Citywide Housing Study

City of Roanoke, Virginia

This study provides demographic, economic, household, and housing analyses outlining the shifting market dynamics across the City.

ROANOKE

Roanoke Valley-Alleghany REGIONAL commission

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

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CITY OF ROANOKE HOUSING STUDY

EXECUTIVE SUMMARY

RKG undertook an analysis of the City of Roanoke's housing market and compared key metrics to the Roanoke Valley-Alleghany Region (the Region) which is made up of the following localities: the Counties of Alleghany, Botetourt, Craig, Franklin, and Roanoke, 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 the City of Roanoke. This study points to several challenges the city is facing as it works to address housing needs which include:

- The city's population has been slowly, but consistently, growing over the last 50 years, with the percentage of elderly population increasing.
- Households composed of one- and two-persons comprise the largest share of households in the city, but over the last five years more growth has occurred in larger households of four or more people.
- The number of vacant units has been declining in Roanoke. Owner-occupied vacancy is quite low at 2%, while rental vacancy is a bit higher at 5%. Both vacancy rates are within the range of a healthy market with turnover. Rental vacancy has slowly been increasing since 2012 which could be the result of new product coming on the market.
- The City of Roanoke's industry sectors are varied, particularly those that are poised to grow over the next five years. The mix of higher paying jobs in sectors like Healthcare and Finance and Insurance are increasing purchasing power in the city and region, yet at the same time there is continued growth in lower paying hourly wage jobs in Accommodations, Retail, and Food Services. Lower wage hourly positions can make affording housing in the city more challenging thus exacerbating the need for affordable housing to those earning at or below 50% of the area median income (AMI).
- The percentage of housing units constructed before 1980 is 82 in Roanoke, leaving the city with a much older housing stock than what is found in many other parts of the region. This has led to much lower owner-occupied home values and sales prices. Although the median sales price of a home in the city has increased 7% since 2010, sales prices are still low compared to other parts of the region.
- Median rents in the city are increasing. In 2018, the median gross rent increased 15% since 2013. The average rent for a single family home is around $900 per month, while rents in multifamily buildings averaged $1,300 per month.
- In the city, there is a significant difference in cost burdened households when comparing owners and renters. Approximately 26% of owner households are experiencing some level of cost burden compared to 47% of renters. It is typical in many cities to see a broad

difference between these two groups, but also speaks to the need for affordably priced housing for renter households.

- The number of renter households that qualify for affordable rental housing at the 30% of AMI level outstrips the number of units available at that price point. There is a projected deficit of 3,570 units, which means many extremely low-income households are having to spend more than is recommended on housing further exacerbating the housing affordability and cost burden challenges.
- A key constraint is the shrinking financial resources available to local governments to address housing and housing affordability issues. Housing programs are limited, forcing all levels of government to make decisions for how to prioritize limiting (and in some cases shrinking) funding sources.

To address some of these issues, RKG compiled a set of strategies each informed by a city-wide analysis, interviews and focus groups, and an assessment of existing housing resources and programs. Priority strategies the city should consider to address housing issues and opportunities include:

- 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 city.
- 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.
- 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.

CITY OF ROANOKE 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 the City of Roanoke and the Region.

Introduction

Across the City of Roanoke, and nationally, home prices have risen 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 a difficult time 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 including industry composition and wages can help policymakers identify needs and direct the requisite resources towards priority areas. Across the City of Roanoke, economic opportunity varies as do incomes, but a central commonality is that housing is a fundamental need which also defines a community – a collection of households living area. Ensuring that housing is available and affordable to all income levels is critical for growing and sustaining communities.

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

Project Purpose

The goal of the City of Roanoke's 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 picture of the housing landscape for both the city and the region through rigorous quantitative and qualitative data analysis and synthesis. The results will help decision makers adjust, add, or reconfigure existing programs and strategies to match the needs of current and prospective residents.

Role of Study

The City of Roanoke's Housing Study is a compilation of city 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 the City of Roanoke. The quantification of issues, especially those related to housing supply and demand, are important for imparting regional change. Please note that the terms "affordable", "attainable", and "workforce" housing are used interchangeably throughout the document to generally describe housing that is priced to households with 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 housing strategy section that groups strategies by topic which could be used to address identified issues in the housing market.

CITY OF ROANOKE 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.

CITY OF ROANOKE HOUSING STUDY

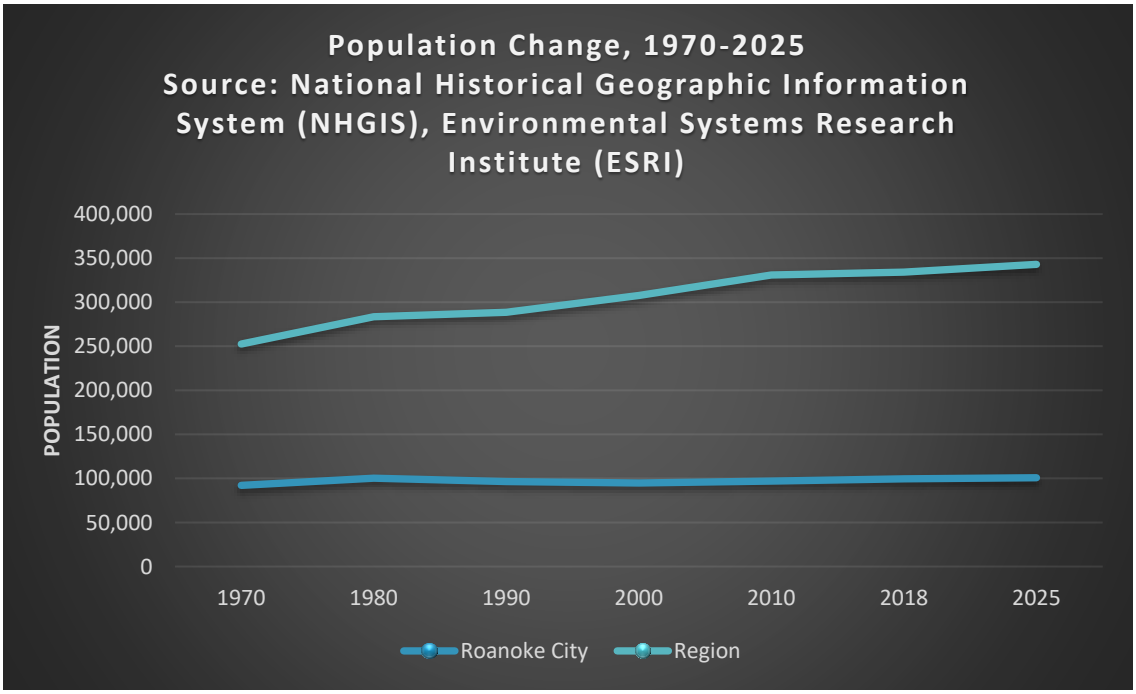
DEMOGRAPHIC ASSESSMENT

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

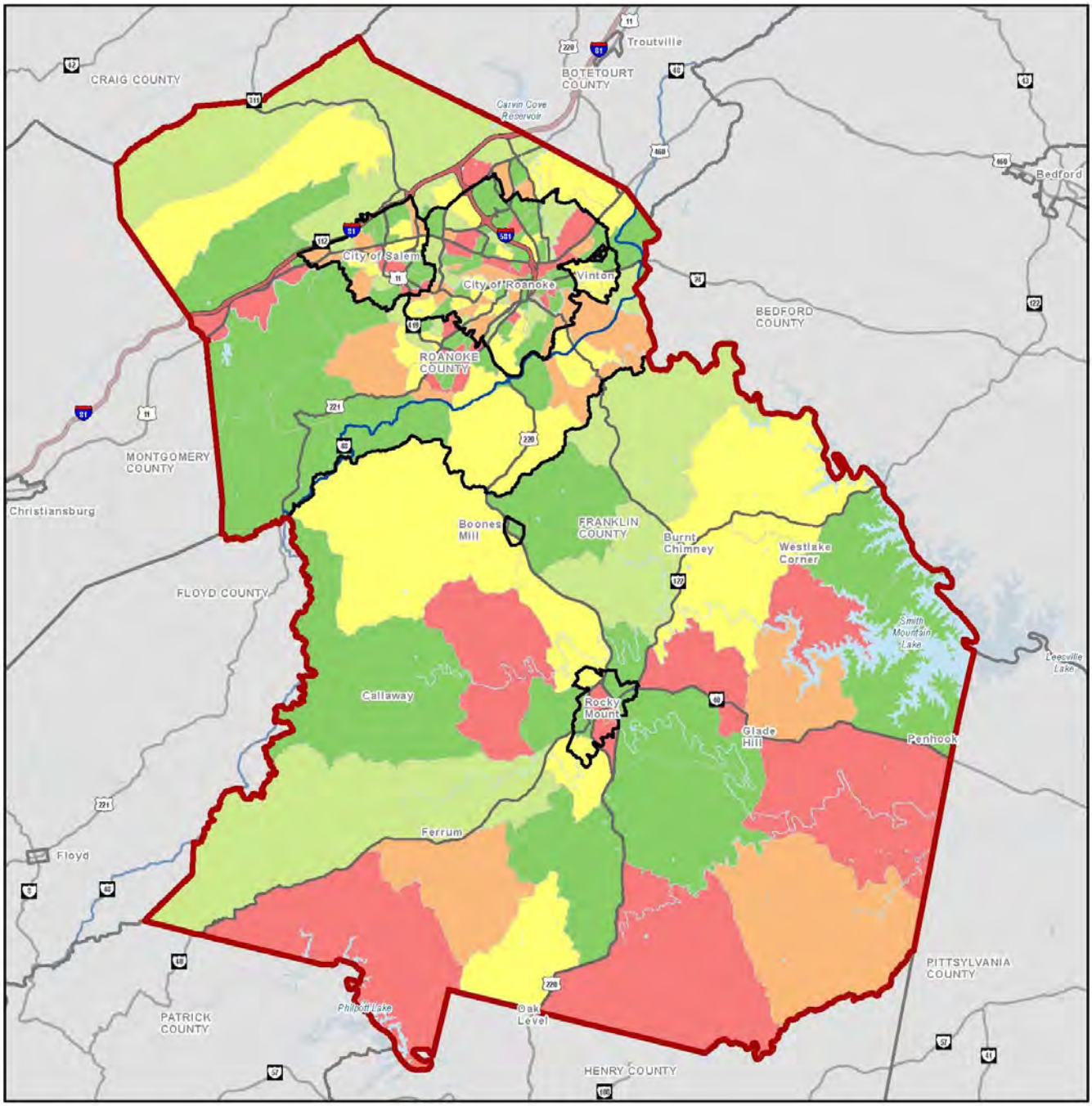
Between 1970 and 2010, the population of Roanoke grew by 8%, rising from around 92,000 to about 99,600. Over the same period, the Region grew by 31%. Roanoke, as the primary population center in the region, saw most of its growth occur in prior decades and has been growing more slowly than the region or even the counties in the region. The slower growth rate is likely attributable to a lack of available development ready sites compared to what was and is available outside the City's boundary. The faster population growth seen in the region has coincided with national trends like suburbanization, while also being influenced by new economic opportunities in areas such as the Manufacturing, Healthcare, and Education sectors. To accommodate this growth in population, new housing units were created across the region mostly in the form of single family housing.

Figure 1: Population Change



Over the last decade (2010-2018), the City of Roanoke's population increased by over 2,600 residents which was the highest number of new residents since the period between 1970 and 1980 when the city grew its population by 8,000. Looking forward, the population of Roanoke is projected to increase by 1.2% between 2018 and 2025, or about 1,100 residents. Compared to the regional projected growth of 3%, the City is projected to continue to grow slower than the region but is still projected to increase its population regardless.

POPULATION CHANGE MAP



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

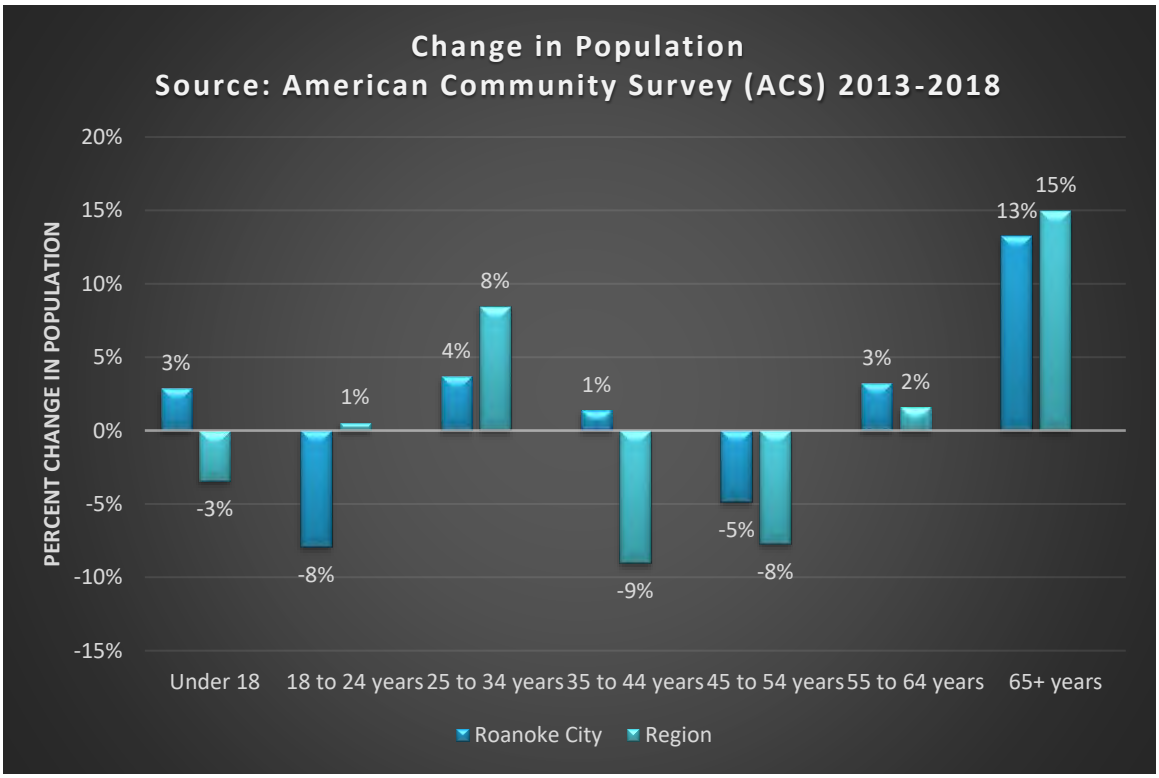
Sources: Roanoke Valley-Alleghany Regional Commission, City of Roanoke, City of Salem, Roanoke County, Franklin County, Virginia Geographic Information Network, Dept. of Conservation and Recreation, Virginia Economic Development Partnership, US Census American Community Survey 5-year estimates

Population by Age

Population by age is one way to look at the demographic makeup of a community through the balance and growth of different age cohorts and life cycles. Similar to the region, the City of Roanoke is experiencing an aging of its population with an increase of 13% of residents over the age of 65 in the last five years. The city has also seen growth in residents ages 25 to 34, a group that is part of the early stage workforce, which may be renting and looking to purchase a home and may be in the early stages of family formation. Interestingly, Roanoke's growth in this age cohort does lag the region.

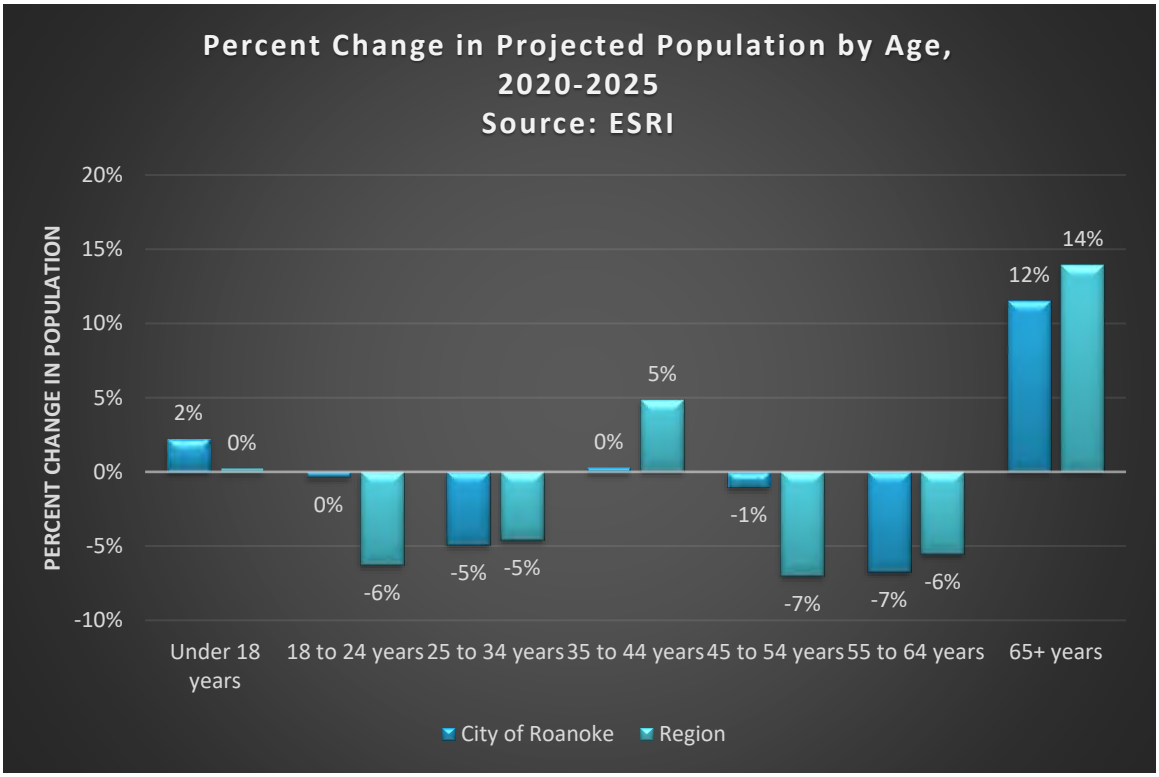
Unlike the region, the City saw growth in residents ages 35 to 44 and residents under the age of 18. These two age cohorts are often linked as householders ages 35 to 44 are more likely to have children and growth in this category may signal demand for family-sized housing units. Over the last five years the data shows those residents 18 or older are leaving the city resulting in the 8% decrease compared to a 1% increase in the region.

Figure 2: Change in Population



Population projections indicate seniors (65 years and older) are expected to continue to lead population growth by age cohort through 2025. The growth in the senior population will have an impact on the housing supply as many seniors may like to age in place so long as adequate housing supply is available which meets their needs. If not, it could result in a lack of housing turnover and tighten the available for-sale and rental supply. Additionally, the under 18 age group is expected to grow by 2%, again matching a very small growth projection in the 35 to 44 year age group. This has the potential to increase demand for ownership units, as this group tends to be more established in the housing market, have higher earnings than cohorts before them, and are more likely to be part of a larger household.

Figure 3: Projected Change in Population

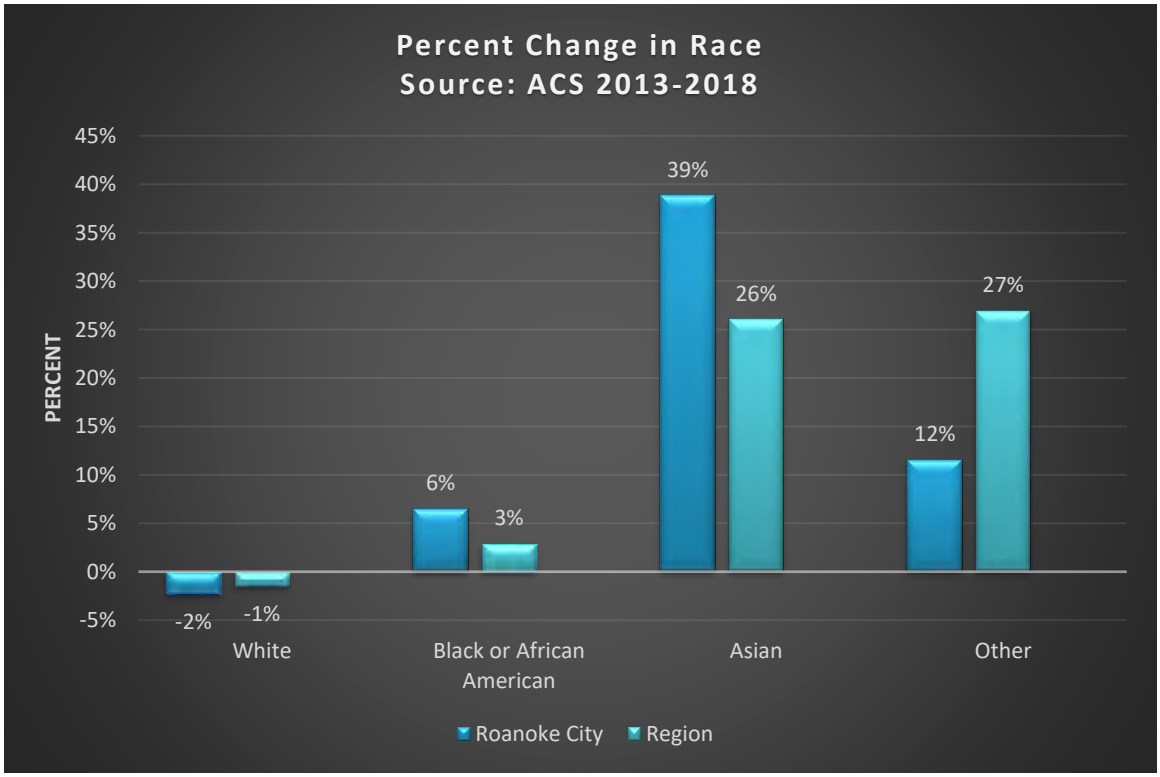


Race and Ethnicity

The City of Roanoke's resident population has a more diverse racial and ethnic composition than most other places in the Roanoke Valley-Alleghany Region. As of 2018, 63% of Roanoke residents identified as White while 29% identified as Black or African American. The Black population in Roanoke accounts for 67% of all Black residents in the region. While Asian residents only comprise 3% of the city's population, they account for 45% of Asian residents in the region.

Between 2013 and 2018, Roanoke's population continued to expand its diversity with White residents decreasing 2% and nearly all other races increasing between 6 and 39%. The increase in the Asian population was particularly high, growing by 39% or 1,200 residents.

