for identifying key sites and potential constraints development may have to overcome.

Leverage County Land for Housing Production (Near - to Mid-Term)

Disposing of available County-owned properties to support housing production, particularly mixed-income or affordable housing, can be an effective way of partnering with developers to address housing needs. Land is a cost borne by the development, but when publicly owned, could be offered at a steeply discounted rate to improve the financial viability of a proposal that includes an affordable housing component. If the disposition of land is of interest to the County, several items should be considered before disposing of the land which include:

- **Minimum Lot Size:** Over 5,000 square feet, but preference for larger sites that could accommodate multifamily units.
- **Use of Property:** Ensure there are no other competing public uses for the property, and no plans by other county or local departments for future use of the property. The use/housing type should be compatible or not conflict with existing neighborhood character.
- **Zoning:** Property should be in an existing residential or mixed use district or overlay district.
- **Infrastructure Capacity:** Property should be served by existing water, sewer, and transportation infrastructure. Capacity should be available to serve the development.

- **Property Location:** Ideally, the property is located near amenities residents could take advantage of such as parks and open space, schools, childcare facilities, and shops and grocery options.
- **Environmental Considerations:** Property should not be located within a floodplain, have significant wetland encumbrances, or environmental remediation issues.

Preserve Existing Affordable Housing (On-Going)

Housing production is not the only way to advance housing goals in the county, a successful housing strategy also relies on the ability to maintain the affordable housing that exists today. One way the County could take a more proactive role in housing preservation is to require property owner or managers of deed restricted affordable housing units/buildings to provide advance notification to the County if affordability restrictions are about to expire and the units are going to convert to market rate units in the future. This type of notification is already required for developments utilizing Low-Income Housing Tax Credit funds which gives a right of first refusal to non-profits who wish to purchase the units/buildings to preserve affordability restrictions. The County could consider expanding this notification process to other residential developments that include affordable units or to projects that receive any public subsidy to support affordable housing.

POLICIES TO ADVANCE HOUSING PRODUCTION AND PRESERVATION

The County and local partners could also consider policies and actions to encourage housing production and preservation. Some could be formally adopted such as encouraging universal design in new housing units while others may be guiding policies such as prioritizing locations for residential development.

Prioritize the Best Locations for Housing (Near-Term)

Leveraging the work done through this study on land suitability and site identification, the County should adopt a guiding policy that new development should be limited in the near-term to the best and most development ready sites to encourage smart growth and slow outward growth away from population and employment centers. This policy could first encourage sites that are served by roads, water, and sewer and within closer proximity to services and amenities such as schools, shopping, and job centers. Secondarily, the County could consider sites that need infrastructure extended to unlock vacant development sites and avoiding development on farmland or other open spaces to preserve agriculture and the natural environment that makes Roanoke County and the larger region what it is today.

Consider Development Negotiations for Affordability (On-Going)

For new, larger scale residential development, the County and local partners should consider entering developer negotiations to secure dedicated affordable units as a percentage of total units in the development. This is a less formal process than a codified inclusionary ordinance and can often be more effective and produce more units in markets where development may not be able to finance affordable units on its own. This process, often referred to as Voluntary Inclusionary Zoning, could be coupled with a zoning change, density bonus, reduced permitting fees, property tax abatements, and/or infrastructure investments in return for long-term deed restricted affordable housing. In some cases, it may be to the County's interest to negotiate a payment-in-lieu of housing units which could then be used to help fund other housing initiatives and programs.

Encourage Universal Design (Near-Term)

Given the increases in the senior population, the County and local partners should encourage (at a minimum) some percentage of new units to include universal design features. Universal design focuses on making the unit safe and accessible for everyone, regardless of age or physical ability. Universal design features go beyond ramps and grab bars and account for the design of the unit itself with things like wider doors and hallways. This is also a good way to move away from age-restricting units or buildings that have these features so when demographics change over time the units are designed for a wider market base.

Financing Strategies

In the residential development world, especially as it pertains to affordable housing, financing strategies and subsides can be a critical component to financial feasibility and a project moving forward. The following are financing strategies the County and local partners should consider advancing both the development of housing as well as the upkeep and maintenance of existing housing.

County Housing Trust Fund (Mid-Term)

Affordable Housing Trust (AHT) funds are a flexible source of funding that can be used to support many different affordable housing initiatives. The money that is generated for the fund is typically created and administered at the county or local level and are not subject to restrictions like other state and federal housing funds. The money in the fund can be designed to address local needs and priorities, such as those noted throughout this Housing Study.

The entity administering the fund, in this case Roanoke County, would work to define priorities and eligible activities money in the fund could be used for. Examples of funding areas might include:

- Emergency rental assistance
- Gap financing for new construction of affordable units
- Repairs/rehabilitation of older affordable homes/units
- Weatherization program to lower utility costs
- Down payment and closing assistance
- Foreclosure prevention

Once the AHT is established, the County will need to determine who will be administering the fund. Typically, these funds are administered by an existing public office that has experience working in partnership with housing developers, administering grants, and overseeing a competitive application process for funding. In Roanoke County, this is could be the Planning and Zoning Department which is already engaged in planning, development, and housing efforts. The County would also need to determine how the fund would be seeded and capitalized over time. Some options include:

- Annual allocation from the general fund
- Funds collected from development (negotiated payments in-lieu)
- Business license fees
- Local occupancy taxes
- Short-term rental registration fee

It is important that once the AHT is created that funding be made available each year for housing programs and to support development and infrastructure requests. This will create a predictable source of funding year over year and allow programs to be marketed and succeed. Funds from the AHT could also be leveraged against federal and state housing funds or other housing-related resources that could be pooled from non-profits, institutions, philanthropies, and employers. Other localities in Virginia like Richmond, Alexandria, Charlottesville, and Norfolk have established and capitalized local housing trust funds.

Residential Rehabilitation Program (Near-Term)

In parts of the County there are older homes with lower values that have likely not been kept up or invested in. These homes may need minor or major rehabilitation, and if owned by low- to moderate income householders, may not have the funds on hand to maintain the structure. A residential rehabilitation program can assist homeowners with the cost of rehabilitation through no – or low-interest rate loans that can be applied to specific repairs the structure may need.

A rehab program would require seed funding from the County or local partners, or a CDBG request to the Commonwealth to provide funds. This type of program does require considerable oversight and coordination to ensure funding is reaching those most in need and addressing issues that would normally trigger a building code violation. If the County were to pursue its own rehab program, the following questions and parameters should be considered:

- Should the program target owner-occupied units and/or renter-occupied units?
- Should the rehab money be given as a grant, no-interest loan, interest loan, or deferred loan repayable on sale of the property?
- What household income levels would the County want to target (30% AMI, 80% AMI, etc.)?
- What types of home repairs would be eligible under the program?
- What should the maximum loan amount be set at?

Another consideration could be the creation of a regional home repair program that could be managed by the RVARC or a similar regional entity. This is common across many counties and regions, particularly with federal programs like weatherization.

First Time Homebuyer Program (Near-Term)

Down payment and closing cost assistance help low- and moderate-income families overcome one of the most common barriers to homeownership—accumulating sufficient savings to make a down payment and pay for closing costs on a mortgage.

Assistance can be offered in a variety of forms, including as a grant, a no- or low-interest amortizing loan or a deferred loan in which repayment is not due until the resale of the home. The assistance is often provided by a local housing agency, a nonprofit organization or a state or local housing finance agency, sometimes through a participating private lender. Program details differ across jurisdictions, but in general borrowers must fall within income and home purchase price limits and must comply with other eligibility requirements, including being a first-time homebuyer, using the home as a primary residence, and completing a homebuyer education course and/or participating in housing counseling.

The County and local partners should consider advancing a first-time homebuyer program for eligible low- to moderate-income buyers who often have the most amount of difficulty entering the homeownership market. This is particularly true in places with rising home values, like parts of Roanoke County, where housing prices are exceeding income growth for many households. The County could consider creating a pool of funds to be set aside as a no-interest rate loan program where the loan is forgivable after a certain period if the homeowner does not move or sell the property. The County could also consider a revolving loan fund (with or without interest) where the loan must be paid back over a certain period, or at the sale or transfer of the property. The revolving loan fund helps ensure the funding pool is recapitalized over time versus forgivable loans in which some percentage of funds are never returned.