Figure 4: Change in Race

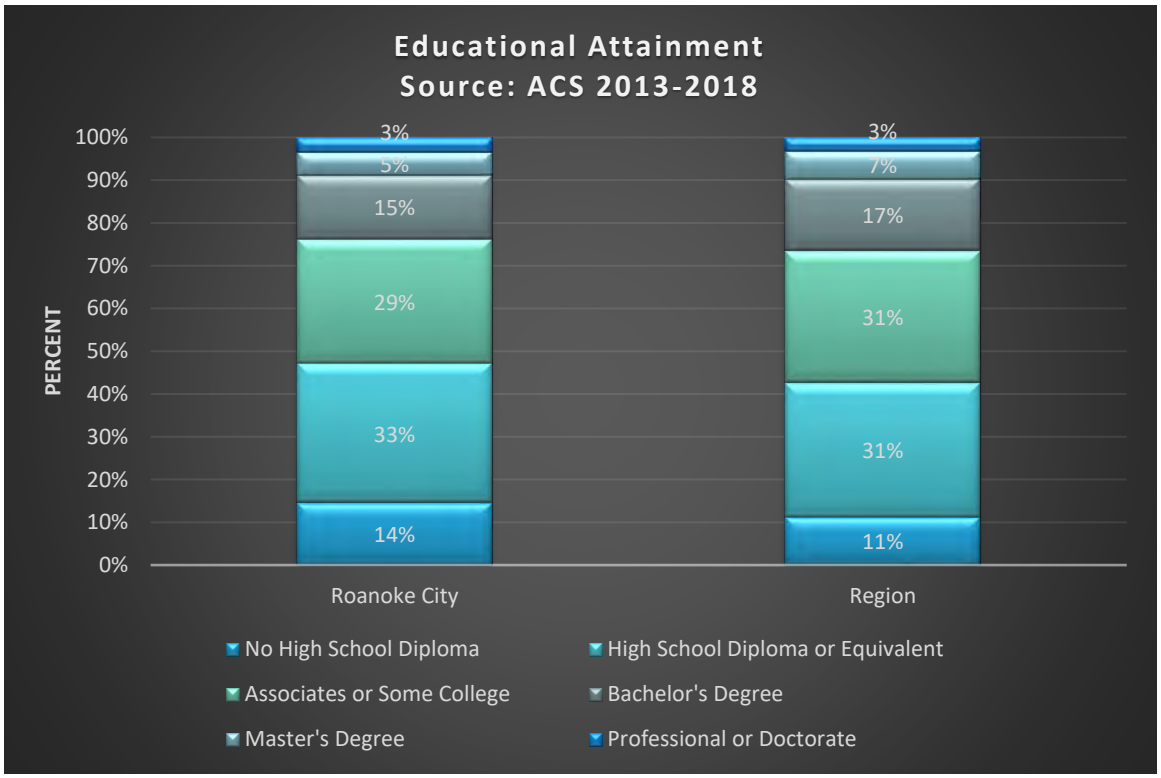


The city's Hispanic/Latino population rose by 13%, from 5,406 residents in 2013 to 6,104 in 2018. This change was slower than the Region, which saw an increase of 16% over the same period but city growth comprised 41% of the regional growth.

Education

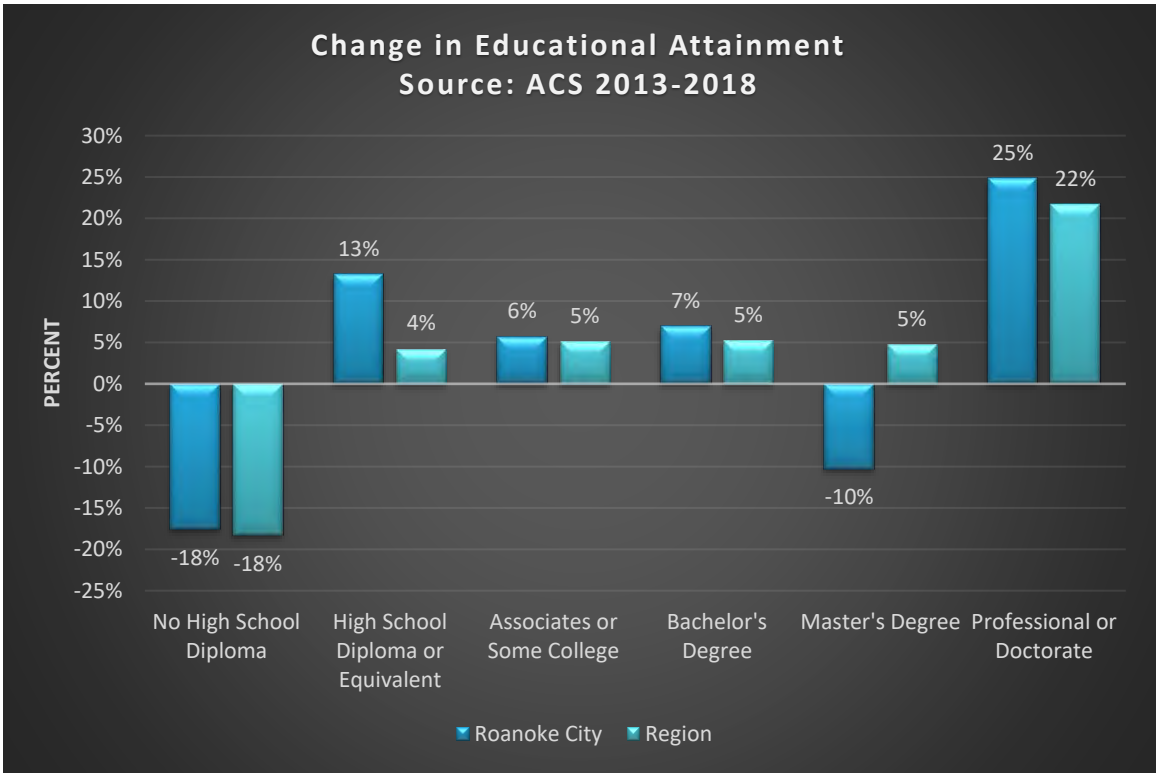
The City of Roanoke, in comparison to the Region, has a larger portion of its population (47%) with a high school diploma or less, whereas the Region's population is only 42%. Additionally, the city lags the Region in the percentage of individuals who have completed bachelor's degrees or higher (15% to 17%, respectively). 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 the employment market changes over time, the skill sets needed for new employment opportunities require higher levels of education. Looking at changes in educational attainment over time shows Roanoke's population with professional and doctoral degrees jumping 25%. At the same time there has been an increase in the number of residents who have obtained a high school diploma and a decrease in residents without a diploma.

Figure 6: Change in Educational Attainment

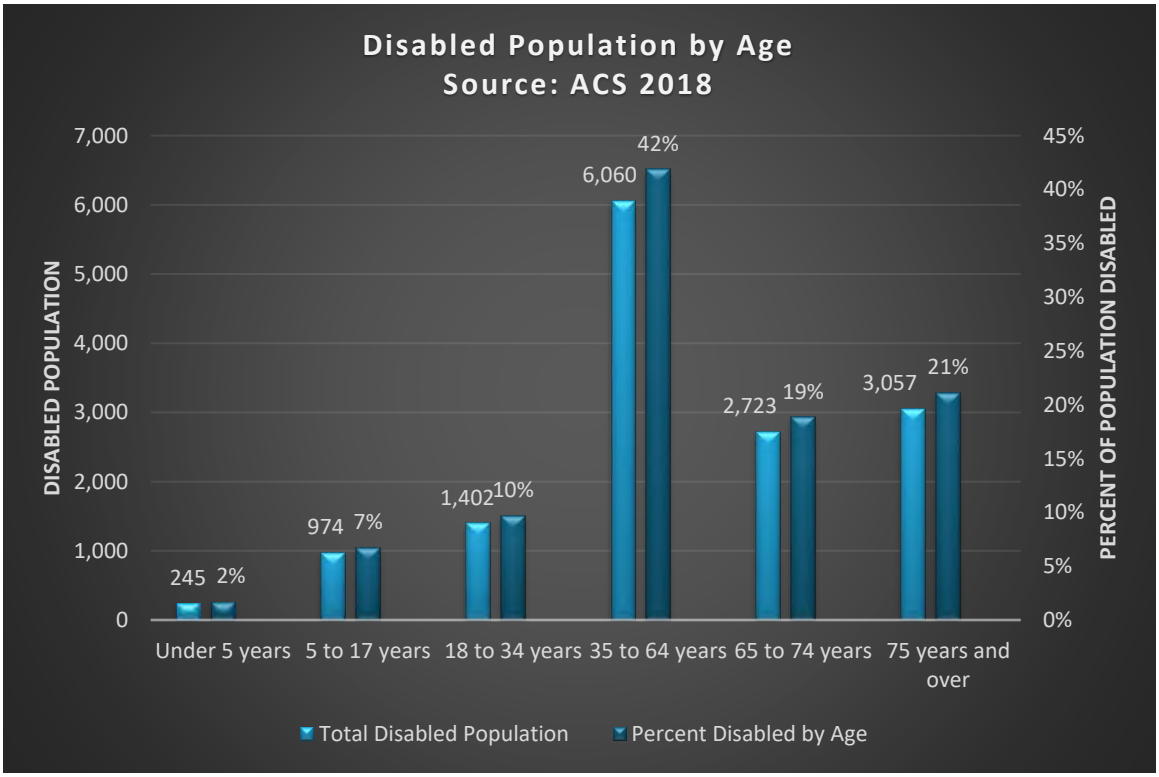


Disabled Population

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 the City of Roanoke, 15% of the population has one or more of the Census defined disabilities, translating into 14,461 individuals. The largest concentration of disabled individuals can be found in the 35 to 64 age group which has 6,060 disabled individuals and accounts for 42% of all disabled individuals in the city. Figure 7 presents data on the disabled population by age.

Figure 7: Disabled Population by Age



Not surprisingly, the senior population in the City shows many disabled individuals, with 5,780 residents having at least one disability. Of the senior population, 21% of individuals 75 years or older have a disability. 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 the disabled from experiencing housing instability.

The need for home accessibility and other services for people with disabilities in Roanoke is critical given the large population. 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 for services provided by local organizations and the government. Recognizing the housing and service needs these populations require is critically important. Disabled residents may also rely on long-term care and wrap-around services such as counseling, case management, education services, and self-help groups. There may also be an unmet need for long-term housing facilities to assist residents with disabilities.

Homeless Population

To understand the existing homeless population in the City of Roanoke, 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 the City of Roanoke.

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 CoC's operating in the Salem 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 Valley-Alleghany Region has been effective in preventing a rise in the number of unsheltered homeless. Data from the CoC showed a very low incident of unsheltered homeless with about 6% of the recorded homeless population going unsheltered, and of those unsheltered homeless, most refuse to engage in accessing resources. In many cases, multiple mental health barriers prevent individuals from obtaining and maintaining housing. Across the region there are non-profits targeting their resources to help alleviate the plight of the homeless population. Services are available which help transition the homeless population towards long-term stability.

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.				

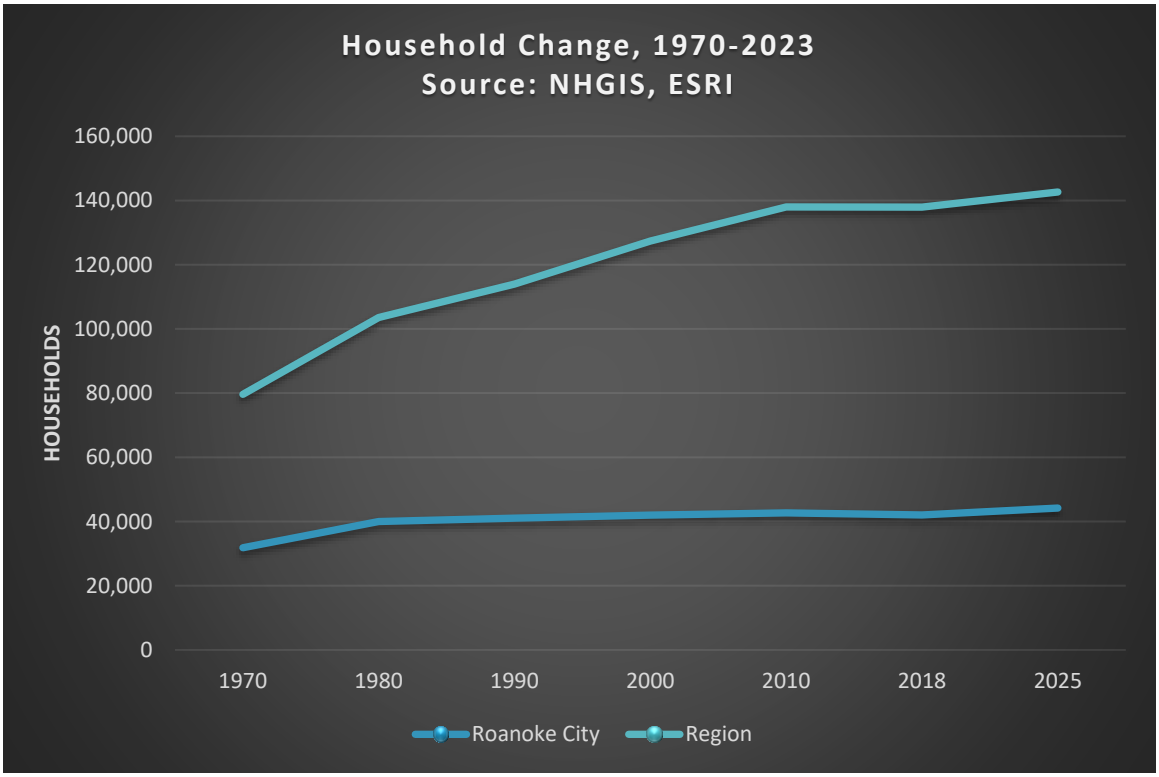
The PIT data from the City of Roanoke Roanoke County, and City of Salem CoC showed that 34 percent (93 individuals) of all sheltered and unsheltered homeless individuals were Black/African American, while 57 percent (157 individuals) of the homeless population were White. The Region has a relatively 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, the City of Roanoke experienced steady, continued household growth between 1970 and 2010 which closely tracks with population growth over that same period. Between 1970 and 2010, the number of households in the city increased by 34%, with the biggest increase (8,200) between 1970 and 1980. This decade of growth was the largest for the region as well.

Interestingly, between 2010 and 2018 the population of Roanoke grew by about 2,600 residents yet the number of total households decreased by 675, or 2%. Typically, when population grows, there is a commensurate growth in households particularly with the national trends of smaller household sizes driven by the growth in younger and older householders. In the City of Roanoke though, these two measures are heading in opposite directions driven by growth in larger households (4+ persons) and a shrinking of one- and two-person households.

Figure 8: Household Change



In 2018, the city had 42,037 households. Future projections show the city could add an additional 2,162 households (5%) by 2025.[1] These same projections show households region-wide also increasing by 3% over the next five years.

Table 4: Projected Total Households

Community	2018 Estimates	2025 Projections	Change	Percent Change
Roanoke City	42,037	44,119	2,162	5%
Region	137,942	142,643	4,701	3%
Source: ESRI, 2020				

HOUSEHOLD SIZE

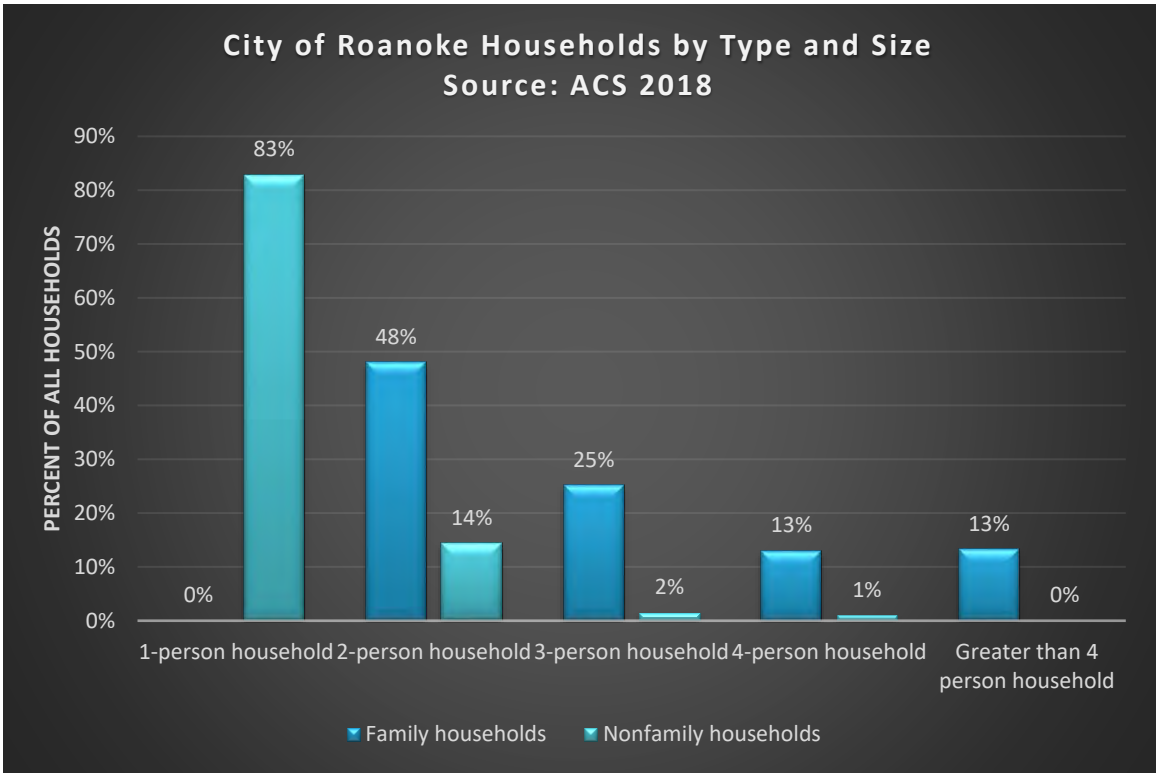
Household size is an important consideration as it provides insight and an understanding of what types of housing units are needed to accommodate today's residents and those who may choose to locate here in the future. An example of this is a larger five-person household would require more bedrooms than a two-person household. Traditionally in the city, owner-occupied single family homes offer larger living spaces with more bedrooms and bathrooms, enough to accommodate the larger households with four or more members. Structures with 10 or more units,

[1] ESRI, 2020

which account for about 20% of all housing units in the city, 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 the City of Roanoke, most family households (73%) are comprised of two or three members. Most non-family households are single individuals which account for nearly 83% of non-family households.

Figure 9: Households by Type and Size



While over 70% of all households in the city are one- and two-person households, some unique changes in household size have occurred over the past five years. Between 2013 and 2018, family households with five or more persons increased by 33% while single-person households decreased by 5%. While single- and two-person households still comprise the highest number and share of households in the city, there may also be a need for slightly larger family-sized units going forward. The growth trends in the older demographics may also point to a continued need for smaller units with universal design components in a managed property or as part of a Homeowners Association.

Among family households with children under the age of 18, 50% of these households are headed by a single parent of which 75% of households are headed by a female. This equates to 9,260 single parent households with children, and 6,888 headed by a female. The median household income for a female headed household with children is $25,272 which is nearly $18,000 less than the

median household income for the city. The median income for female single parent households is just above the federal poverty line for a household of three and would equate to an affordable monthly rent of $632. This is $160 below the City's 2018 median gross rent of $799 per month.

CITY OF ROANOKE HOUSING STUDY

ECONOMIC ASSESSMENT

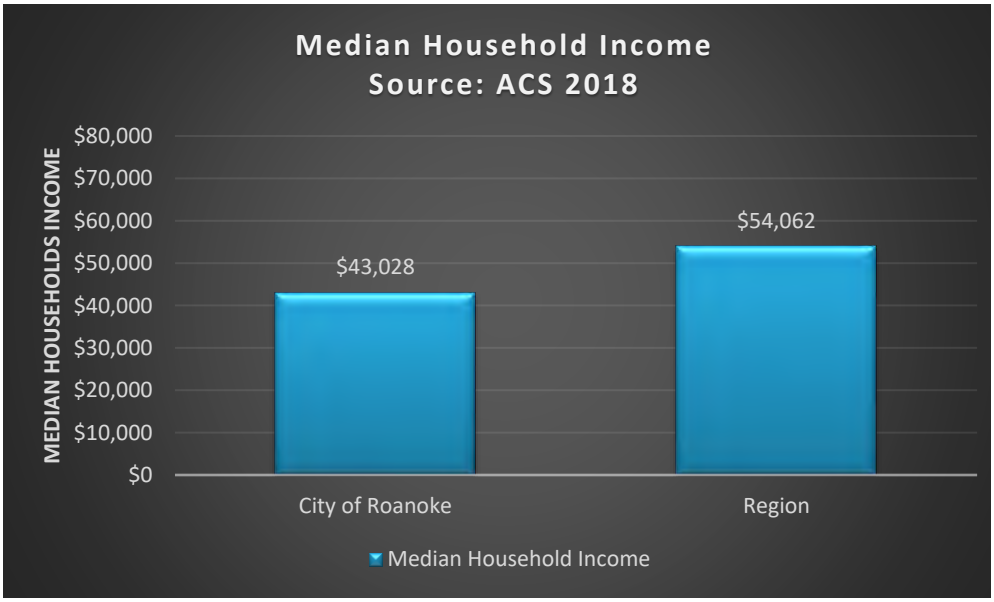
Economic issues such as changes in income, employment, commuting patterns, and the overall economy are explored in this section of the study. Much of the analysis is grounded in data which is supplemented by knowledge gained from interviews with stakeholders described in more detail throughout this section of the study. The economic baseline analysis provides the context and history of the City of Roanoke 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 City of Roanoke was $43,028, which was about $11,000 less than the region's median income of $54,062. This income differential is significant from a housing affordability perspective, as the region's median income would add about $275 per month in purchasing power for a renter household. 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

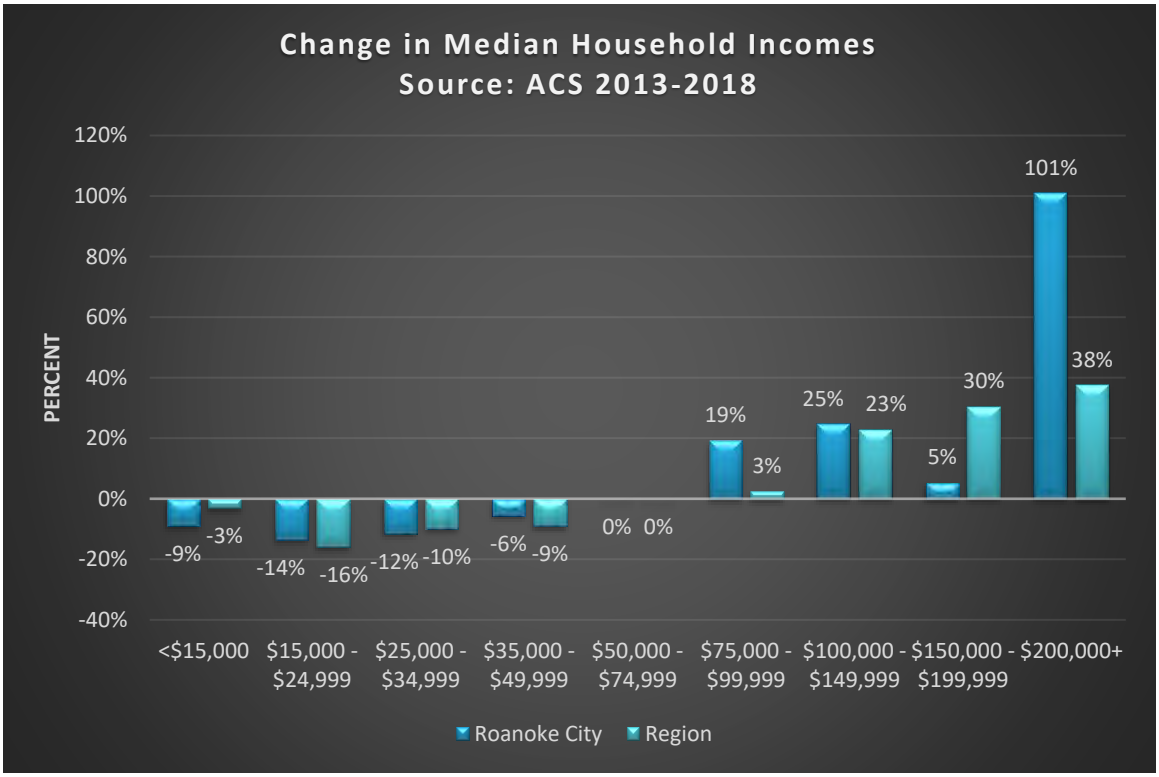


Cost burdening, which is circumstance where a household pays 30% or more of their income toward housing costs is a reality for lower-income households across the city. Higher housing costs crowd out disposable income for other necessities such as food, healthcare, and transportation. About 42% of city households earn less than $35,000 a year, compared to 26% of