Property Tax Abatement for Housing (Near-Term)

To encourage affordable housing development, the County and its local partners should consider the application of property tax abatements in return for a percentage of affordable housing units included in the development. The County could consider a sliding scale for the tax abatement where the more units or the deeper the affordability the more property taxes are abated. The County could also consider a sliding scale for the length of the abatement and when the percentages of taxes paid begins to increase over time.

Infrastructure Strategies (Mid- to Long-Term)

Housing development in the county may be impeded by a lack of available infrastructure, particularly public water and sewer for larger scale residential development. The County and its local and regional partners should continue to be proactive in identifying potential development sites and working to ready those sites with strategic infrastructure investments. Where public water and sewer cannot be accommodated, the County and its partners should look for ways to partner with developers to construct on-site package treatment plants that can support new residential development.

APPENDIX A: SITE SUITABILITY DOCUMENTATION

LAND SUITABILITY ANALYSIS

Planning for land use change and future development must consider a wide range of factors that include environmental conditions and hazards, local plans and regulations, and the availability of critical infrastructure and services to support urban expansion and redevelopment. Land suitability models provide a framework that can incorporate these variables - and represent them geographically - in order to identify and prioritize areas that can support new housing, and potential constraints to development. This type of model is often employed in local and regional planning efforts using geospatial analysis techniques to process and integrate existing Geographic Information Systems (GIS) data. Thanks to the availability of high-resolution and regularly updated GIS databases, it has become possible to evaluate land suitability at the neighborhood and site scale while providing a reasonably accurate representation of local conditions.

Overview

For this project, the objective was to assess the suitability of land for residential development across four jurisdictions in the Roanoke Valley-Allegheny Region: Roanoke County, Franklin County, the City of Roanoke, and the City of Salem. Because each locality has unique physical characteristics, local bylaws, and planning priorities, it was critical to customize the suitability model within the boundaries of these areas. Part of the objective of this study was to prioritize three specific sites for each locality from a list of potential development sites, which were identified by land use and development planning staff. Additional details on the process of engaging local planners in the land suitability analysis can be found later in this chapter. The following diagram summarizes the stages of model development, from compiling planning documents and GIS data to developing final recommendations for the selected sites, including the critical points where local feedback was solicited on the model inputs and results.