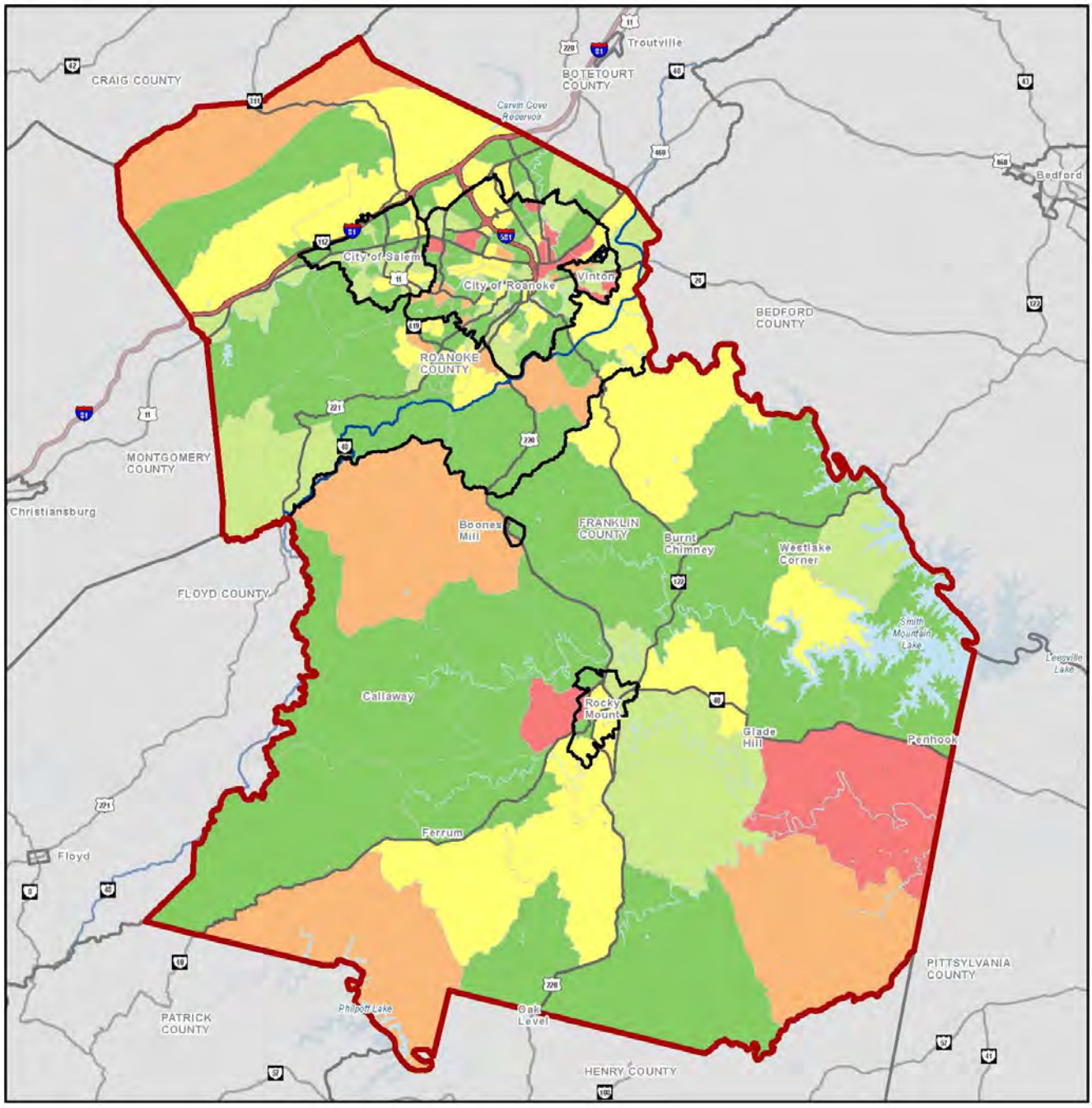
households in the Region. The higher percentage of lower-income households requires proactive measures to ensure safe and affordable housing for households at all income levels.

Looking at the distribution of households by income cohort over the last five years shows the city experiencing a loss of households with incomes below $50,000. Of households making less than $50,000, there was a 11% decrease within the cohort earning between $15,000 and $25,000 per year. While the city is losing households at the lower end of the income spectrum, it is gaining households earning more than $75,000 per year. The increase of higher income households can be explained in part by growth in higher paying industry sectors such as Manufacturing, Healthcare, and Finance and Insurance. Employees in these sectors typically have higher levels of education and specific skills tied to the industry sector resulting in higher wages. As manufacturing processes shift from legacy to advanced, the sector requires employees with advanced degrees in engineering, management, and logistics to keep up with advances in manufacturing processes.

Figure 11: Change in Median Household Incomes



HOUSEHOLD INCOME CHANGE MAP



Modest growth of real incomes is a challenge both in Roanoke and across the United States as a whole. The city saw median household incomes grow by 13% between 2013 and 2018, during which the Region grew by 16%. While impressive, the growth in income is not outpacing the cost of housing. As housing costs continue to rise, incomes must as well, or households will be forced to spend more on housing leaving less for other expenses.

Table 5: Growth in Median Household Income, 2008-2018	
Community	**Growth Rate**
Roanoke City	13%
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 the city are projected to grow. Between 2020 and 2025, the city's median household income is projected to grow by 4.4%, slightly less than the Region's growth rate of 5%. This future growth may be attributed to the investment employers are making locally in the City of Roanoke 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.

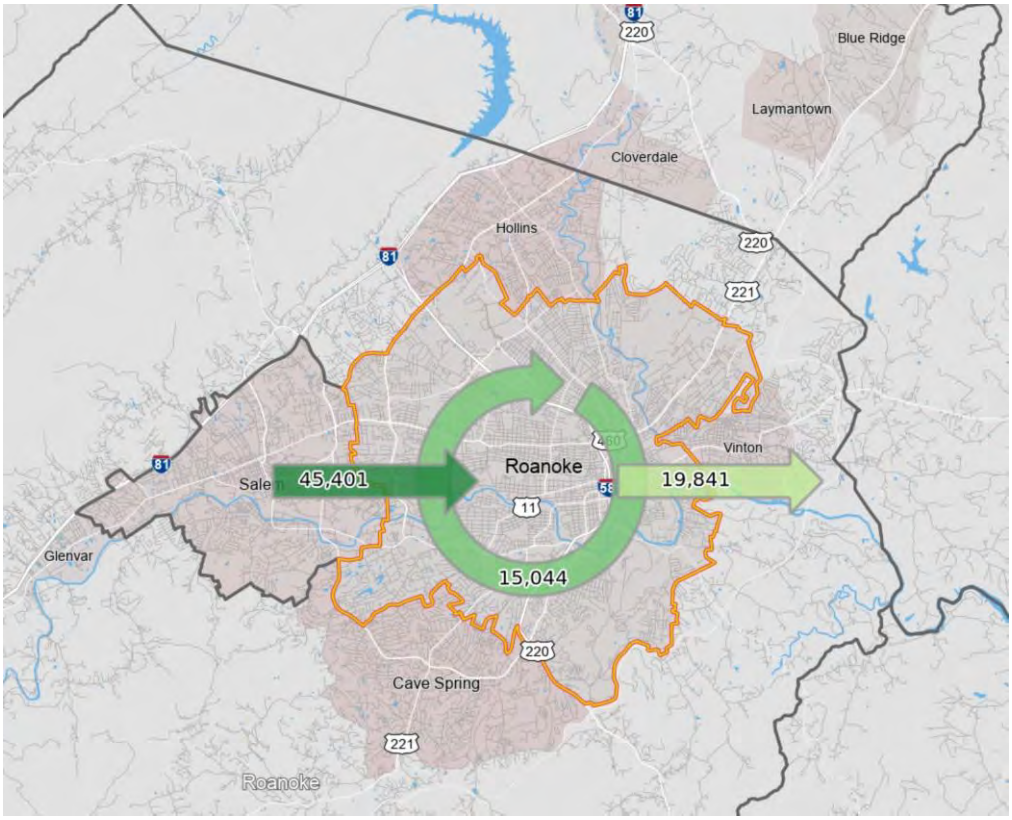
Table 6: Projected Median Household Incomes				
Community	**2020 Estimates**	**2025 Projections**	**Change**	**Percent Change**
Roanoke City	$40,593	$42,357	$1,764	4%
Region	$53,448	$56,124	$2,676	5%
Source: ESRI, 2020				

WORKERS

In the City of Roanoke, there are a total of 60,445 jobs which is inclusive of both private and government employment.[2] Of that total, 45,401 people come from outside the city to work, while 15,044 live and work within the city. Aside from those working within the city, approximately 19,841 residents travel outside for employment, making Roanoke a net importer of labor. The large number of people entering the city for employment is due to its function as the major employment hub in the region with many large employers importing workers from around the region.

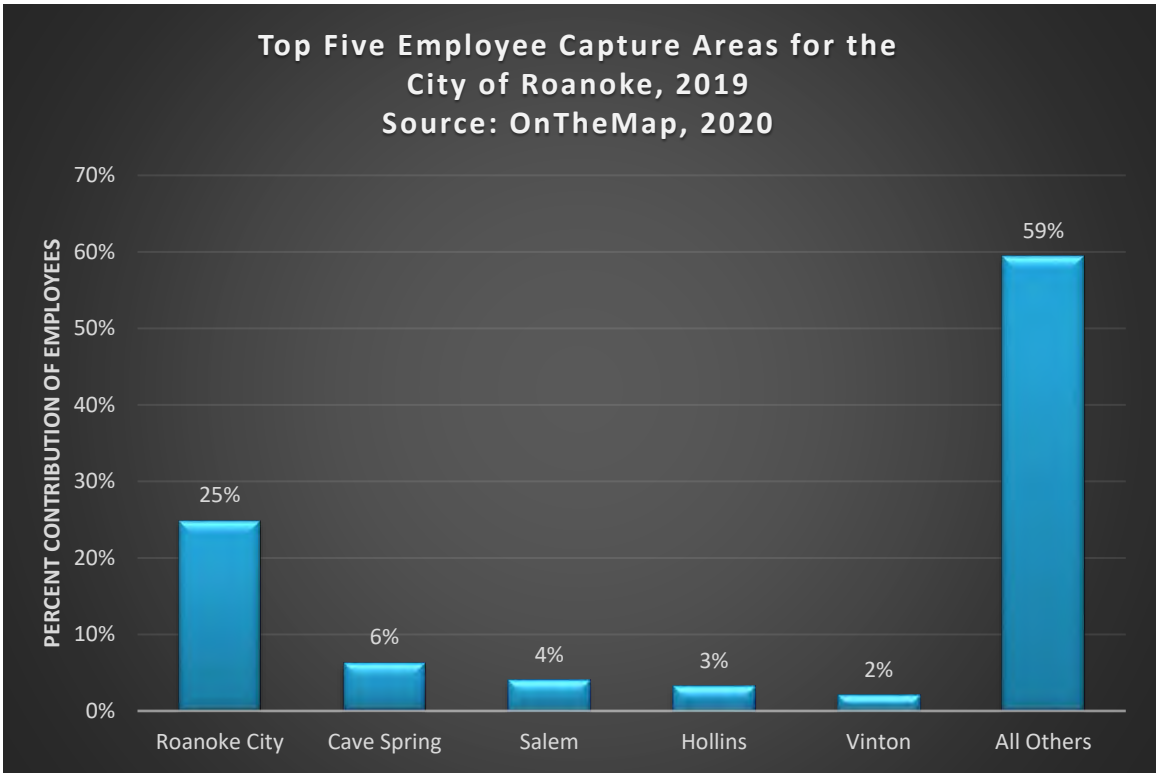
[2] OnTheMap, 2020

Figure 12: Worker Inflow and Outflow



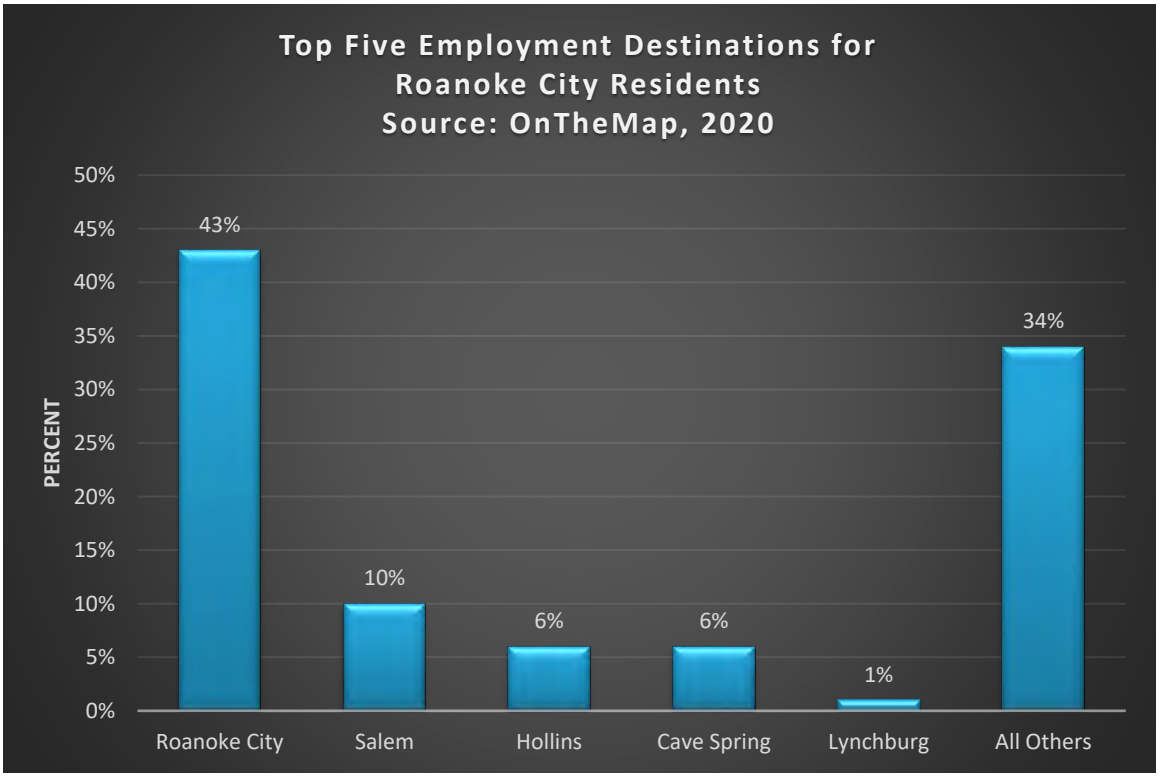
Understanding how many employees are in the city and what types of employment opportunities exist can help explain some of the activity within the housing market. One of the key linkages between employment and housing is how many individuals are employed in an area and from whence they commute. This is important because it reflects whether the city 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 city 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, 45,401 workers commute to the city from communities and counties outside the city with the highest percentages coming from places like Cave Spring, Salem, Hollins, and Vinton. Residents who both live and work in the city comprise 25% of the workforce, or 15,000 resident workers. Being the major employment center in the region, it is not surprising to see a higher percentage of residents who both live and work in the city.

Figure 14: Top Five Employment Destinations

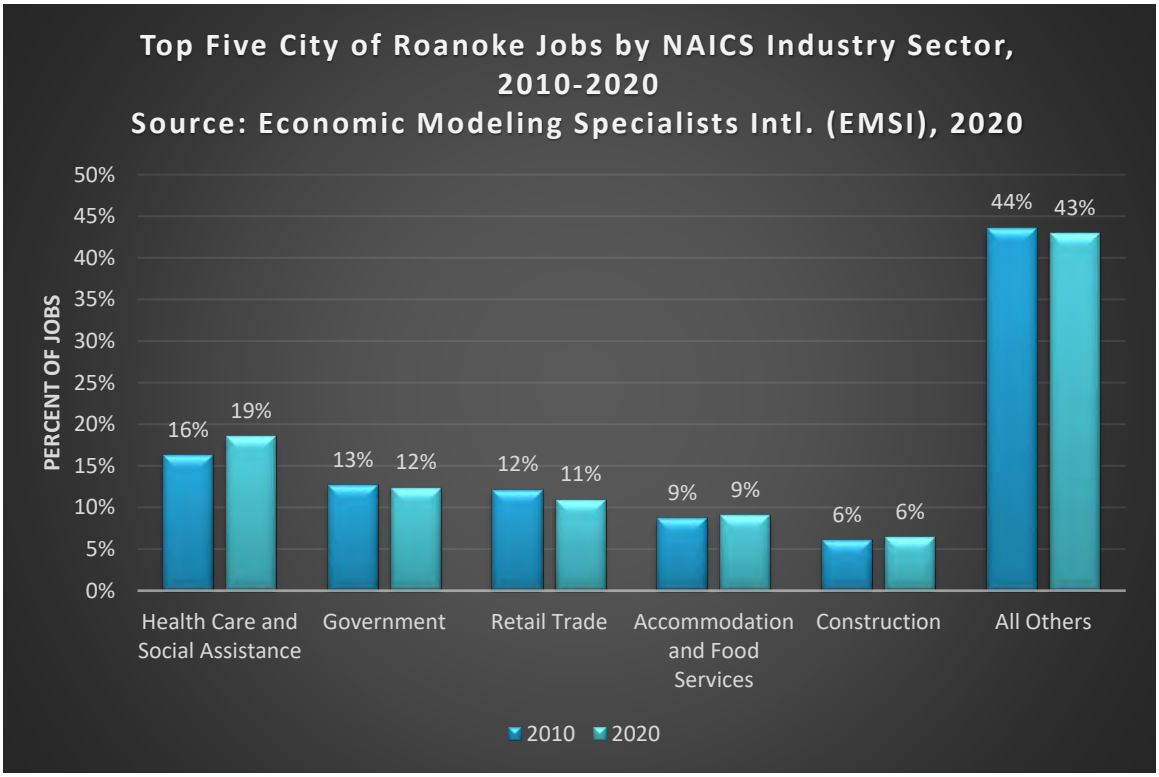


When looking at the top commuting destinations for city residents, about 43% of residents work in Roanoke which helps minimize commute distances and transportation costs. The second largest employment location for Roanoke residents is Salem, which the other major employment center in the region.

INDUSTRIES

In Roanoke, about half of all jobs are clustered in five industry sectors. Figure 15 presents the top five employment sectors across the city. As a percentage of total employment, Healthcare and Social Assistance is the largest industry sector with 19% 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 43% of the total employment in the city.

Figure 15: Top Five Jobs by NAICS Industry Sector



Most notable is the increase in Healthcare employment over the last 10 years. Healthcare jobs increased 3% over the last 10 years which correlates with national trends and the aging of the Baby Boomer generation. Hospitals, outpatient clinics, assisted living, in-home care have all been staffing up to care for our seniors. In the City of Roanoke, this is no different and is anticipated to continue as the population grows older. All other industry sectors generally remained same if not dropped by a percentage point corresponding with the slight increase in overall employment over the 10-year period from 69,940 in 2010 to 69,819 in 2020.

MAJOR EMPLOYERS

As indicated above, the city has a diversified employment base which helps bolster the economy and makes it an attractive place for new residents and employers alike. As the major employment center in the region, Roanoke has attracted large medical providers like Carilion Clinic that has several large facilities here including the Children's Hospital, the Community Hospital, and the Carilion Roanoke Memorial Hospital. Carilion also has several specialty and out-patient offices in Roanoke including oncology, pediatric services like cardiology and endocrinology, psychology, and rapid care facilities.

In addition to healthcare facilities, the city has also attracted professional offices and corporate headquarters for several large corporations including Allstate Insurance, Advance Auto, Kroger, and Wells Fargo Bank. These corporations employ thousands of workers who both live in the City

of Roanoke as well as those who commute in daily for employment. Below is a listing of some of the largest local private employers in the area:[3]

- Carilion Clinic – 10,000+ employees
- Kroger Mid-Atlantic Division Office – 1,000 to 2,999 employees
- Advance Auto Headquarters – 1,000 to 2,999 employees
- Allstate Corporate Headquarters – 500 - 999 employees

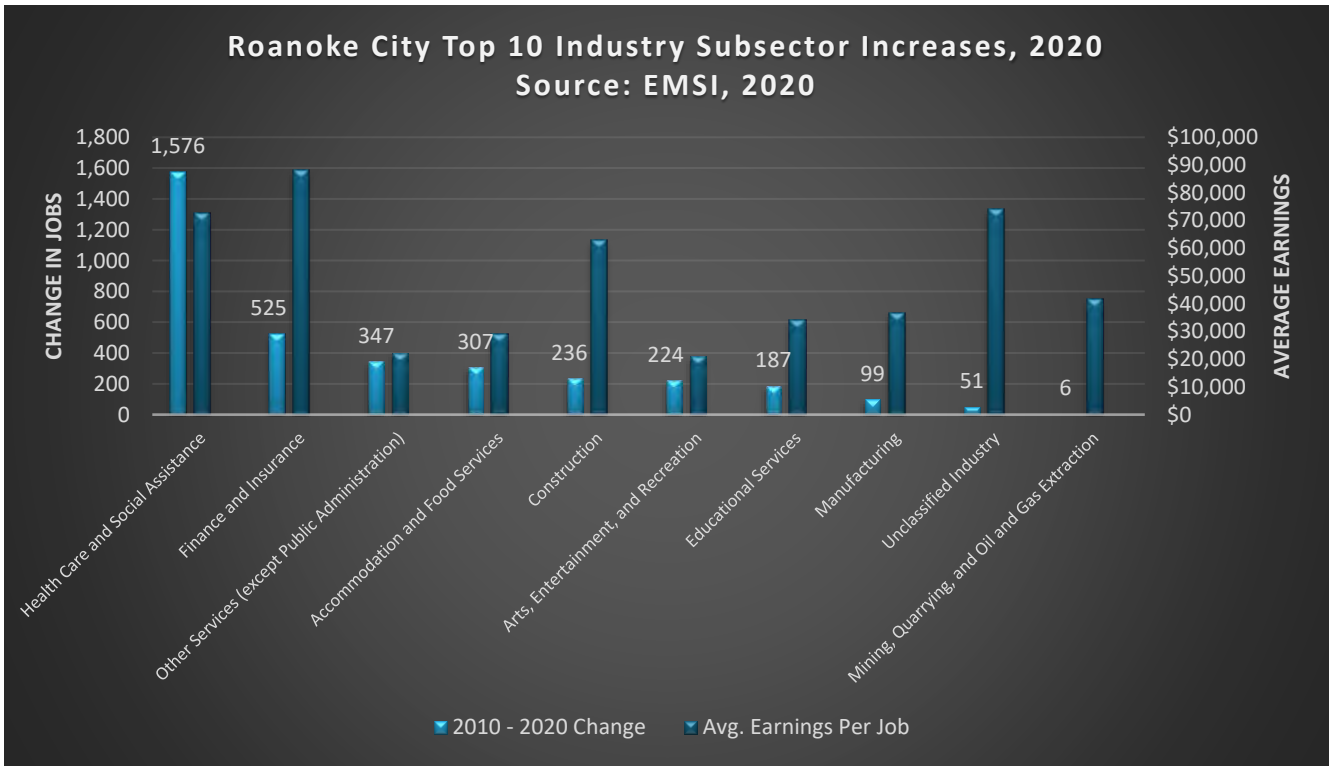
The housing market in the City is influenced by these large employers because they provide jobs and careers which enable households to gain economic stability generate disposable income. Once stability is attained, households can actively engage the housing market by being able to make purchase and rental decisions based on their needs and wants. 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. The underlying factor in being able to make such decisions is employment.