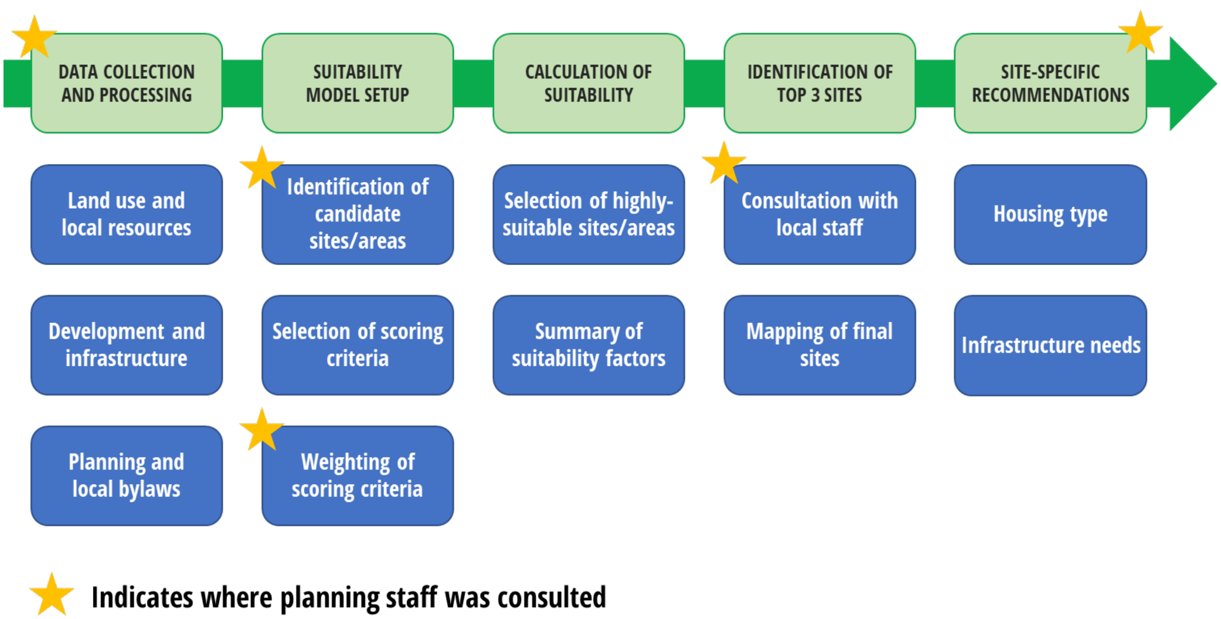


Figure 1 Land suitability model process

Data Collection and Processing

The information included in a land suitability model takes many forms, from GIS datasets representing linear infrastructure networks, administrative boundaries, and nodes of activity, to tables documenting details from assessors' databases and the dimensional requirements of local zoning bylaws. Data was collected from public data portals, RVARC's Director of Information Services, GIS managers from each city and county, and multiple agencies of the Commonwealth of Virginia, including:

- Department of Conservation and Recreation (DCR)
- Office of Intermodal Planning and Investment (OIPI)
- Virginia Department of Transportation (VDOT)
- Virginia Economic Development Partnership (VEDP)
- Virginia Information Technologies Agency (VITA)
- Western Virginia Water Authority (WVWA)

Figure 2 Sources of data used for the suitability model

To ensure consistency and compatibility between data from different sources, each dataset was clipped to a common geographic extent, defined by the project's study area, and assigned a common projected coordinate system (NAD 1983 Virginia Lambert (Meters)) when data were imported into the geodatabases created for mapping and analysis. Additional data processing and preliminary analysis steps were completed to standardize the data and ensure complete and continuous coverage for the study area, including:

- Aggregating land cover data from the Virginia GIS Clearinghouse to merge three regional datasets overlapping with the study region
- Combining water and sewer network data from multiple jurisdictions to generate a single dataset for each infrastructure type
- Merging city, county, and commonwealth boundaries for conservation land and easements

- Cleaning up boundary overlaps between Franklin County and Rocky Mount zoning data, and aligning boundaries with Smith Mountain Lake
- Calculating or joining additional values to GIS attribute tables based on road type classifications, zoning regulations, and assessed value for parcels (ex. computing improved value to land value ratio)
- Interpolating a Digital Elevation Model (DEM) and calculating percent slope using topographic contour data
- Generating buffer areas that represent regulatory constraints, such as river protection areas, utility easements, and setbacks from roads and railroad corridors
- Geocoding school addresses for the City of Salem to produce point locations

In addition to GIS data sources, other location-specific data and variables were derived from local reports and planning documents, including comprehensive plans, area plans, zoning ordinances, housing assessments, and digital map documents produced by municipal and county planning offices. A full list of the documents referenced to derive land suitability model inputs is provided in the appendix. The following table summarizes the key data inputs that were compiled for this study.

Table 2 Land suitability data types

LAND USE AND LOCAL RESOURCES	DEVELOPMENT AND INFRASTRUCTURE	PLANNING AND LOCAL BYLAWS	OTHER DATA
Existing development and impervious surfaces	Existing residential, commercial, industrial, and institutional bldgs.	Base zoning and overlay districts	Administrative boundaries, Census block groups
Agricultural land, forests, wetlands and water bodies	Urban Development Areas / Designated Growth Areas	Future land use designations	Planning area and study area boundaries
Protected open space, local parks and recreation facilities	Public safety facilities, waste management sites	Parcels and assessor's data (lot size, improved and land value)	Airports, rail infrastructure
Trails and greenways	Existing and planned roadways	Historic districts	Public schools and universities
Natural hazard areas: flood zones, karst geology, steep slopes	Existing and planned public water and sewer service areas	River buffer areas	Hospitals, libraries
Historic and cultural resources, cemeteries	Utility easements, including the Mountain Valley Pipeline	Conservation easements	Topographic contours

Suitability Scores and Weights

The land suitability model was designed based on established land use assessment techniques that apply spatial analysis tools to assign scores to a range of categorical and numerical variables. These scores are then combined into an index that indicates the relative suitability for a particular land use.