CHANGES IN INDUSTRY

Between 2010 and 2019, employment data for the City of Roanoke shows that the top 10 employment subsectors have added 206 jobs, with an average wage of $55,000. The sector which experienced the largest gain was Healthcare, adding 1,576 jobs over the ten year period with an average wage of $72,900. One interesting trend to watch in the city is the growth in high wage jobs and low wage jobs. Sectors like Healthcare, Finance and Insurance, and Manufacturing are all growing but have average wages between $73,000 and $88,200. At the same time, the city is experiencing growth in sectors like Accommodations and Food Services, Personal Services, and Arts and Entertainment. These sectors have average wages between $21,150 and $29,000, much lower than the previously described sectors which has direct correlation to what a person or family could afford for housing.

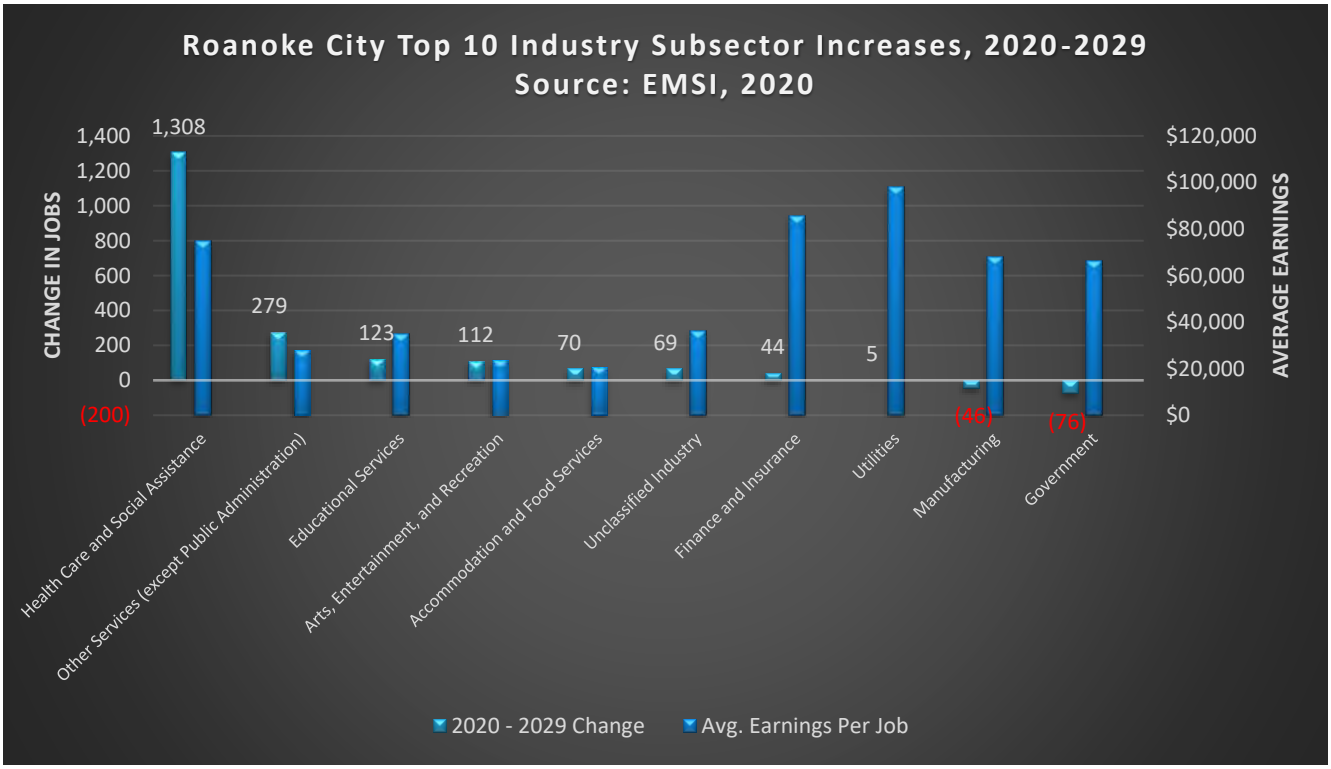
[3] https://www.bizroanoke.com/about-roanoke/major-employers/

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



Between 2020 and 2029 the City of Roanoke is projected to see employment growth in Healthcare and Social Assistance (1,308 jobs), Personal Services (279 jobs), Educational Services (123 jobs), Arts and Entertainment (112 jobs), and Accommodations and Food (70 jobs). Jobs in these industry sectors pay varying wages, some higher like in Healthcare and some lower like in Arts and Entertainment. Job losses are projected in sectors like Manufacturing and Government which tend to pay higher than average wages.

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



INDUSTRY WAGES AND HOUSING AFFORDABILITY

As indicated earlier, while Roanoke experienced low employment growth over the last decade and incomes in some industry sectors are not sufficient to rent or own housing without placing financial pressure on the household. Across the city, the median sales value of a home is around $147,000, while the median gross rent is about $799 per month. Based on these metrics, several of the top industries and growing industries do pay wages which could afford these housing prices. At the same time, there are several that do not and there are also jobs within top paying industry sectors which do not. For example, within the Healthcare industry physicians may earn over $200,000 but janitorial staff earning less than $30,000 a year.

Table 7 illustrates the affordable home price and affordable rent by industry sector based on the average earnings within each sector. It is important to note these represent average earnings and not the earnings across different occupations within industry sectors.

Table 7: Housing Affordability Based on Top 10 Industry Sectors, 2019				
Industry	Industry Jobs	Average Earnings	Affordable Home Price	Affordable Rent
Health Care and Social Assistance	12,992	$72,853	$268,949	$1,821
Government	8,647	$68,237	$251,908	$1,706
Retail Trade	7,636	$33,689	$124,369	$842
Accommodation and Food Services	6,319	$21,154	$78,093	$529
Construction	4,485	$62,851	$232,025	$1,571
Transportation and Warehousing	4,222	$56,664	$209,185	$1,417
Other Services (except Public Administration)	3,933	$28,968	$106,940	$724
Manufacturing	3,898	$74,083	$273,490	$1,852
Finance and Insurance	3,221	$88,231	$325,719	$2,206
Administrative and Support Services	2,941	$43,552	$160,779	$1,089

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

CITY OF ROANOKE HOUSING STUDY

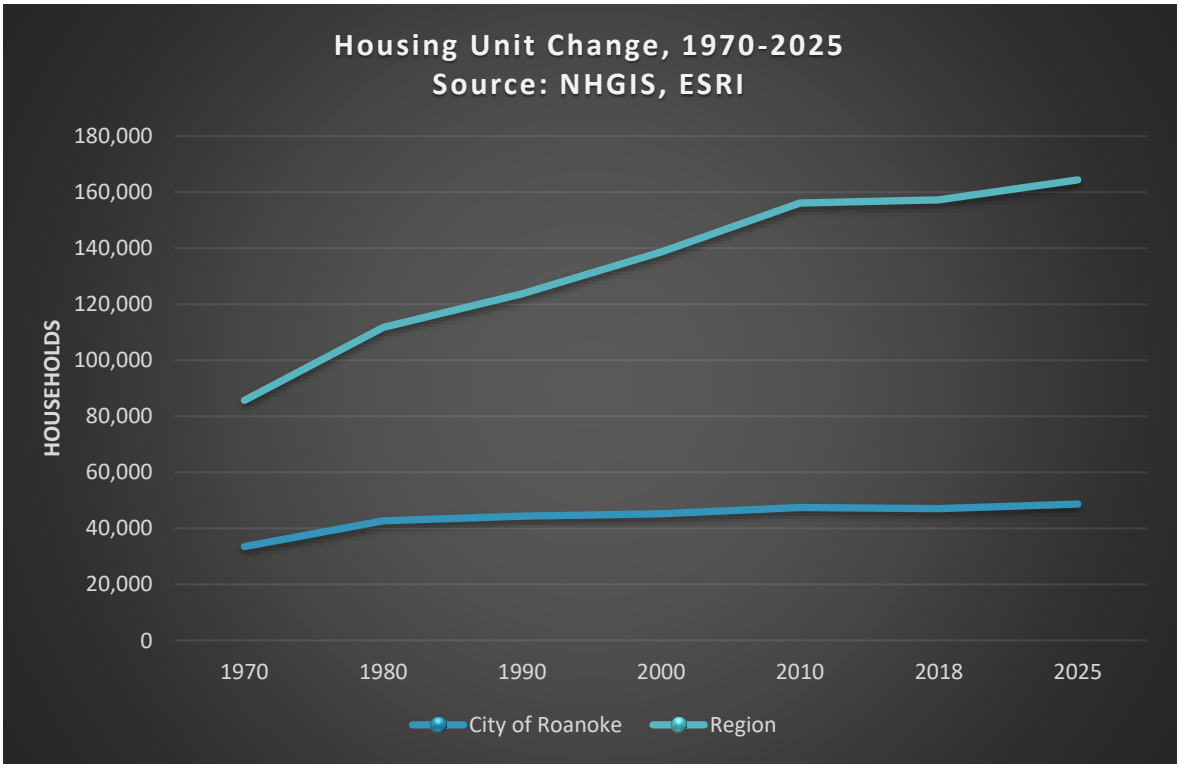
HOUSING MARKET ANALYSIS

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

City-Wide Housing Market

The City of Roanoke has 47,056 housing units of which 42,037 (89%) are occupied and 5,019 (11%) are vacant. Of the occupied housing units, 52% are owner-occupied, and 48% are renter-occupied. Housing development patterns have changed over time across the city as the population has grown. This city-wide housing market analysis examines both the historical and current market conditions and uses that information to inform strategies for addressing future housing needs.

Figure 18: Housing Unit Change

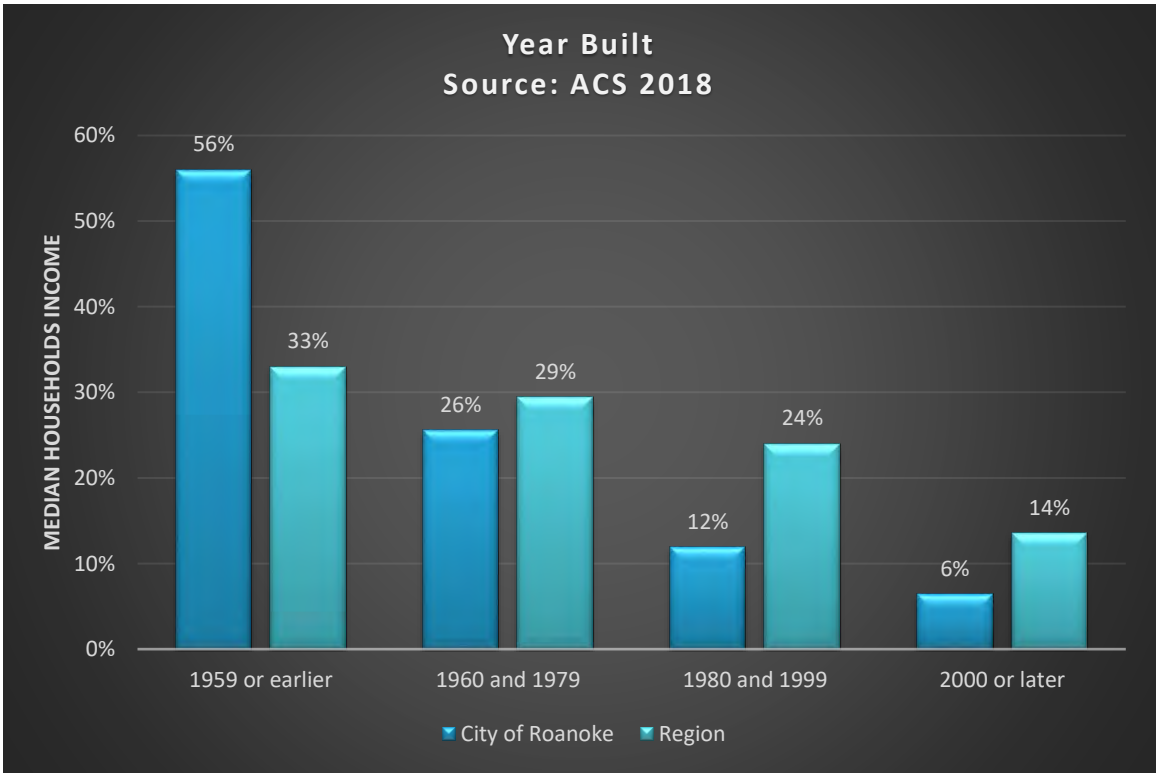


YEAR BUILT AND HOUSING UNIT GROWTH

The city's housing growth history shows a steady transformation over a few decades. Between 1970 and 2010, the number of housing units grew by 42%, rising from 33,500 to about 47,450. Over the same period, the Region grew by 82% indicating that growth in the City of Roanoke was a smaller contributor to regional growth than other locations like Franklin and Roanoke Counties. The steady housing unit growth in the city coincided with both population and household growth. The City of Roanoke did experience a much larger period of housing unit between 1970 and 1980 with 9,177 new housing units being built. Figure 19 shows the year built for housing units highlighting the large number of units constructed during that period. Compared to the counties

and region, the city has a much older housing stock with 82% of all units constructed before 1980 compared to only 62% across the region. The City of Roanoke also has a lower percentage of units constructed after 2000 at 6% versus 14% for the region.

Figure 19: Year Built

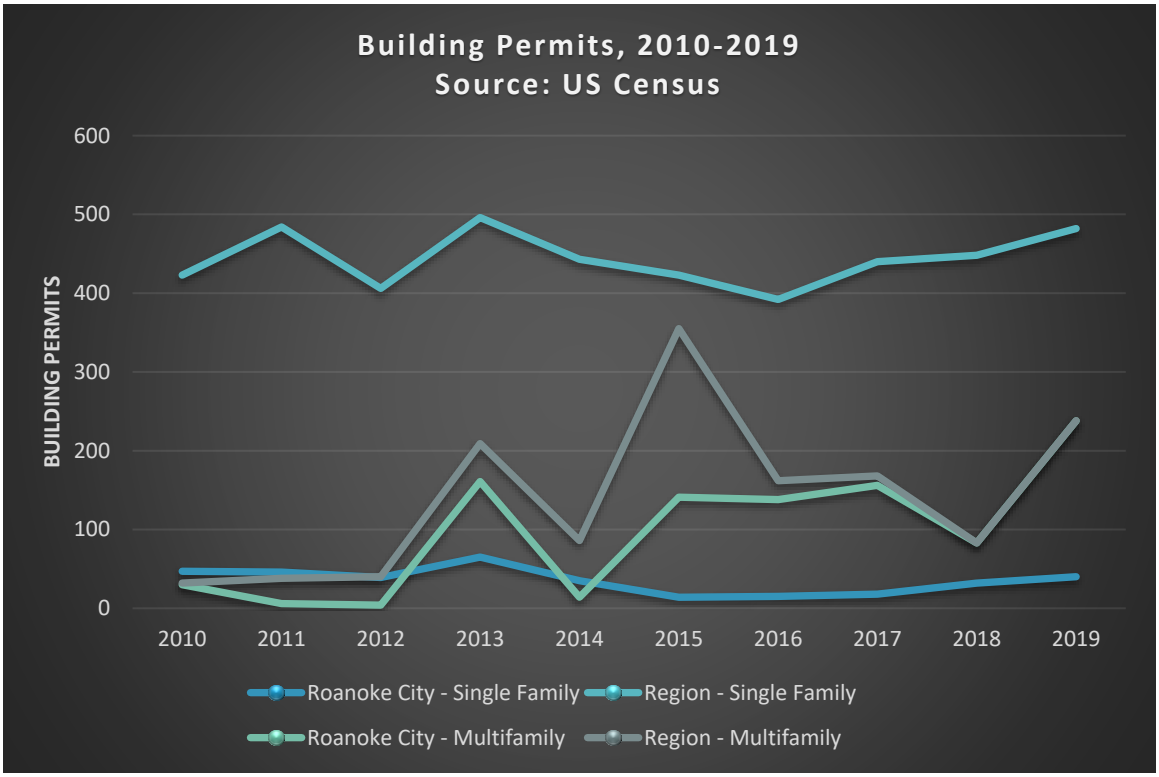


Building Permit Activity

On average, the City of Roanoke permitted 35 new single family detached housing units per year since 2010.[4] Over the same period, the city also issued an average of 97 building permits per year for multifamily units in duplexes, triplexes, quadplexes, and buildings with five or more units. In Roanoke, the largest number of single family permits were issued in 2013 when 65 housing units were built, while in 2019 there were 238 multifamily unit permits issued. The city has comprised the vast majority of all multifamily permits granted in the region (69%) with Roanoke County accounting for another 27%. This is not surprising since the city is the urban center in the region and as a community that is more built-out with less land availability denser forms of development are more common.

[4] U.S. Census, 2020

Figure 20: Building Permits



Housing Tenure

As of 2018, 46% of the city's housing stock was owner-occupied with 43% renter-occupied. The city's housing stock is nearly evenly split between owner and renter while the region skews more toward ownership with localities like Franklin County having 80% owner-occupied units.

Table 8: Housing Tenure

	City of Roanoke	Region
Owner-Occupied	46%	63%
Renter-Occupied	43%	26%
Vacant	11%	12%

Source: ACS 2014-2018

Units in Structure

In the City of Roanoke, 65% of residential units are in single family detached structures.[5] The second largest residential typology are multifamily structures with 10 to 19 units accounting for 9% of all units. Roanoke's housing stock has a much more diversified mix than many other locations in the region. While it does have a lower percentage of single family homes, it instead offers a wider range of housing choices from attached single family, to duplexes, to mid-scale multifamily and even larger scale multifamily with structures of 50 or more units. The historical

[5] ACS 2014-2018

development pattern combined with a more urban built fabric has allowed Roanoke to create and maintain a fairly diverse stock of building types and units.

The breakdown of units in structures changes drastically when comparing owner-occupied units to renter-occupied units. Within the city, 93% of owner-occupied units are single family homes and only 7% are in structures containing two or more units. Contrast this with renter-occupied units, where 35% are single family homes, 65% are in structures with two or more units. The housing diversity noted above is predominately in the renter market with units spread across the various typologies like duplexes, triplexes, and mid- to large-scale apartment buildings.

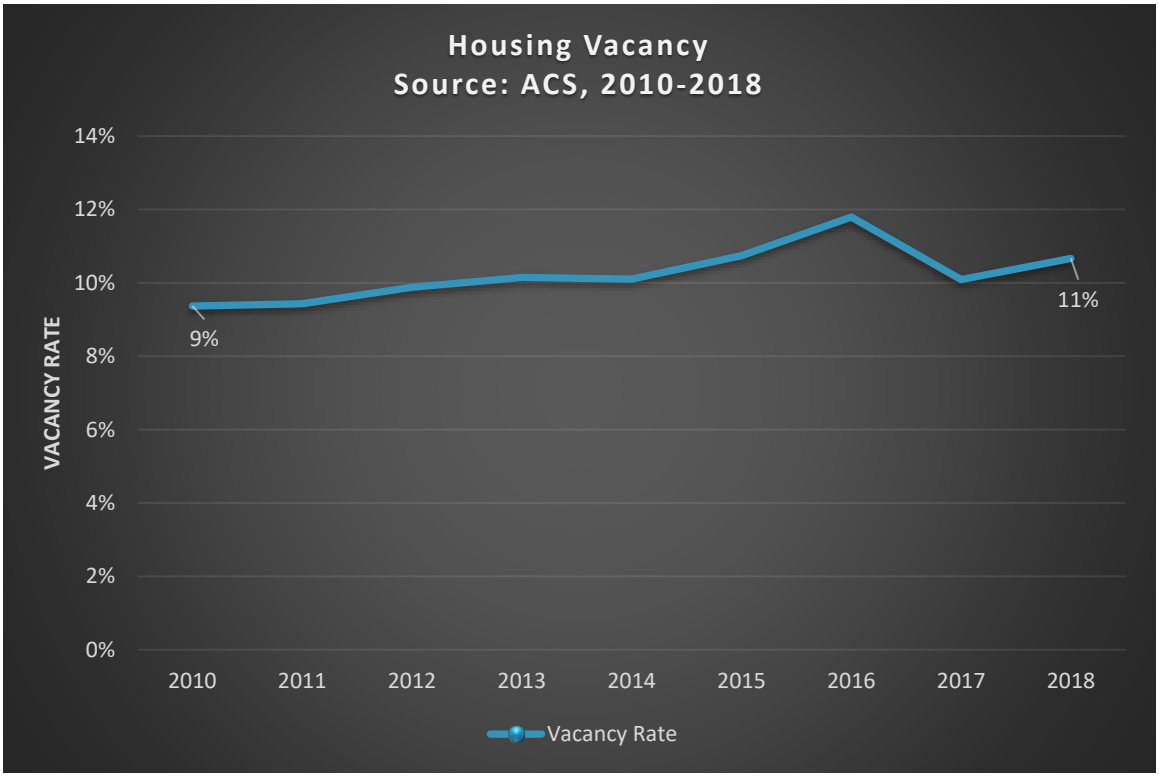
Vacancy

The City of Roanoke's overall housing vacancy rate has been steadily increasing since 2010 when the rate was 9%. As of 2018, the rate had increased to 11%. Part of Roanoke'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 Roanoke's total vacancy across all categories, the Census sums each category together and divides by the total number of housing units in the city. 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

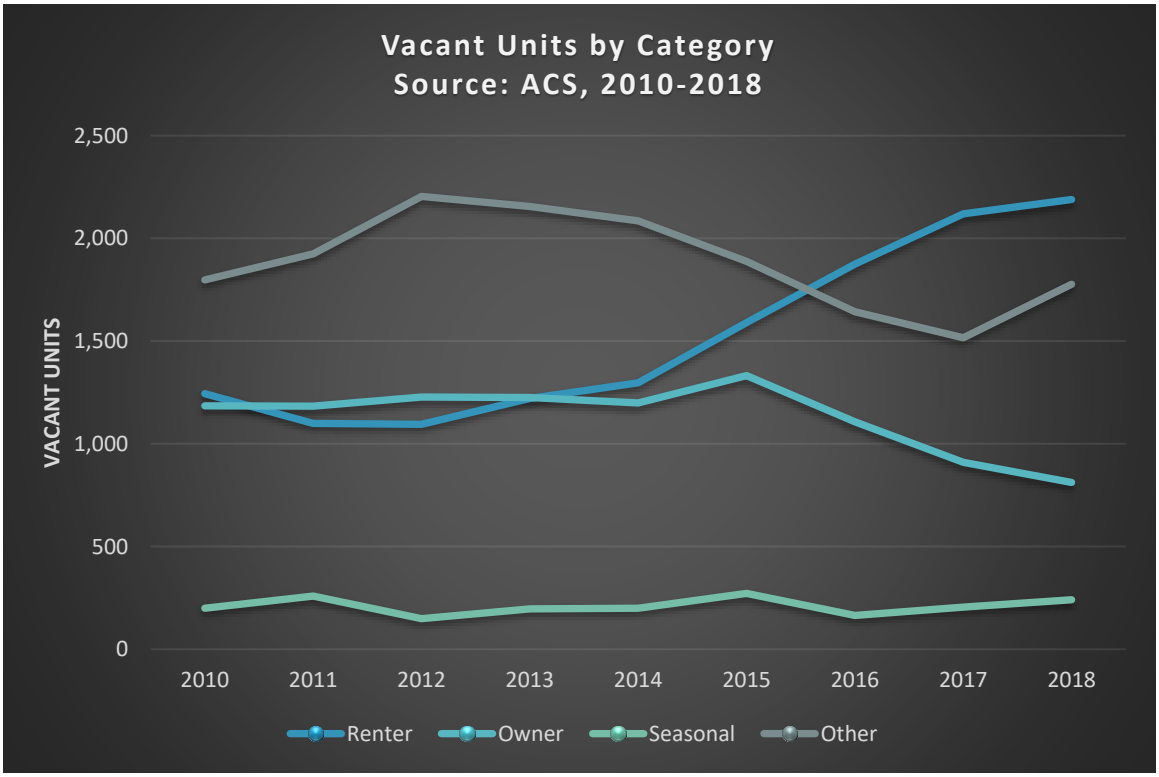


The increase in vacancy is a result of a significant jump in vacant rental units in 2017 which could be the result of some larger rental developments entering the market. The other vacancy categories have largely remained consistent over the eight-year period including units categorized Other Vacant.