There are many ways to implement this type of model using GIS – in this case a raster-based model was used, in which each study area is divided into a grid of cells and suitability scores are assigned to each cell based on:

- proximity (ex. within 50 feet of a road)
- category (ex. land use or zoning)
- or a simple binary score (0 or 1) indicating location within an area of interest (ex. UDAs).

The following examples illustrate how these scores were assigned based on land use and road proximity in Roanoke County. Water, wetlands, and existing buildings are indicated as the least suitable, while cleared land with minimal vegetation (areas classified as barren, scrub/shrub, pasture, etc.) are most suitable for residential development. Areas within 50 feet of the center of roads were considered not suitable, to account for the road right of way and an average setback distance. Areas close to the roads (between 50 and 200 feet) are considered the most suitable.

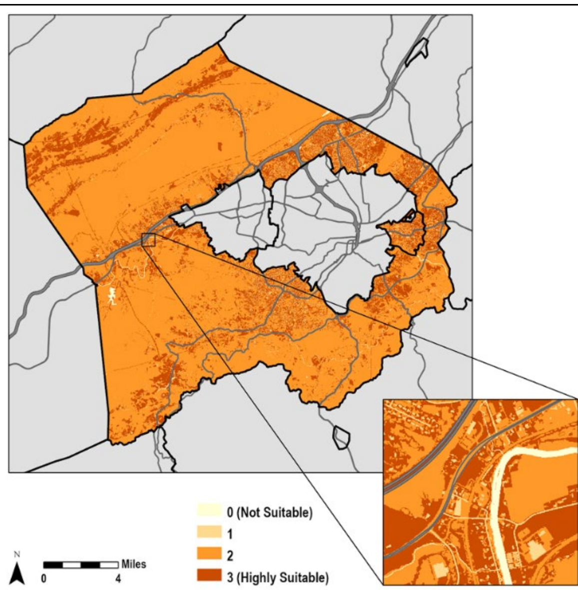
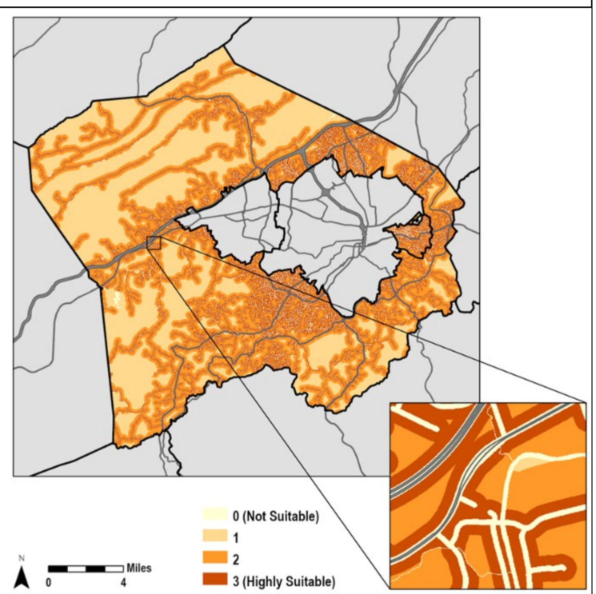
Land Cover *water is not suitable (0), barren land is highly suitable (3), forest land is somewhat suitable (2)*	**Road Proximity** *within 50 ft. of road centerline is unsuitable (0), from 50 to 250 ft. of roads is highly suitable (3)*
	

Figure 3 Land suitability score examples

For this housing study, suitability criteria were selected based on a review of local planning documents and consultation with planning staff, with a focus on conditions that could support residential development in each jurisdiction. Numerical scores were assigned to each factor according to the level of development suitability, from high (score = 3) to low (score = 1), or not suitable at all (score = 0). Total scores were calculated using a weighted sum to combine the score of each factor.

The weight values range from Low (weight = 1) to Very High (weight = 7), and were based on initial discussions with local planners, then refined through further validation of the initial model results. The table below presents a summary of the suitability criteria, assumptions for each score, and the relative weights used in the model for each jurisdiction. Certain criteria were not factored into the analysis in some areas, for example, because some zoning or water resource protections were unique to the City of Roanoke they did not apply in other areas. Because of the scale of the regions and differences in mobility, the distance from public schools used wider ranges (1 to 5 miles) in the county geographies and smaller ranges (0.5 to 1.5 miles) in the cities. In total, the Roanoke County model included 13 criteria, 12 for Franklin County, 16 for the City of Roanoke, and 15 for the City of Salem.

Table 3 Suitability criteria and weights

	Suitability Score				Criteria Weight			
Suitability Criteria	**High (3)**	**Medium (2)**	**Low (1)**	**None (0)**	**Roanoke County**	**Franklin County**	**City of Roanoke**	**City of Salem**
Land Cover/Hydrology	Barren, Scrub-Shrub, Harvested-Disturbed, Turf Grass, Pasture	Impervious (parking), Forest, Tree, Cropland	Impervious (roads/buildings), Wetlands	Rivers/Streams, Lakes and Ponds	High	High	Very High	Very High
Protected Open Space / Conservation Easements	Not in conservation land or easement (score = 1)			Protected land	Medium	Medium	High	High
Topography	0-15% slope	15-25% slope	25-35% slope	>35% slope	Low	Medium	Low	Medium
Flood Zones	Not in flood zone	500 year flood zone	100 year flood zone	Floodway	High	High	Very High	Very High
Urban Development Area	Located in UDA or Designated Growth Area (score = 1)			Not in UDA/DGA	Very High	High		Very High
Distance from Roads	50-250 ft.	250-1000 ft.	1000+ ft.	0-50 ft.**	High	Medium	Medium	Medium
Distance from Major Roads	50-250 ft.	250-1000 ft.	1000+ ft.	0-50 ft.**	Very High	Very High	Medium	Medium
Distance from Public Water	20-200 ft.	no medium score	200+ ft.	0-20 ft.**	Very High	Medium	Medium	Medium
Distance from Public Sewer	20-200 ft.	no medium score	200+ ft.	0-20 ft.**	Very High	Medium	Medium	Medium
Distance from Railways	no high score	100+ ft.	50-100 ft.	0-50 ft.	Low	Low	Medium	Medium
Distance from Greenways	< 0.5 mile	0.5-1 mile	> 1 mile	N/A			High	High
Distance from Public Parks	< 0.25 mile	0.25-0.5 mile	> 0.5 mile	N/A			High	High
Improved to Land Value Ratio*	0 (or unknown)	0.1-2	2 or more	N/A			High	High
Base Zoning# *(model was also run without zoning restrictions)*	3+ Mixed Density Housing Types	2-3 Mixed Density Housing Types	1-2 Low Density Housing Types	No Housing Allowed	High	Medium	High	Very High
Zoning Overlays								
Roanoke River Conservation	no high score	100+ ft.	50-100 ft.	0-50 ft.	Low			
River & Creek Corridor	Not within 50 ft. of rivers and creeks (score = 1)			0-50 ft.			Very High	
Design/Historic Districts	Neighborhood Design District	Historic Downtown & Neighborhood	Not in a design overlay	N/A			Low	
Distance from Public Schools								
Counties	< 1 mile	1-2 miles	2-5 miles	> 5 miles	Very High	High		
Cities	<0.5 mile	0.5-1 mile	1-1.5 miles	> 1.5 miles			Medium	Medium
				Number of Criteria:	**13**	**12**	**16**	**15**

 # includes zoning ordinances for Town of Vinton and Town of Rocky Mount

** ratio of improved value to land value from assessed values (vacant land ratio = 0)*

*** represents a setback or easement associated with the infrastructure network*

Constraints

In addition to calculating land suitability scores for each jurisdiction, a separate score was computed for development constraints. These constraints represent the suitability criteria that are considered not suitable, areas where development would not be feasible due to physical barriers or regulatory restrictions associated with infrastructure or land use.