The Census defines "other vacant" using eleven categories with ones most pertinent to the City of Roanoke being: Foreclosure, Personal/Family Reasons, Legal Proceedings, Preparing to Rent/Sell, Needs Repairs, Abandoned/Possibly to be Demolished or Condemned. In 2018, 35% of all vacant units in the city fell under this category which equates to about 1,777 housing units. Figure 22 shows how the number of vacant units in four vacancy categories changed from 2010 to 2018.

Over this eight-year period, the number of vacant renter-occupied units increased by 76%. This change was due to an increase in the number of renter units being actively marketed indicating activity and turnover in the market. At the same time, the number of vacant ownership units declined by 31% during the same period, further tightening the available supply of housing units.

Figure 22: Vacant Units by Category



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 city.

SUPPLY

As was noted earlier, owner-occupied units comprise 52% of the city's housing stock with 93% of units being single family homes, 6% in multifamily structures, and 1% of units in mobile homes. The single family percentage in the city is comparable to the region, but the percentage of multifamily and mobile homes are a bit different.

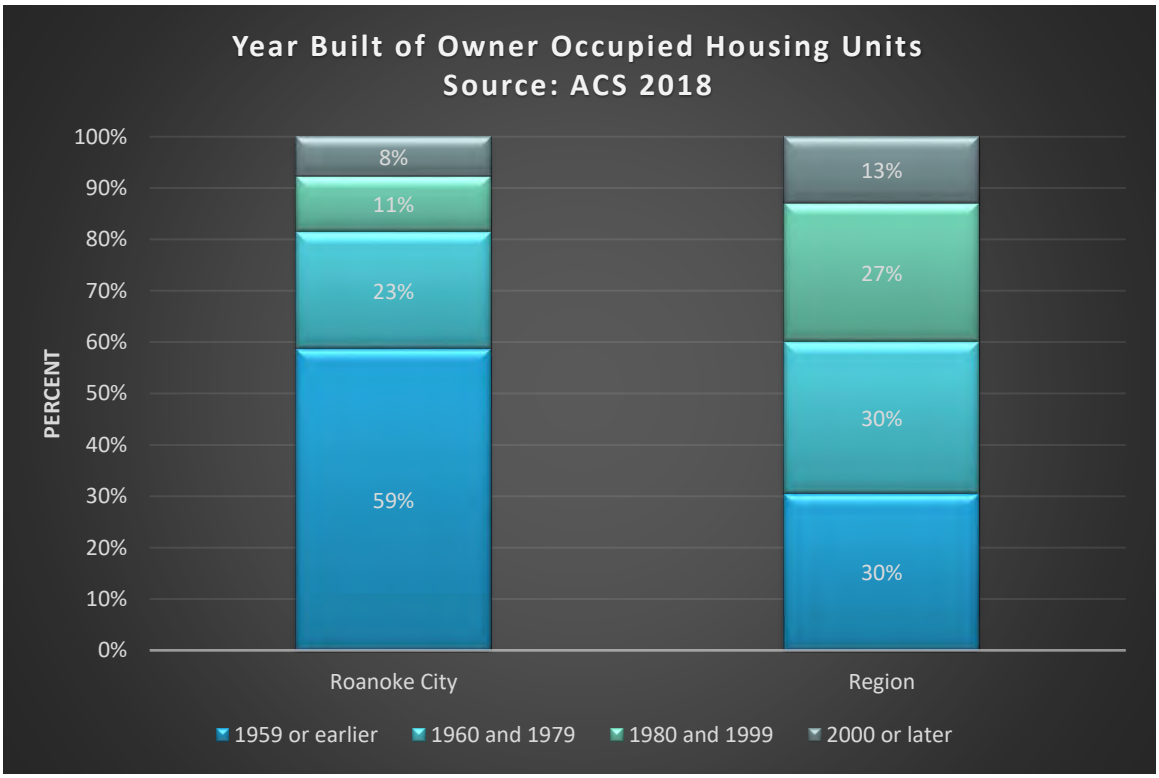
Table 9: Housing Tenure, Owner		
Owner Occupied	Roanoke City	Region
Single family	93%	92%
Multifamily	6%	2%
Mobile Home/RV/Other	1%	6%
Source: ACS 2014-2018		

Between 2013 and 2018, there was a decrease of 1,490 owner-occupied housing units and an additional 1,031 renter units. The largest change occurred with single family homes showing the city losing 1,297 owner-occupied single family homes and gaining 1,604 rental single family

homes.[6] This is a trend seen in many cities across the country, particularly after the Great Recession when many units were foreclosed upon, purchased by investors, and then rented back to residents. With interest rates at historic lows and capital flowing within the real estate industry, this trend is likely to continue.

The age of Roanoke's owner-occupied housing stock mirrors the age of the entire housing stock with 82% of ownership units built before 1980. This compares to 60% for the Region. Prior to 1960 there were many owner-occupied, single family units built across the city with a second building boom between 1970 and 1980. Since then, the number of new units constructed has increased at a steady rate.

Figure 23: Year Built of Owner Occupied Housing Units



Pricing

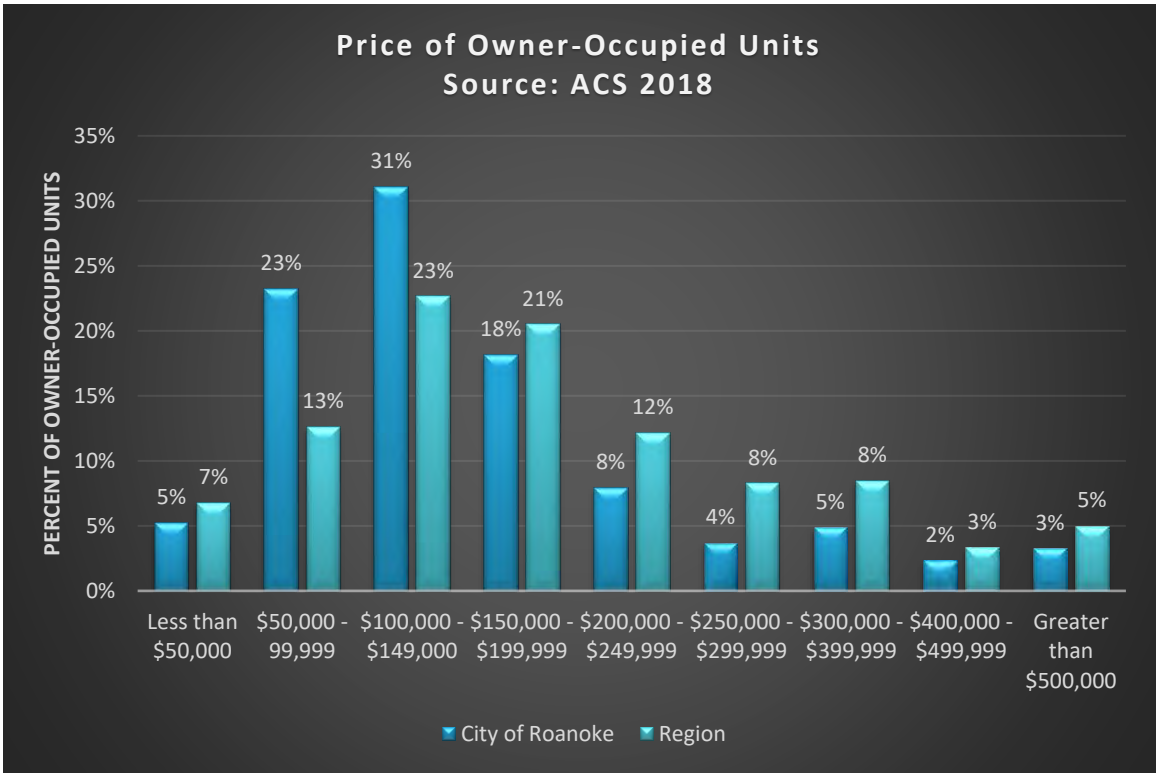
In 2018, the median value of an owner-occupied housing unit in the City of Roanoke was $133,200.[7] That figure is down 1.1% over the median value from 2013 of $134,700. While sale prices for owner-occupied units have been rising, the Great Recession hit the city particularly hard driving both values and sale prices downward. It took until about 2013 for the median sales price to begin rising again. Figure 24 compares the number of owner-occupied housing units by value range across the city and the Region. Generally, Roanoke's housing stock is more affordable compared to the

[6] ACS, 2013-2018.

[7] ACS, 2014-2018.

Region with 59% of all owner-occupied units valued at less than $150,000. Only 22% of all owner-occupied units in the city are valued at more than $200,000. That figure is 36% for the region.

Figure 24: Percent of Owner-Occupied Units by Price Range



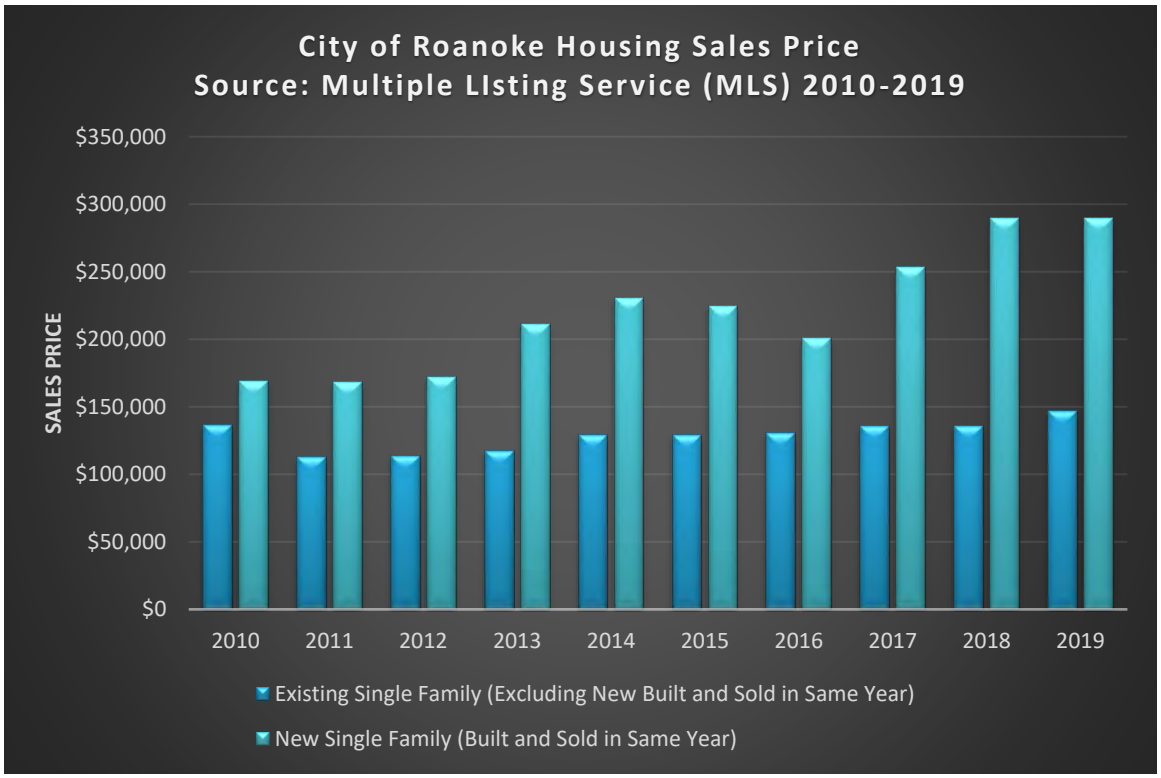
To provide accurate data on owner-occupied sales in the City of Roanoke, Multiple Listing Service (MLS) data for the period 2010 to 2019 was analyzed.[8] Over the ten-year period, there were about 11,300 sales with an average of 1,130 sales annually. While the Great Recession impacted sales prices between 2010 and 2012, the number of sales per year continued to increase. Starting in 2010, sale prices began to decline to a low in 2012 before recovery began to take place. The median sale price dropped from $136,850 in 2010 to $114,000 in 2012. Prices, number of sales, and days on market have all improved since then.

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 97% more than existing single family homes. The median sales price of a new home in 2019 was $289,680

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

compared to $147,033 for an existing home. Figure 2 shows median sales price for existing and new homes by year sold.

Figure 25: Sales Price



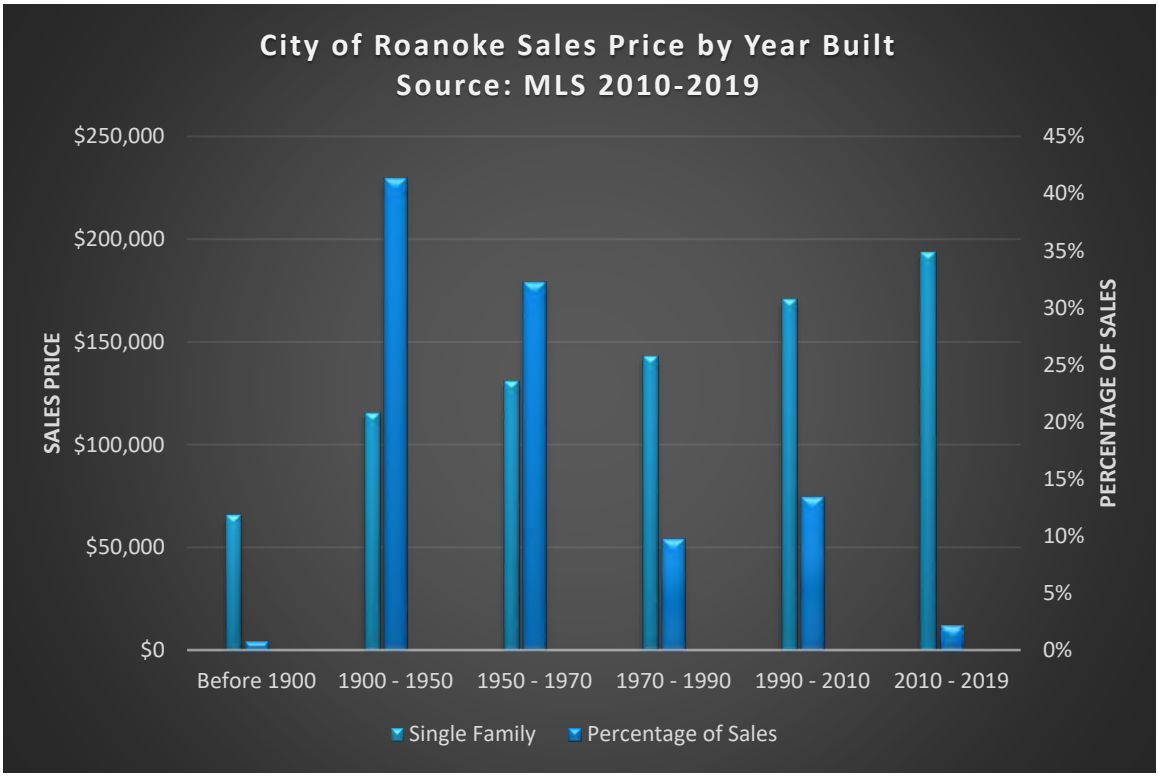
Homes built before 1970 accounted for 74% of all sales activity. Both the size and price of homes on a per square foot basis vary depending on the age of the home. On a price per square foot basis, the median sales price of a home built before 1950 was $64 per square foot, compared to $134 a square foot 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.

Interestingly, homes built in the city prior to 1990 are actually larger than newer homes constructed after 1990. Home built prior to 1990 average 1,880 square feet while newer homes average 1,650 square feet. The fact that these smaller homes are selling for nearly double the price of older, larger homes may speak to the condition of older homes in Roanoke and the layout and amenities inside the home. Homebuyers today may place more consideration on the location, age, condition, and layout of the home than the space and price.

The average days on market varies by product type with new homes selling faster than existing homes, which is a bit surprising given the significant differential in price point. This could again speak to the overall condition of the older, existing housing stock across the city. Overall, the total

days on market has declined since 2010 when on average it took an average of 60 days for a unit to sell compared to only 17 days in 2019.

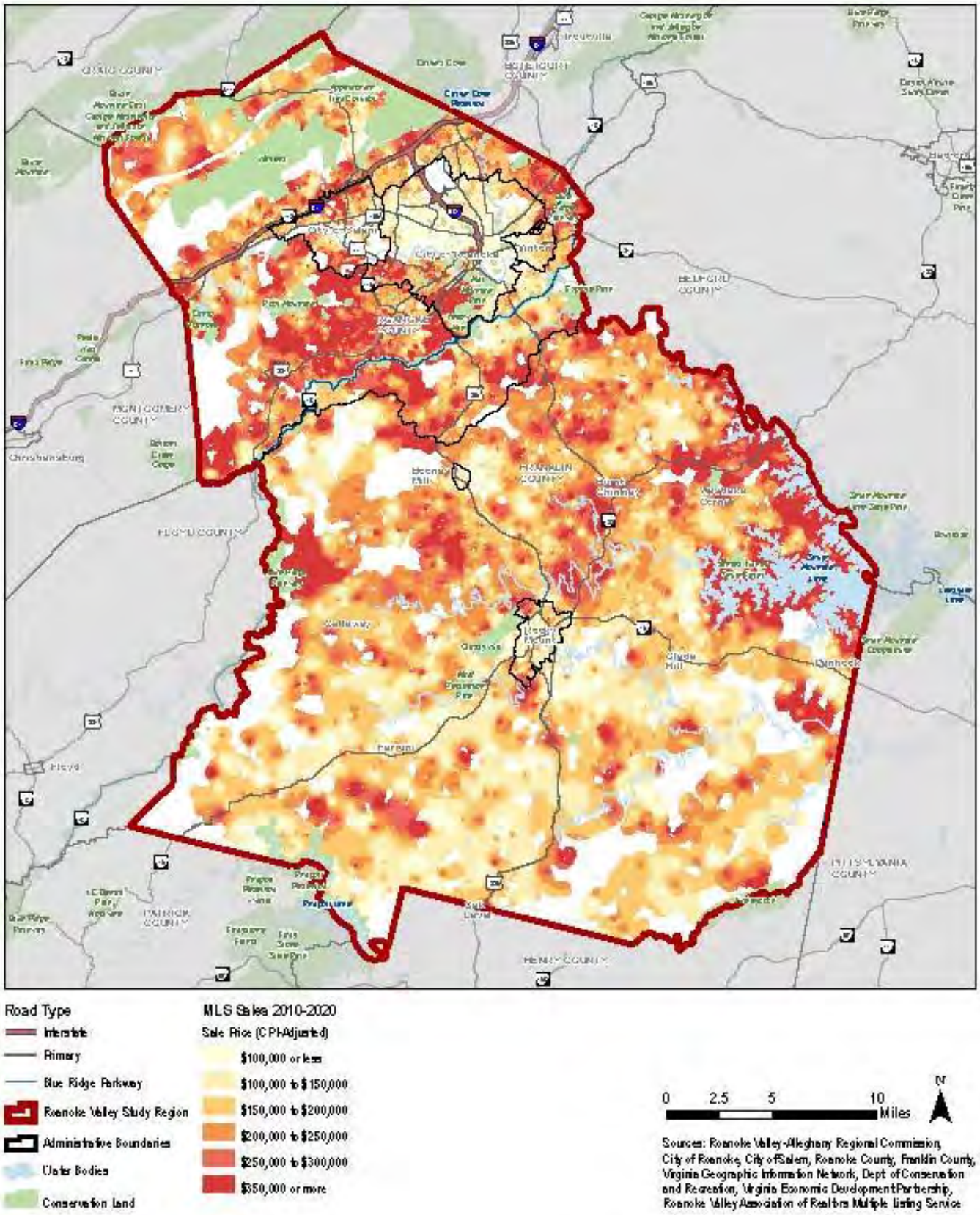
Figure 26: Sale Price by Year Built



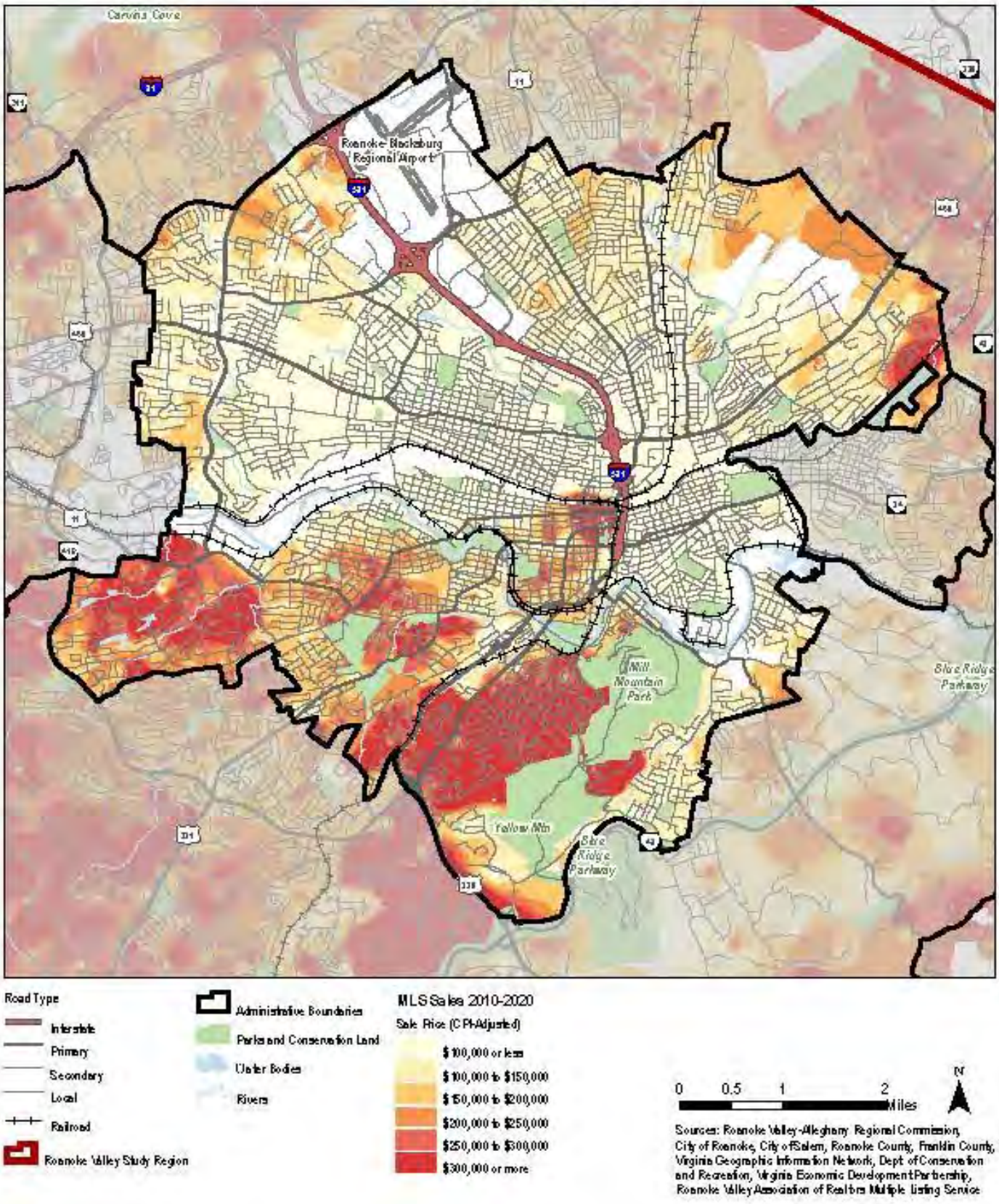
The maps on the following pages show the prices of homes sold between 2010 and 2020 at the regional level. The highest priced markets are across much of Roanoke County and around Smith Mountain Lake in Franklin County. Interestingly, the lowest concentrations of sales prices are in the incorporated cities and towns like Roanoke, City of 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 the city which increase significantly as one travels from the core of city to the periphery. Newer homes and subdivisions, particularly on the south and southwest edges of the city have far higher sale prices than the central portion spanning east and west along the Route 460 spine.