The table below shows which constraints were included for each locality. In some cases, the constraint was not present in all areas, such as the Mountain Valley Pipeline. For others, such as karst geology and cemetery parcels, data was only available in certain jurisdictions. The Roanoke County model included the most constraints, 13 in total, while Franklin County had the fewest with 10 constraints.

Table 4 Development constraints by jurisdiction

	Development Constraints			
Constraints	**Roanoke County**	**Franklin County**	**City of Roanoke**	**City of Salem**
Land Cover/Hydrology: Impervious (buildings/roads), Wetlands, Rivers/Lakes	X	X	X	X
Protected Open Space / Conservation Easements	X	X	X	X
Base Zoning: residential not allowed	X	X	X	X
Topography: > 35% slope	X	X	X	X
Flood Zones: Floodway only	X	X	X	X
Karst Geology: within karst formation	X		X	X
River Conservation Buffer: within 50 ft. of river	X		X	
Distance from Roads: within 50 ft. of centerline	X	X	X	X
Distance from Public Water: within 20 ft. of network	X	X	X	X
Distance from Public Sewer: within 20 ft. of network	X	X	X	X
Distance from Railways: within 50 ft. of centerline	X	X	X	X
Mountain Valley Pipeline: permanent easement	X	X		
Cemetery parcels	X			
Greenways: within 20 ft. of network			X	X
Number of Constraints:	13	10	12	11

Assumptions and Limitations

As with any model, some simplifications were necessary to represent real-world conditions using this conceptual approach to evaluating land suitability. The break values selected for distance from critical infrastructure and scores assigned to different types of land cover, for example, represent assumptions made as part of the model development. Site-specific factors may change the applicability of these assumptions, but they are considered representative of potential development conditions at the regional and neighborhood scale.

Additionally, errors or omissions may be present in the GIS data and documents used to develop the model. One such known data gap is the water and sewer infrastructure in eastern Roanoke County. Data was collected for these infrastructure networks in Vinton, but it did not cover the areas connected to this system east of the Vinton border. Also, cemetery locations were included in the data for Roanoke County, but not other areas.

Overall, this model represents a regional decision support tool, using the best available data at the time of this report's writing. For more detailed parcel-level assessment of suitability and constraints, additional site surveys and mapping should be performed by qualified professionals. These models are intended to prioritize pre-selected development sites and identify potential infrastructure needs and other factors that could facilitate housing production. Other uses of this model should consider the assumptions and limitations outlined in this report.

Site Identification

Development of the land suitability model was organized to capture local planning and development knowledge at critical stages in the process, specifically:

- **Data collection and processing:** determining key datasets and relevant local plans and bylaws
- **Suitability model configuration:** identifying potential development areas and discussing initial weights for suitability factors
- **Selection of final sites:** providing feedback on the suitability and constraints of selected sites
- **Site recommendations:** offering input on types of housing, zoning, incentives, and infrastructure

At each stage more of this local knowledge of land use, planning, and development conditions was integrated into the land suitability model configuration and helped to refine the areas suggested as sites of potential housing development.

Site Selection

The ultimate objective of model is to evaluate the development potential of an initial list of sites, with the goal of prioritizing three sites within each jurisdiction. The sites were identified as follows:

4. Initial discussions with planning staff (August 2020)
    - The model development team conducted Zoom calls with planners from Vinton, Rocky Mount, City of Roanoke, Roanoke County, and Franklin County.
    - Discussions centered on recent development trends and sites with potential for residential development, based on local knowledge and interest from developers. Initial locations were marked on a custom Google Map and saved to a GIS file.
    - Planners were also asked to provide a preliminary distribution of importance to each category of suitability criteria.