RVA HOUSING STUDY - HOME SALES 2010-2020



CITY OF ROANOKE, VIRGINIA - HOME SALES 2010-2020



Renter-Occupied Housing Market

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

SUPPLY

In 2018 only 48% of the city's households were renters, with 42% of rental units in single family homes and 57% in multi-unit structures. These percentages, except for mobile homes, closely mirror that of the region.

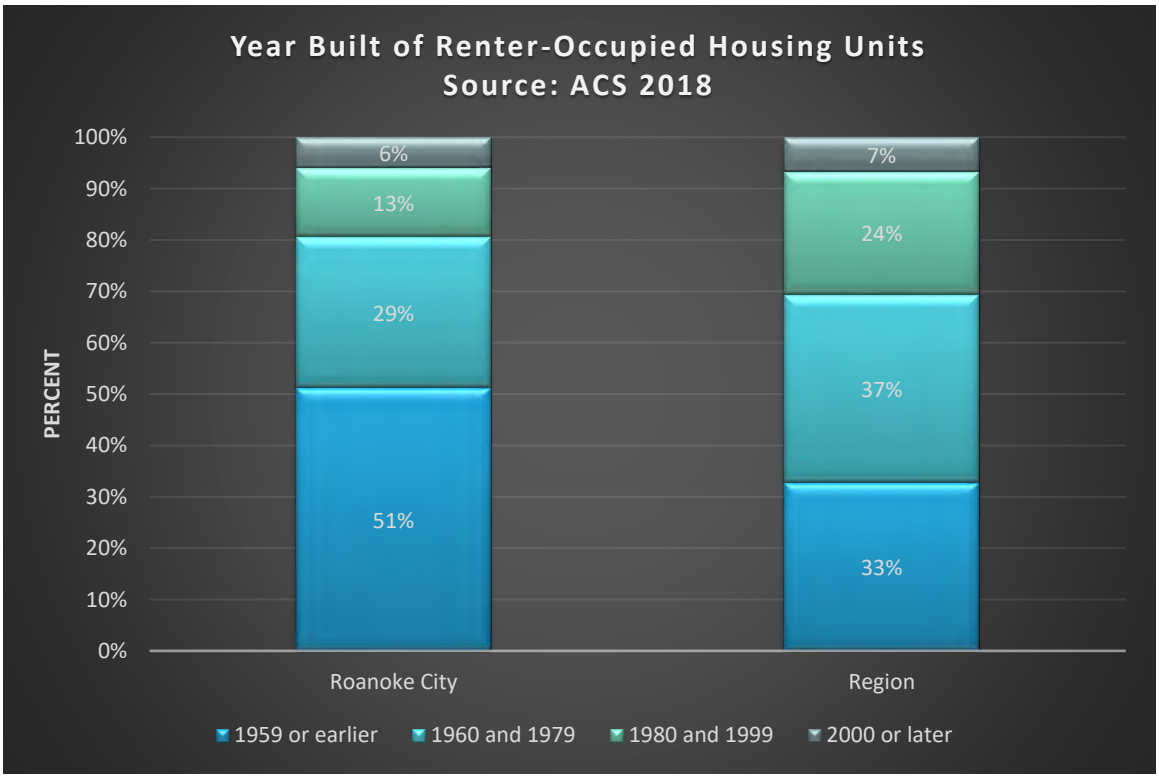
Table 10: Housing Tenure, Rental

Renter Occupied	City of Roanoke	Region
Single Family	42%	44%
Multifamily	57%	52%
Mobile Home/RV/Other	0%	4%

Source: ACS 2014-2018

The rental housing stock across the city is also older with 80% of rental housing units built before 1980. This compares to the Region where 70% of rental units were built before 1980. Half of all rental units in the city were constructed prior to 1959 compared to only 33% in the region. Older rental units tend to require greater maintenance and sometimes result in less than ideal conditions for tenants.

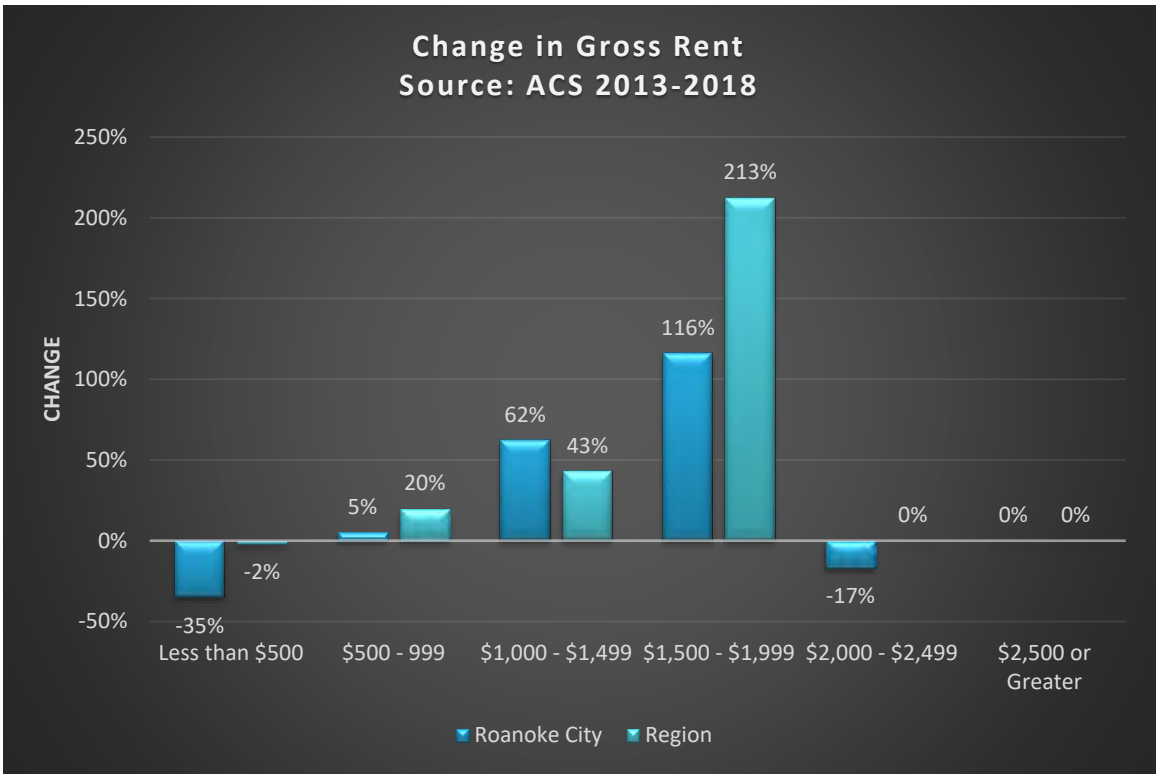
Figure 29: Rental Structures by Year Built



Pricing

In 2018, the median gross rent in the city was $799 which was an increase of 15% from 2013.[9] 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 30 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 35%, while the number of households paying rent at the higher end (over $1,500 a month) has grown by 116%. Households paying moderate rents, between $500 and $1,499 per month, have also increased driven mostly by renter households paying between $1,000 and $1,499 per month. Some of this rent growth may be attributed to new product coming on the market which could coincide with the sharp increase in rental vacancy described in the Vacancy section of the study.

Figure 30: Change in Gross Rent



A recent scan of rental listings showed the average rent for a single family home to be around $907 per month, while rents in multifamily buildings averaged $1,308 per month.[10] Rental prices in the larger apartment complexes vary significantly depending on the location, quality, and amenities offered but are about $400 higher than the average rent for a single family home.

[9] ACS 2013 and 2018.

[10] Apartments.com, November 2020.

Affordable Rental Units

In addition to market rate rental units, there are 50 apartment complexes in the city which have income restricted affordable units. As of 2020, the city has 4,281 low income rental apartment units, of which 2,509 of the tenants receive rental assistance.[11] The median rent in these units is $728. Rental assistance comes in the form of the Section 8 Voucher program which is administered by the Roanoke Redevelopment and Housing Authority and Roanoke Total Action Against Poverty. 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 $941 for a two-bedroom or $1,268 for a three-bedroom unit.

Future Housing Demand

The population of the City of Roanoke is projected to grow by 1,148 new residents between 2018 and 2025, a less than 1.2% 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 population projected for 2025, RKG estimates the city may need to produce an additional 2,162 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 52% owner-occupied and 48% renter-occupied.

Under these assumptions, RKG projects the city would need to add another 1,120 owner-occupied housing units and 1,042 renter-occupied units.

It is worth noting that between 2013 and 2018, the city lost 457 housing units. Given that loss of housing units, the city would fall short of the target needed to accommodate the projected population and household counts if current trends held steady through 2025. This is particularly true for households at or below 30% of AMI, which currently experiences a shortage of affordable housing.

Table 11 shows the allocation of households by household size for the projected new households across the city. This allocation assumes that trends will remain constant out to the year 2025. For example, in 2018, 17% of all households were 1-person and 20% were 2-person. These percentages are applied in the same way to the total households projected for 2025 which results in 1,520 additional 1- and 2-person households over the next five years. Since 3, 4, and 5+ person households comprise a lower percentage of the city's household composition those percentages are lower than 1- and 2-person households.

[11] Affordable Housing Online. https://affordablehousingonline.com/housing-search/Virginia/Franklin-County. November 2020.

Table 11: 2025 Projections if 2018 Household Composition Held Constant		
Household Size	Households	% of Total
1-person household	809	37%
2-person household	711	33%
3-person household	314	15%
4-person household	170	8%
5-or-more person household	158	7%
Total	2,162	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 52/48 split based on 2018 data, there is a projected need for an additional 1,120 owner-occupied housing units and 1,042 renter-occupied housing units through the year 2025. The new households are skewed toward one- and two-person households which are the two predominant household size categories in Roanoke as of 2018.

Table 12: 2025 Projections if 2018 Household Composition Held Constant				
Household Size	Owner Households	Total % of Owner	Renter Households	Total % of Renter
1-person household	372	33%	437	42%
2-person household	424	38%	287	28%
3-person household	165	15%	150	14%
4-person household	92	8%	78	7%
5-or-more person household	68	6%	91	9%
Total	1,120	100%	1,042	100%
Source: ESRI, ACS 2013, 2018, RKG Associates				

Based on the projection data, the City of Roanoke will need to consider how to increase the production of smaller units to accommodate the increase in 1- and 2-person owner-occupied households. In addition to housing production, the city should consider rehabilitation programs to bring older owner and renter housing units up to the standards of today's buyers.

CITY OF ROANOKE HOUSING STUDY

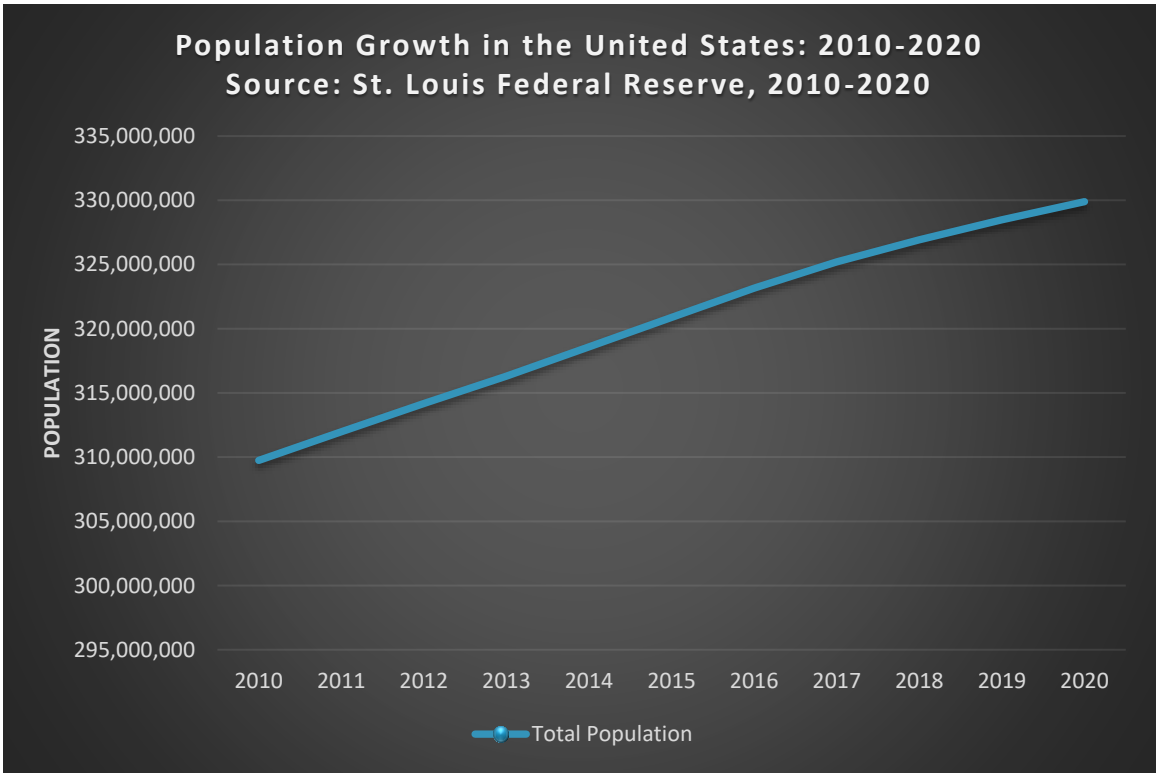
NATIONAL TRENDS

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 the City of Roanoke.

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 31: Population Growth in the United States

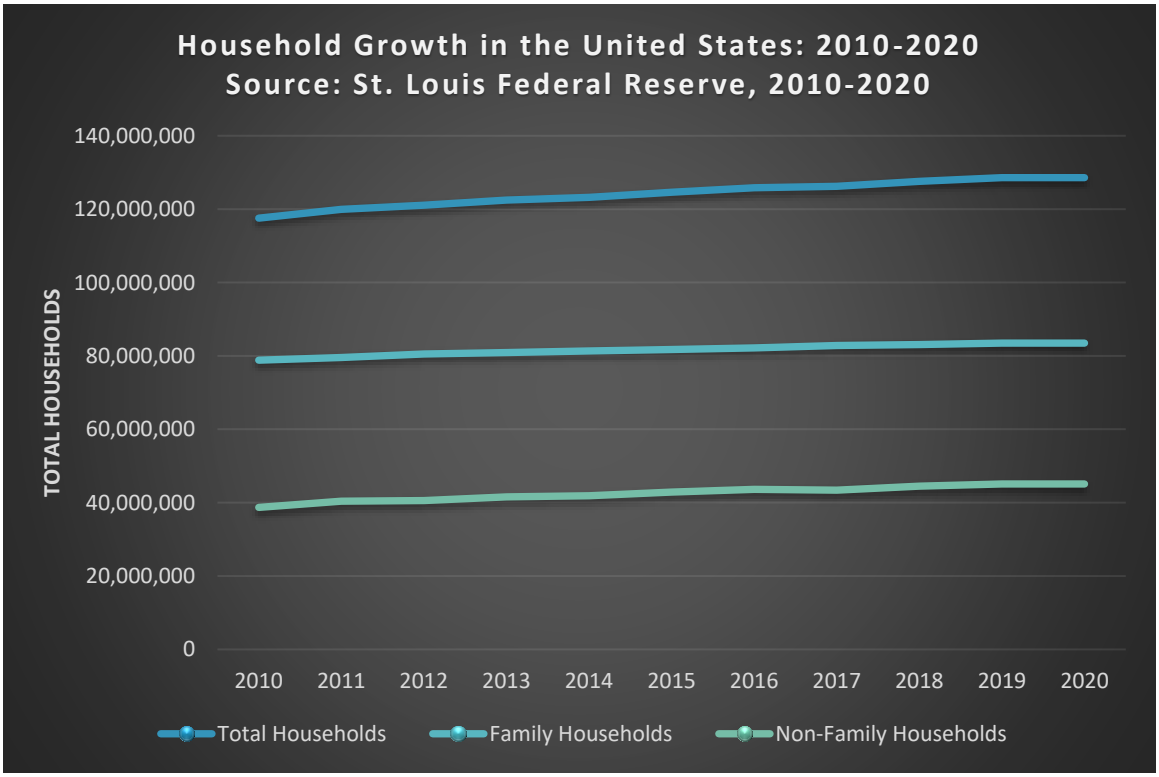


Roanoke has seen steady population growth over the last 50 years. Between 1970 and 2010, the population of the City of Roanoke grew by 5%, rising from around 92,115 to 97,032. However, this population growth has leveled off with the population only growing by 2.6% since 2010. Even with a slow population growth, the demographic changes occurring in the city impacts 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 household 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 32: Households in the United States

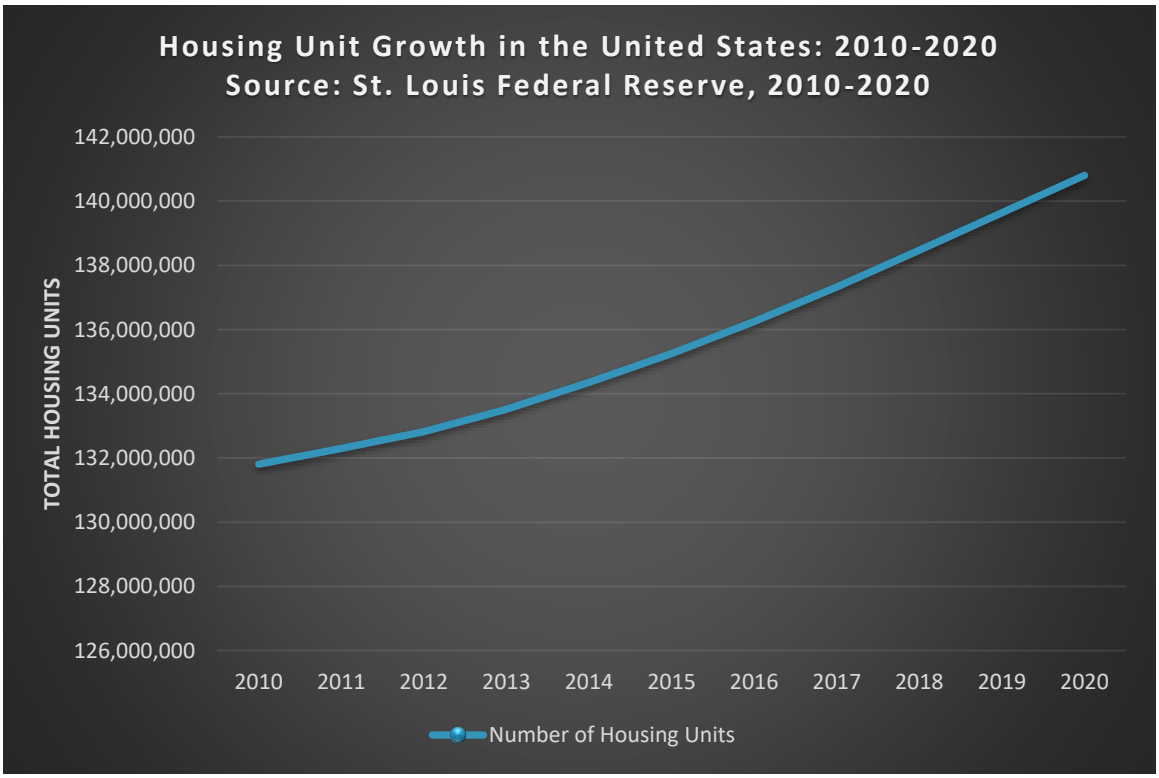


In Roanoke, the total number of households has decreased over the last five years. Unlike national trends, the number of non-family households declined at a much faster rate with a loss of over 400 non-family households over the last five years. Family households remained relatively unchanged, declining by 50 households.

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 33: Housing Unit Growth in the United States

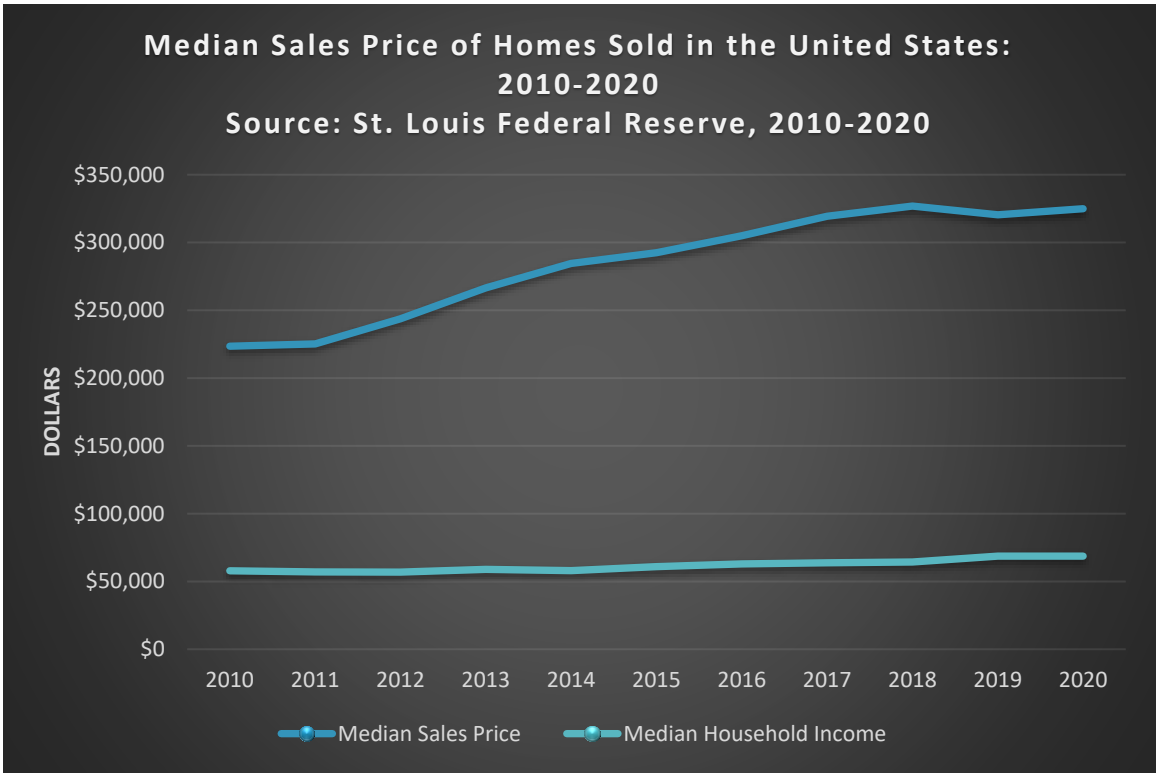


Unlike national trends, the City of Roanoke has experienced a loss of housing units over the last five years. Across the city, the total number of housing units declined by 0.5% or 236 total units.