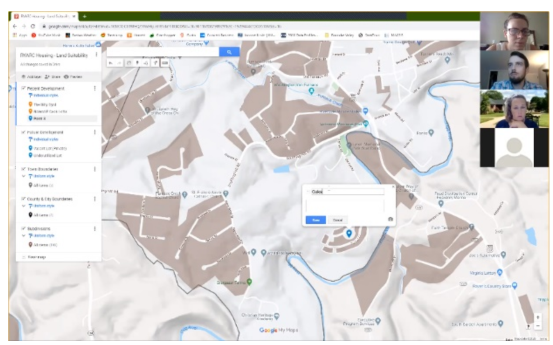


Figure 4 Mapping potential development areas

5. Site delineation and validation (September 2020)
    - Based on the locations identified with planners, parcels and larger areas were identified and assigned an ID. Associated parcel numbers and addresses were tabulated for each site.

- Information on the preliminary sites was sent back to planning staff for validation
- Another discussion with senior planning staff in Roanoke County led to the identification of additional potential development areas.
- Initial sites were identified for the City of Salem, using future land use data, aerial imagery, and other reference datasets. A meeting with their planning staff could not be coordinated until November 2020, at which point the initial sites were modified.

ID	Parcel ID	Address	Area (acres)	Type	Notes	Photo
1	2240103	0 Rockland Ave NW	5.278	Mixed-use development	big box, apartment complex, likely a PUD Note: original point was placed closer to bridge and highway ramps, but no parcel exists in this area	
2	2350105	0 Andrews Rd NW	15.484	Future Development	Proposed single-family	
3	4013101 through 4013111	0 Jamison Av SW	1.18	Potential affordable housing	Owned by Rescue Mission, possible Habitat for Humanity development Zoning: RM-2, located in Neighborhood Design overlay and Belmont Historic District	

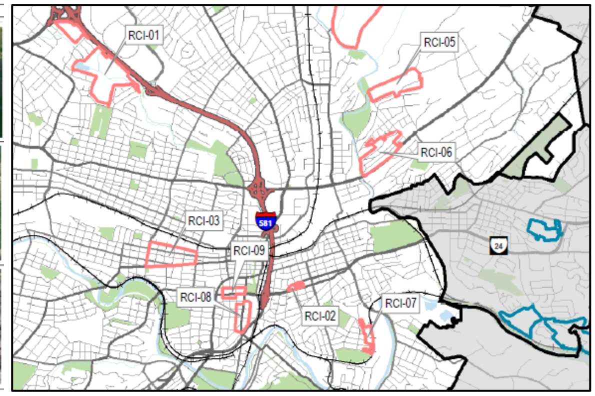


Figure 5 Development site validation and delineation

6. Development site refinement and consolidation (October-November 2020)
   - After reviewing the additional feedback, potential development area boundaries were adjusted, and ID numbers were updated to reflect the final selected sites.
   - The largest site, FCO-12 (Penn Hall Road), was reduced from over 1,000 acres to just over 700 acres, focusing on parcels directly adjacent to Smith Mountain Lake.
   - Separate sites located in the West End area of the City of Roanoke were consolidated into a single larger area (RCI-03).
   - In the City of Roanoke, the Countryside site (RCI-11) was added, and the Jefferson Street site (RCI-08) was removed – it is slated to be part of a special corridor
   - In the City of Salem, five sites were removed (SCI-01, SCI-03, SCI-05, SCI-09, and SCI-10), the SCI-08 site was redefined to eliminate an area with steep slopes, and the "Radio Station" site was added (SCI-07).

Site Evaluation

The final sites identified for each jurisdiction were incorporated into their respective suitability and constraint models to calculate the scores and compare the development potential within each site boundary. Because the model employed a grid-based approach, the suitability and constraints scores vary across each site. To account for the range of scores, the average suitability and constraint scores were tabulated. Based on feedback from the project steering committee, there was interest in reviewing the suitability of each site without considering current zoning, which would lower the score in areas where limited housing types are permitted by right.

The following section presents a summary of the scores for each version of the model, organized by jurisdiction. Final selection of potential housing development sites also considered the area and configuration of the parcels within each site, as well as local housing market conditions and the type of housing each site would be likely to support. At the end of each section, a summary of the top three sites is presented, including a close-up view of the site, a map of key constraints, and other important details, including: site area, zoning, and location relative to UDAs, zoning overlays, and historic districts.