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 sales 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 34: Median Sales Prices of Homes Sold in the United States

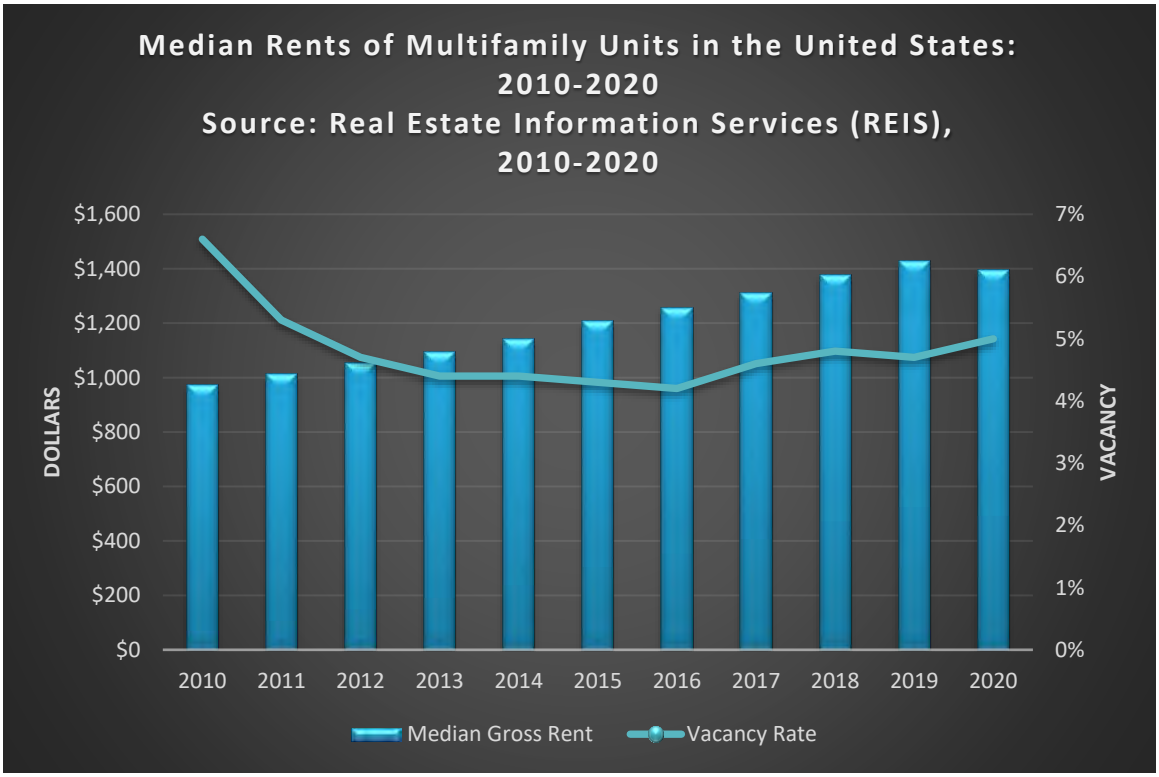


Home prices have increased across the city with a median sales price of around $147,033, up from $136,850 in 2010. Unlike many parts of the country, and even other parts of the Roanoke Valley-Alleghany Region, home prices have remained relatively low and affordable. Like many other urban cities in rural regions, the older housing stock and long-term maintenance issues have kept values low. The price difference of $142,000 between a new home and an existing home illustrates this issue clearly.

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 35: Median Rents of Multifamily Units in the United States

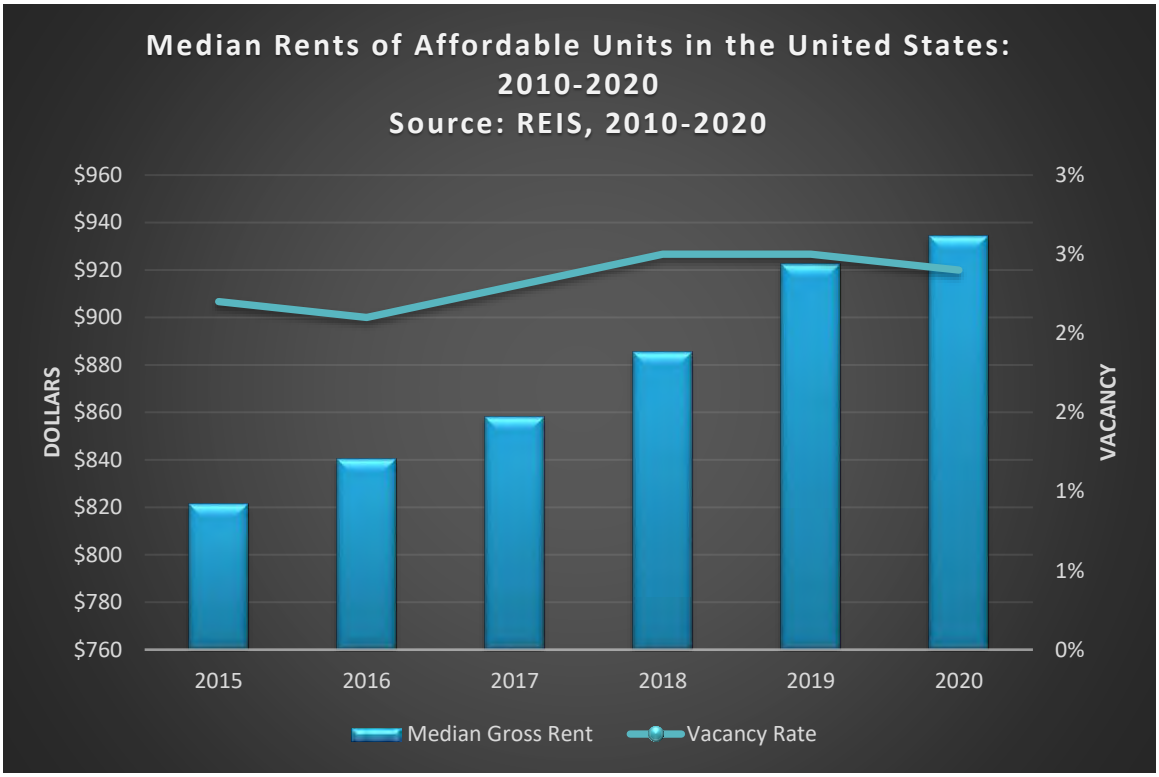


Compounding the problem in the rental market are low levels of vacancy for rental units. Rental unit rates have declined to less than 5% over the last 10 years. Low vacancy levels push rental prices upward as greater competition develops amongst households looking to secure available units. In the City of Roanoke, the average rent for a single family home is around $907 per month, while rents in multifamily buildings averaged $1,308 per month. The multifamily sector comprises the majority share of all rental units at 57% of rental units and 37% of units in buildings with more than five units.

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 36: 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 for renter- and owner-occupied units actively being marketed remained at a healthy rate of 6% 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.

CITY OF ROANOKE 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 the City of Roanoke 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 city 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 the City of Roanoke showing 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

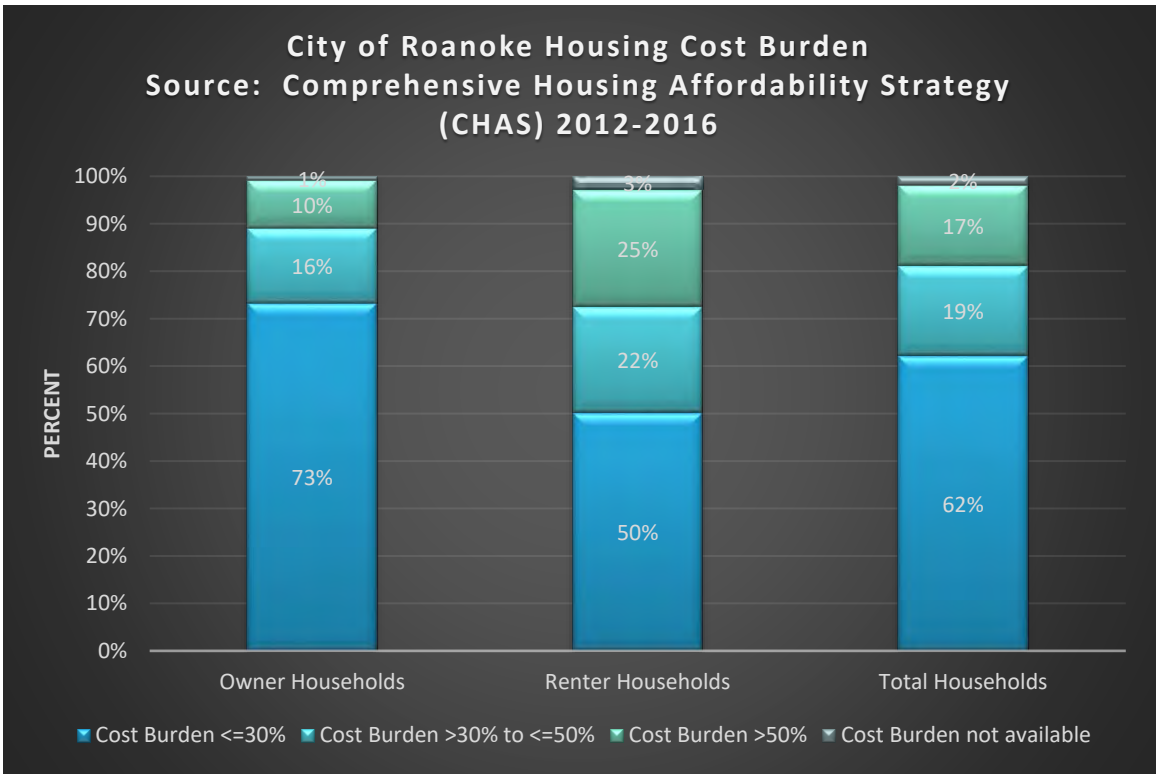
For example, in the City of Roanoke, if the household income for a three-person household did not exceed $55,250 that household could qualify for a deed restricted affordable unit. Maximum

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

Growth in housing prices coupled with slower or stagnant growth 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 37: Housing Cost Burden



In the city, 19% of all households are considered cost burdened under HUD's definition and 17% are considered severely cost burdened. This is higher than the Region as 14 percent 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 the City of Roanoke have a higher tendency to be cost burdened than owners which is typical in most markets as well as nationally. In City of Roanoke, 22% of renter households are cost burdened and 25% of households are severely cost burdened. The percentage of renter households severely cost burdened is more than twice as high as owner households which correlates with lower household incomes for renters and rising rent rates.

Table 14: Housing Cost Burden Overview, Roanoke City, 2012-2016						
Cost Burden	Owner Households		Renter Households		Total Households	
	Est.	% of Total	Est.	% of Total	Est.	% of Total
<= 30%	16,235	73%	10,225	50%	26,460	62%
>30% to <=50%	3,490	16%	4,555	22%	8,045	19%
>50%	2,235	10%	5,030	25%	7,265	17%
Cost burden not available	190	1%	580	3%	770	2%
Total:	22,155	100%	20,385	100%	42,540	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 household face to afford adequate housing. To gauge whether owner and renter units in the city are aligned with household Area Median Income (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 just under 52% of all owner households in the city earn at or above 100 percent of AMI, there is a shortage of units priced to what those households could technically afford home in that price range. Some of this is related to the city's market dynamics, as described in the market analysis section, where many ownership units are valued at less than the average sales price. Many homes across the city are valued at less than $150,000 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 the city can choose to live below their means because housing is available at lower price points.

Although this analysis does show a surplus of housing available to households at the lowest income tiers, many households at 30 and 50 % 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% AMI categories would be extremely limited and likely show a deficit. With the growth in one- and two-person households city-wide, 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	3,144	14.4%	$80,663	5,008	1,864
50% AMI	$34,550	2,789	12.8%	$128,311	5,034	2,245
80% AMI	$55,250	4,626	21.2%	$205,186	7,028	2,402
100% AMI	$76,700	3,162	14.5%	$256,622	1,238	-1,924
120% AMI	$82,875	1,548	7.1%	$307,779	1,252	-296
120%+ AMI	$82,876	6,514	29.9%	$307,780	2,223	-4,291

Source: ACS 2014-2018, HUD

On the rental unit side, Table 16 shows a surplus of almost 3,933 units priced to households earning at or below 80% of AMI. At the upper end of the rental market there is a deficit of 3,933 units priced for households at or above 100 percent of AMI. Again, this is the result of most rental units in the city being priced between $500 and $1,000 a month. While there are renter households that could afford higher rents, they may be more inclined to rent a single family home over an apartment unit if the prices are similar.

Table 16: Renter Price to Affordability Comparison

Category	Income Threshold	Renter Households	Percent	Monthly Rent	Rental Units	Surplus/Deficit
30% AMI	$21,720	7,565	37.4%	$543	3,996	-3,569
50% AMI	$34,550	3,859	19.1%	$864	7,530	3,671
80% AMI	$55,250	3,585	17.7%	$1,381	7,416	3,831
100% AMI	$76,700	598	3.0%	$1,918	860	262
120% AMI	$82,875	2,285	11.3%	$2,072	108	-2,177
120%+ AMI	$82,876	2,362	11.7%	$2,072	344	-2,018

Source: ACS 2014-2018, HUD

Households earning 30% of AMI or below are showing a significant deficit in the number of units available compared to households in this income band. There is a deficit of nearly 3,600 rental

units affordable to households at or below 30% of AMI. This is a trend seen not only in the city, 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 citywide.

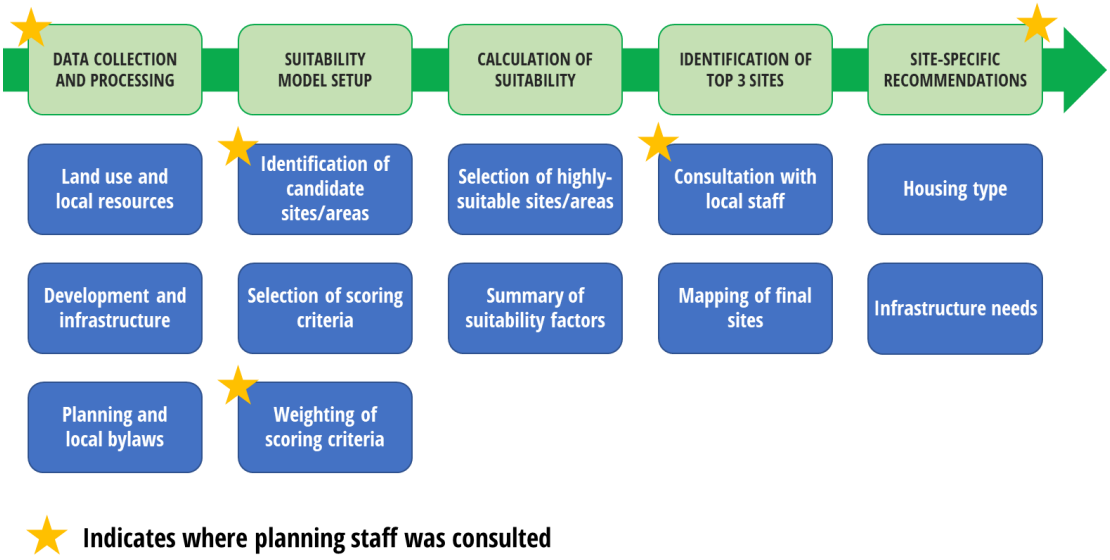
CITY OF ROANOKE HOUSING STUDY

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.

City of Roanoke 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. Areas of higher suitability are concentrated closer to downtown Roanoke and extend east and west between the two main railway corridors. Neighborhoods between Orange Avenue NW and Route 581 also showed high suitability. The lowest suitability areas were generally located closer to the perimeter of the city, around the airport and existing industrial parks, as well as areas with slope or infrastructure limitations. The maximum suitability score for the model including zoning was 176, and the average score was 123.

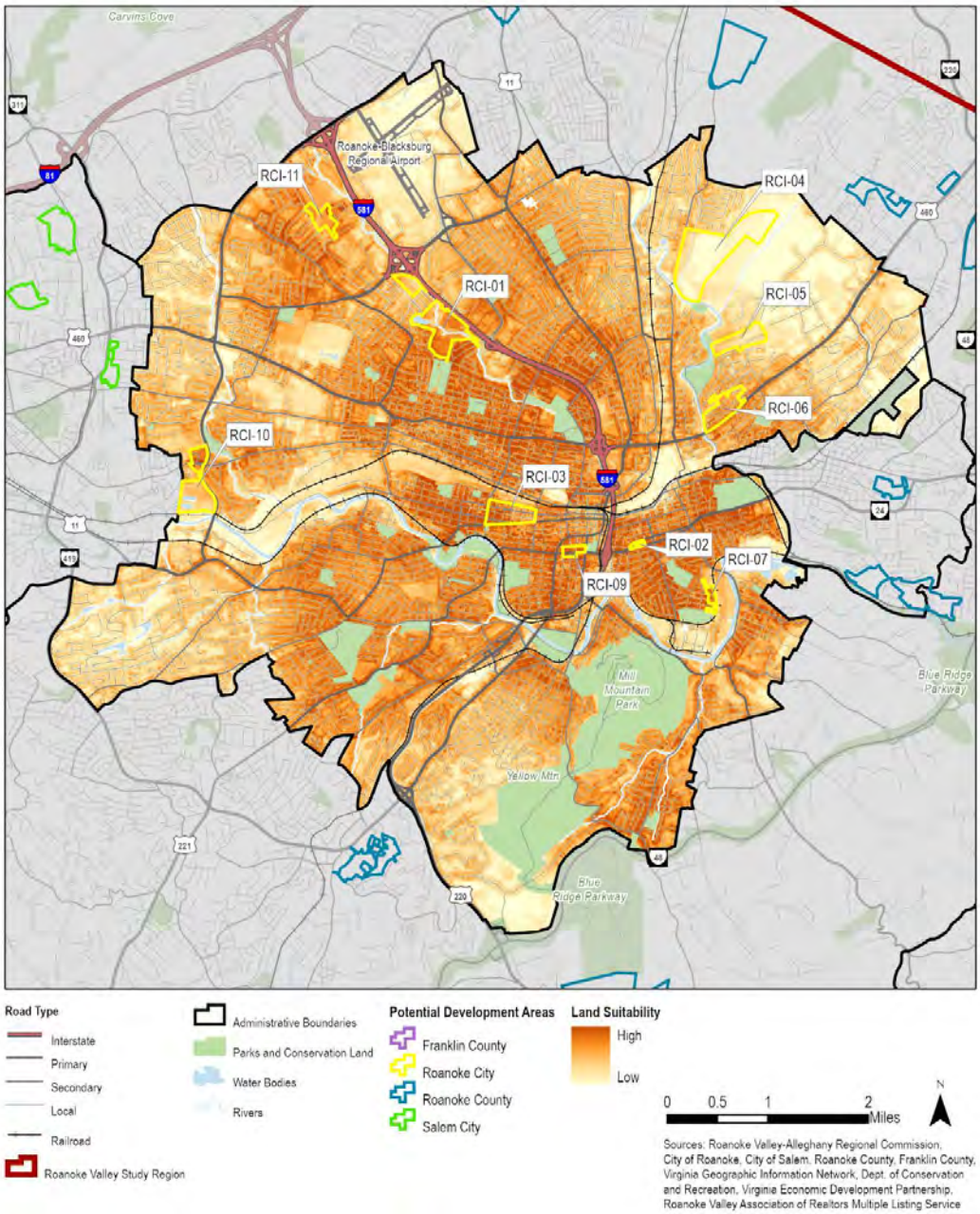


Figure 38: City of Roanoke Land Suitability

Constraints were relatively evenly distributed across the city, with the most constrained areas along existing roads, the Roanoke River, and the main railway corridor running from east to west through the center of the city. The airport and existing parks and open spaces also had higher constraint scores. Across the city, the highest constraint score was 9, and the average score was 1.07. The following map shows the distribution of constraints, including zoning districts that do not allow residential development by right.

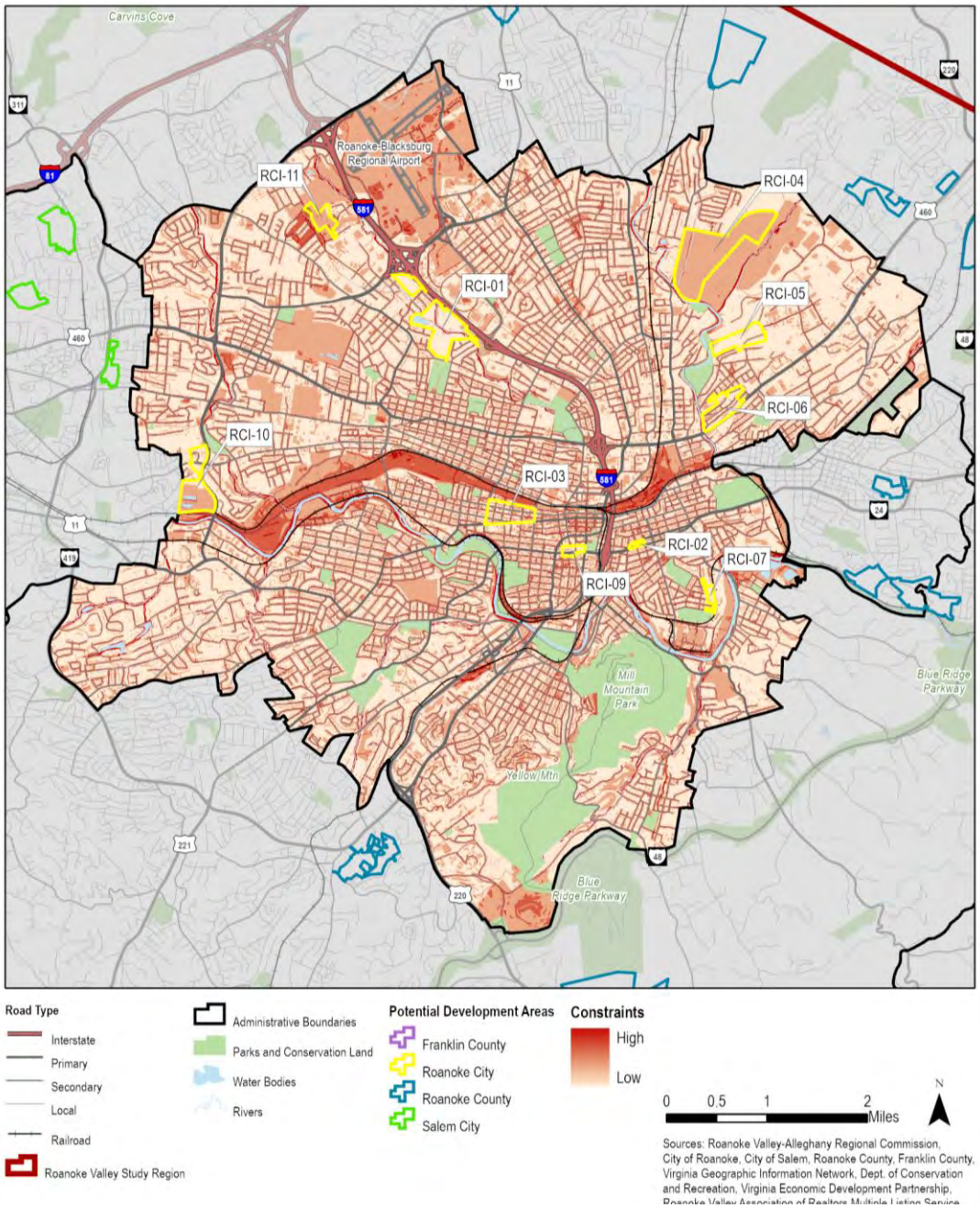


Figure 39: City of Roanoke Development Constraints

Comparing each site to the scores across the entire city, several had a suitability score that was above average, and most were below the average constraint score. Looking at the "Primary" model in comparison 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: City of Roanoke Site Suitability Scores

Site ID	Site Description	Area (Acres)	Primary Model			No Zoning Model		
			Suitability	Constraints	Rank	Suitability	Constraints	Rank
RCI-01	Evans Spring	121.91	136.3	0.43	4	126.3	0.43	6
RCI-02	Gateway to Southeast	4.25	152.3	0.87	1	140.5	0.66	1
RCI-03	West End - Norfolk to Campbell Ave.	58.80	134.3	1.30	6	126.8	1.27	5
RCI-04	Monterey Golf Course	228.35	102.5	1.06	10	102.5	0.06	10
RCI-05	Eastgate - Mason Mill Road	51.90	113.8	0.32	9	104.0	0.30	9
RCI-06	Eastgate - Orange Avenue	56.37	129.8	0.83	7	119.8	0.83	8
RCI-07	Morningside	12.71	145.1	0.14	2	135.1	0.14	2
RCI-08	Jefferson Street	24.33	*removed*			*removed*		
RCI-09	Day/Elm Avenue	12.66	140.1	1.18	3	130.1	1.18	4
RCI-10	Peters Creek Road / VA Hospital	82.84	125.9	0.97	8	120.8	0.31	7
RCI-11	Countryside (added)	31.28	135.4	1.16	5	134.4	0.23	3

In both models, RCI-02 (Gateway to Southeast) had the highest suitability score, followed by RCI-07 (Morningside). RCI-09 (Day/Elm Avenue) ranked third in the primary model and fourth in the no zoning model. RCI-11 was third highest in the no zoning model and fifth in the primary model. RCI-04 (Monterey Golf Course) had the lowest score, due in part to the distance of most of the site from water and sewer infrastructure, as well as schools and parks.

Upon further review and discussion of the sites, the size of RCI-02 limited its housing production potential and it was therefore not selected as one of the top three sites. The total land area and interest from developers in the Evans Spring site (RCI-01) resulted in it being included instead. Additionally, although the Morningside site showed high potential in the model, feedback from planning staff suggested the topography and associated infrastructure costs would make it less attractive. Recent planning efforts and the mix of housing types and higher home values in the vicinity of Countryside contributed to that site being included among the top three.

The table below provides some additional details about the top three sites for the City of Roanoke, additional maps of these sites are included on the following pages.

Site ID	Site Description	Acres	Zoning	Overlays	UDA	Historic District
RCI-01	Evans Spring	121.91	RA	Floodplain, River & Creek Corridor	Yes	No
RCI-09	Day/Elm Avenue	12.66	D	None	Yes	Yes (partial)
RCI-11	Countryside (added)	31.28	ROS / RM-2	None	Yes	No

RCI-01: EVANS SPRING

The Evans Spring area is the largest remaining open land in the City of Roanoke and has been considered for development over many years including in the City's Comprehensive Plan, Vision 2001-2020. The City's Evans Spring Area Plan (2013) envisioned a mixed use development with a mix of commercial and residential uses including apartments, townhomes, and detached single family houses. The area was subject of a recent rezoning request for mixed use residential/commercial development that was withdrawn in February 2020.

(Image from the 2013 Evan's Spring Area Plan, page 13)

The site consists of 14 parcels owned by seven private entities and one parcel owned by the City of Roanoke – both located on Route 681 near the Valley View Mall. The total site consists of 122 acres and zoned RA per the City of Roanoke's Zoning Code. A portion of the larger, southeastern area is within a Floodplain overlay and both areas are partially within the Creek Corridor overlay district. The site is within the designated Urban Development Area (UDA).

The RA district allows single family, manufactured homes, mobile homes, and mixed use development but at more limited intensities than envisioned in the 2013 Evans Spring Area Plan (page 26).

Potential yield depends on many factors including the mix of commercial and residential uses, types of residential uses, density, environmental considerations including the extent of preservation of natural features including Lick Run, and transportation and traffic circulation considerations. 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 points to a need for a mix of housing types and price points in the City of Roanoke. This site, given its size and location, could provide a mix of single family homes, townhomes, and multifamily apartments. The key with this site is to mix incomes, and not just product types. This is especially true for renter households who, on average, have lower incomes and are more impacted by housing cost burden. New product entering the market on this site could be a considerable draw for Roanoke, particularly if the area is designed in accordance with what was envisioned in the 2013 Plan, a mixed use neighborhood where commercial and residential components are integrated in a walkable, pedestrian-friendly environment.

Recommendations:

- Consider development proposals that closely align with the Evan's Spring Area plan's guiding principles and policies including stormwater management and conservation of natural resources, street network and design, urban development aimed to create a village center development with a diversity of housing types that are compatible with the City's Residential Pattern Book and the Residential Plans Library to ensure compatibility with surrounding neighborhoods.
- Secure public funding to construct access from I-581 Valley View interchange to the site as a public investment to remove a financial obstacle to constructing an architecturally and environmentally sensitive and well-integrated mixed use and mixed-income development.

RCI-01: Evans Spring

Image sources: USDA FSA, GeoEye, Maxar

Locality: City of Roanoke

Area (Acres): 121.91

Zoning District:
RA (City of Roanoke)

Other Base Zoning:
N/A

Zoning Overlay:
Floodplain; River & Creek Corridor

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

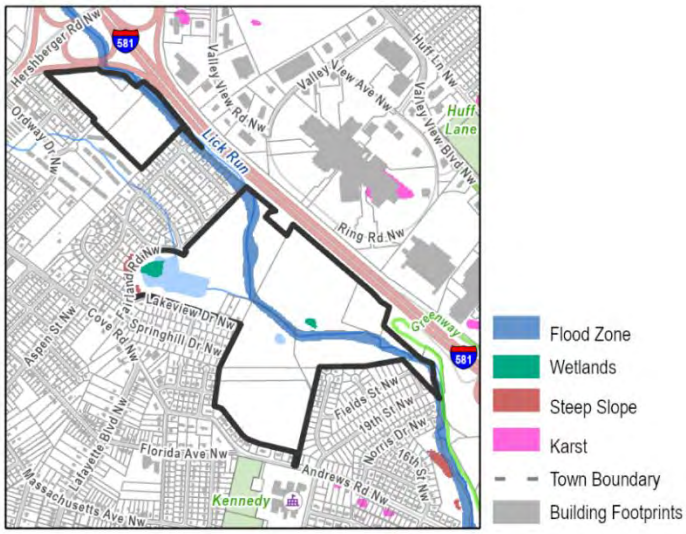


Figure 40: RCI-01 Site Summary

RCI-09: DAY/ELM AVENUE

The area of Roanoke in the northern edge of Old Southwest consists of 65 parcels owned by 22 separate entities, all private except for one parcel that is owned by the City. This area is located on Day Ave SW and Elm Ave SW between 3rd Street SW and Jefferson Street SE and consists of just under 13 acres in total. Based on ortho photos, many of the parcels are used as parking lots. Other parcels contain apartment buildings, office buildings, houses converted to offices and possibly some remaining as single family. There may be some historic resources, such as the Gill Memorial Building at 709 Jefferson Street SE.

The area is in the city's Downtown (D) zoning district, which allows multifamily dwellings, townhouses, group homes, and mixed use by right and is intended for higher intensity development. The district has no minimum lot size or frontage and no height limitations unless abutting a residential district. The area is not in the Historic Downtown Overlay District (H-1) nor is it included in the Southwest Historic District. However, it appears that some of the parcels are within a National Register District, which could provide incentives for rehab and reuse of existing historic buildings.

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 points to a need for a mix of housing types and price points in the City of Roanoke. This area, with its proximity to the major employer Carilion Community Hospital and health center complex, could provide market opportunities for infill development of parking lot sites to create more missing middle housing downtown (small to midrange multifamily) and mixed use. This could serve as housing opportunities for employees of the hospital or other employers in and around the Downtown. Smaller units could cater to single-person households and younger residents looking to live within a close walk to Downtown. Proximity to Elmwood Park provides additional access to nearby open space and events.

Recommendations:

- Conduct a neighborhood vision study that includes a parking study to determine use of existing parking areas and level of need for parking to support local commercial, institutional, and residential uses.
- Consider City partnerships with its authorities, non-profit community, and private sector to explore opportunities including property aggregation to foster urban infill development (supported by the 2006 City of Roanoke Strategic Housing Plan, pages 10 and 17).

RCI-09: Day/Elm Avenue

Image sources: Commonwealth of Virginia, USDA FSA, GeoEye, Maxar

Locality: City of Roanoke

Area (Acres): 12.66

Zoning District:
D (City of Roanoke)

Other Base Zoning:
N/A

Zoning Overlay:
N/A

In a UDA?
Yes

In a Historic District?
Yes (partial)

N

350 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 41: RCI-09 Site Summary

RCI-11: COUNTRYSIDE

As described in the 2011 Countryside Master Plan, the City of Roanoke purchased the Countryside Golf Course property in November 2005. The golf course was closed in winter 2010 and City planning staff initiated a public participation process to identify potential reuse options. The Plan recommends the property be developed as a new mixed use neighborhood set within the context of other neighborhoods and existing development, which is consistent with and implements the Vision 2001-2020 Comprehensive Plan and the Strategic Housing Plan.

The Master Plan recommends residential uses including single family, townhouse, and mixed residential, for about 26% (35 acres) of the site that provide a variety of dwelling types to "allow people of different lifestyles, ages, family composition, income levels, and tastes to live in close proximity and to interact with one another."

The site is within two zoning districts – about 29 acres of is in the Recreation and Open Space (ROS) zoning district and 2 acres in the north portion of the site is in the Residential Mixed Density (RM-2) zoning district. The ROS district does not allow residential development. The RM-2 district allows single family, both detached and attached, townhouses, two-family, multifamily with 10 or fewer units, and mixed use by right and multifamily with 11 or more units by special permit.

The entire City is designated as an Urban Development Area which requires zoning to accommodate minimum residential densities as follows: four units per acre for single family; six units per acre for townhouses; and 12 units per acre for multifamily. 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 points to a need for a mix of housing types and price points in the City of Roanoke. This site, given its size and the planning that has already taken place,

could provide for the mix of residential described in the 2011 Plan. From a market perspective, this should include a mix of smaller single family homes, townhomes, and multifamily apartments. The key with this site (like Evans Spring) is to mix incomes and leverage city-owned land to secure more affordable housing options for residents. This is especially true for renter households who, on average, have lower incomes and are more impacted by housing cost burden.

Recommendations:

- Work to implement the Master Plan's vision. Consider rezoning options and development incentives. Consider subdividing parcels to create manageable development opportunities per the general land uses envisioned in the master plan.
- Issue various RFPs for private development of residential, office/ and neighborhood commercial areas as envisioned per the Master Plan.
- Negotiate development agreements to ensure the Master Plan's vision and design principles are closely followed.
- City should invest in public improvements concurrently with marketing development opportunities including construction of greenways, park amenities, athletic facilities, and environmental improvements.

RCI-11: Countryside

Image sources: USDA FSA, GeoEye, Maxar

Locality: City of Roanoke

Area (Acres): 31.28

Zoning District:
ROS (City of Roanoke)

Other Base Zoning:
RM-2 (City of Roanoke)

Zoning Overlay:
N/A

In a UDA?
Yes

In a Historic District?
No

N

590 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 42: RCI-11 Site Summary

CITY OF ROANOKE HOUSING STUDY

BARRIERS TO ADDRESSING HOUSING

To address gaps across the City of Roanoke'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 the city, there are several market-based barriers affecting housing which include:

- **Lower Household Incomes** – With a median household income of $43,028 and 30% of households having a median income of less than $25,000 a year, spending power on housing purchases or rents is limited for many. As housing prices and rents continue to climb, the need for affordable units grows. These units are often the most challenging to produce and require deep subsidy or regulatory relief plus a development entity that is knowledgeable about the financing, construction, and long-term management of affordable units. The lower incomes of many households in the city can be a market barrier to producing housing in a city environment where costs are often higher, and redevelopment is more prevalent.

- **Housing Prices and Comps** – With a citywide median sales price of $147,000, the construction of new single family homes or significant rehabilitation of homes in existing neighborhoods with lower housing values could be challenging for some developers/builders. Combining the purchase price of the house/land, demolition of the structure, and construction of a new home could put the sales price of the new home above localized comps in the neighborhood. This may make it financially challenging for a developer or builder, as well as for the financial institution backing the loans. From the buyer's perspective, it may be challenging to obtain an acquisition and rehabilitation loan if the value of the home plus the value of renovations exceeds local neighborhood comps.

- **Fewer Opportunities for Greenfield Development** – Roanoke is an older, more established locality compared to other parts of the region like Franklin and Roanoke Counties, as such much of the city has been developed over time. There are fewer large, vacant tracts of land available to support development which in turn guides efforts toward redevelopment of existing land and buildings. With most redevelopment efforts, a certain level of development intensity is necessary to create financial returns the market will accept. This requires proactive zoning and good communication with the community about the benefits of redevelopment projects.

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 city. 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 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 neighborhoods, building on in-fill lots, or undertaking new development is a barrier. The cost of land, materials, and construction are significant, especially with the topographic challenges in parts of the city and the availability of infrastructure and utilities. The risks associated with larger projects 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.

- **Funding 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 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, 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:

- **Integrating Affordable Housing** – The city's zoning ordinance allows a wide range of housing types across many different zoning districts with favorable lot sizes, lot coverage, and heights that generally match the historic development patterns of neighborhoods. Integration of affordable housing can be challenging in markets where housing prices (sale or rents) are not enough to subsidize the inclusion of affordable units on its own. There may be a need for the city to revisit zoning regulations and permitting processes to look for ways to offset the inclusion of affordable units through mechanisms like a density bonus, expedited permitting, or reduced fees.

- **Design District Regulations** – The city has designated specific neighborhoods for priority conservation areas or targeted rehabilitation. Neighborhoods like Melrose-Rugby, Washington Park, Evans Spring, and Morningside fall under the city's Rehabilitation designation, but are also covered under the Neighborhood Design District Overlay. This overlay district was designed in response to neighborhood concerns that new construction was incompatible with the design features of existing homes. The Design District principles specifically address building location and massing, roofs, entrances and windows, siding, and porches to ensure design mimics features common to the neighborhood. Given the lower housing values in Roanoke, the city may wish to audit the Design District standards and determine if any create a financial barrier to either significant rehabilitation efforts or new construction.

- **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 city'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 all 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 city.

- **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. The City of Roanoke 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 city 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 the city, partnerships between local government, affordable housing providers, institutions, employers, non-profits, Virginia Housing, Virginia Department of Housing and Community Development, and the RVARC will be critical to addressing housing needs going forward.

CITY OF ROANOKE 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 city-wide 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 the city'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 city 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

The city and its local partners should consider zoning changes that allow and potentially incentivize new housing types where appropriate. The city'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. If the city 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.

REVIEW OF PROPOSED VIRGINIA HOUSE OF DELEGATES LEGISLATION AND LOCAL REGULATIONS

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 city 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 city from rural areas to vacant land along transportation corridors to downtowns with mixed use and upper story residential. The review and comment on three House of Delegates bills from the 2020 Session of the Virginia General Assembly, regulatory

reviews, and recommendations included here should be considered by the city and local partners to help diversify housing types and address housing affordability at different price points.

HB 151 - Accessory Dwelling Units (Near-Term)

An accessory dwelling unit (ADU) is an independent residential living area that is on the same000 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

HB 151, offered in January 2020, requires all localities to allow for the development and use of one accessory dwelling unit per single family dwelling, notwithstanding any contrary provision of a zoning ordinance. Localities can regulate the size and design of ADUs through an approval process provided the regulations are not written in an excessive or burdensome way that would unreasonably restrict a property owners ability to create the ADU.

ADUs in Roanoke 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

HB 151 leaves much of the regulatory powers to the locality to define how ADUs will be implemented and in what zoning districts. Other states, such as New Hampshire, have taken similar actions where ADUs must be allowed by localities. New Hampshire however followed up with a detailed guide for localities to help with the implementation of ADUs in their community.[12] While HB 151 does create statewide legislation enabling the creation of ADUs in all communities, it does not provide the guidance needed to craft an ADU policy that reflects the nuance of each community's built environment, lot sizes, housing needs, infrastructure capacity, and more. In addition to the regulation, Virginia should follow up with a detailed guidebook for localities of different sizes to offer model language for zoning codes, educational materials for residents, property owners, and staff, and ideas for successful integration of ADUs in to the fabric of existing neighborhoods. In addition to the regulations the city would need to adopt, it may also be worth considering the development of 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 City.

HB 152 – Missing Middle Housing Choices (Near-Term)

The housing market study and focus group interviews point to a desire for what is often termed "missing middle housing" which can be defined as a range of residential buildings with multiple units that are generally compatible in scale and form with detached single family homes in the neighborhood. Throughout the city there are already neighborhoods and zoning districts (like RM-1 and RM-2) that allow for and currently offer a range of housing types. However, these zoning districts tend to serve as transitions between the more intensely developed Downtown area, commercial, and industrial corridors and the residential districts that allow primarily single family dwellings (RA through R-3).

The goal of HB 152 is to allow a diversity of housing types across residential districts to provide housing choice in more neighborhoods, some of which may have been previously inaccessible to households at or below a certain income. This may also provide improved access to higher performing schools, transportation/public transportation, grocery stores, childcare, jobs, and public amenities like parks and open space. HB 152 leaves much of the implementation to localities so long as zoning is not used to impose restrictions that discourage the development of all missing middle housing types. HB 152 provides localities with the regulatory backing at the state level needed to push forward the integration of different housing typologies in predominately single family neighborhoods. Like the recommendation for ADUs, the city may wish to consider pre-approved designs for different housing types to ensure new residential structures are integrated into neighborhoods in as seamless a way as possible.

This study and accompanying market study points to the need for diversified housing types across each locality within the larger region to accommodate differences in personal preference for housing, market demand for a variety of housing types particularly for the older and younger generations and offering housing at a variety of price points that are affordable to a wider range of households. HB 152 as written would help push localities to adopt what may otherwise be

[12] Accessory Dwelling Units in New Hampshire, 2017. https://www.nhhfa.org/wp-content/uploads/2019/08/NHHFA_ADU_Guide_final_web.pdf

considered politically difficult, if not impossible. This approach was recently adopted in Minneapolis, Minnesota where the city is trying to remedy decades of exclusionary zoning and rising housing costs.[13]

HB 545 – Inclusionary Housing (Near-Term)

To advance affordable housing, HB 545 (as proposed January 8, 2020) is divided into three primary groups that are intended to work together and build on one another. These sections include:

- Sections A and B – adoption and periodic update of a housing plan.
- Sections C and D – creation and enforcement of inclusionary housing programs and implementation measures and tools.
- Sections E, F, and G – creation of a local advisory committee and approaches for providing units.

HB 545 provides a wide range of powers to localities for the purposes of creating, incentivizing, regulating, and tracking affordable housing over time. The process begins with the creation and adoption of a housing plan to address the safe, sanitary, and affordable shelter for all residents. The plan must include elements like linkages between jobs and housing affordability, access to transportation, access to public amenities, methods for preserving and increasing affordably priced housing, and reviewing regulations and policies to ensure they do not concentrate poverty or limit choice based on income. The adopted plan must be submitted to the Department of Housing and Community Development and updated at least every five years.

HB 545 also provides a diversity of regulatory, policy, and programmatic options for localities to advance the production and preservation of affordable housing. Options include density bonuses as an offset for affordable housing, monetary contributions to a housing trust fund, integrating a variety of housing types through zoning, specific set asides of affordable housing as part of a development project (inclusionary zoning), and financial incentives to promote the creation of affordable units. HB 545 leaves the selection and implementation of affordable housing tools to the locality which allows for each city and town to tailor responses to local need and context.

For the City of Roanoke, HB 545 would require the creation of a local housing plan with specific recommendations and programs for how the city would address housing affordability issues over time. The bill provides many options for addressing housing issues but leaves much of the implementation work to the city. While many of the tools suggested in HB 545 are consistent with the findings of this study and would help address gaps in affordability, there needs to be additional resources (technical assistance, financing, educational materials) provided by the Commonwealth to help localities with these planning and implementation efforts. This is particularly true for those looking to adopt inclusionary zoning. Understanding what additional financial costs development can shoulder and how to tailor regulations to the market are critical in designing a program that can deliver units without shutting down the development pipeline.

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[13] Rezoning History, Influential Minneapolis Policy Shift Links Affordability, Equity. https://www.lincolninst.edu/publications/articles/2020-01-rezoning-history-minneapolis-policy-shift-links-affordability-equity#:~:text=With%20the%20arrival%20of,directly%20to%20lasting%20racial%20inequities.

Policy and Coordination Strategies

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

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 city 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 City and local partners should create market materials advertising the preeminent development sites to the development community and make a determined effort to market the City 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 City 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 City Land for Housing Production (Near - to Mid-Term)
Disposing of available City-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 City, 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 city 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 city, a successful housing strategy also relies on the ability to maintain the affordable housing that exists today. One way the City 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 City 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 (LIHTC) funds which gives a right of first refusal to non-profits who wish to purchase the units/buildings to preserve affordability restrictions. The City 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 City 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 City 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 City 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 and the larger region what it is today.

Consider Inclusionary Zoning (Near-Term)

Inclusionary Zoning (IZ) is a policy used to create affordable housing by requiring developers to include a specific percentage set aside of below-market units as part of a market-rate rental or ownership development. The IZ policy effectively leverages private market investment to create new affordable units with very little (if any) public subsidy. IZ is also an effective way of integrating affordable units across a community to provide opportunities for housing choices in neighborhoods where lower-income households may not have otherwise been able to afford. Resource-rich areas/neighborhoods may have access to better schools, healthcare options, transportation choices, and open spaces. Diversifying the locations of affordable housing may offer new opportunities to households who previously had limited choice.

Inclusionary zoning policies are typically classified as one of two types: mandatory or voluntary. In mandatory policies, affordable units must be included in all proposed developments that fit within the parameters of the policy. Voluntary policies rely on negotiations and offsets which function as incentives to encourage developers to provide affordable units.

The city should consider what type of policy it wishes to advance, and if it is a codified mandatory IZ policy then the city should also consider conducting a feasibility analysis will allow the city to understand what changes could be supported by market-rate residential development and which changes may slow the pace of development. The financial modeling exercise can help in the crafting of new IZ language and should include the following considerations:

- What size development should IZ be applied to?
- Where should IZ be applied in the city?
- What percentage of units should be set aside?
- Should the policy cover both ownership and rental projects?
- Should the city have a payment in-lieu option to collect money for the Affordable Housing Trust?
- What income levels should the units target?
- Should there be a tiered system for affordable units where fewer but more deeply affordable units are required versus more units at a higher income level?
- What incentives or offsets should the city offer?

Concurrently, the city could work with the entity conducting the feasibility analysis to craft an IZ policy that responds to the feasibility findings. This can help ensure changes to the IZ policy will not discourage private investment thereby reducing affordable housing production.

Partner with the Housing Authority (On-Going)
The Roanoke Redevelopment and Housing Authority (RRHA) owns and operates some of the only deeply affordable housing in the City/Region and has the knowledge and experience to be a valuable partner on public/private partnerships to produce additional units at a variety of income levels. Going forward, the City and local partners should continue to bring value in its financial resources, access to publicly owned land, and staff resources that could help augment the RRHA's knowledge of affordable housing funding, programs, construction, and operations and maintenance. The City and Housing Authority should have open communication and discussions involving the purchase/use of land, pooling of resources, and engaging private sector developers to look for ways of creating additional mixed-income housing as way to both modernize and expand affordable housing across the city.

From the City side, continued assistance with expedited permitting of future affordable housing developments will be very helpful to keep approval times shortened. City engagement early in the design process and site plan layout are also helpful to limit iterations which cost time and money.

Encourage Universal Design (Near-Term)
Given the increases in the senior population, the City 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 City and local partners should consider advancing both the development of housing as well as the upkeep and maintenance of existing housing.

City 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 city 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 the City of Roanoke, 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 city 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 the City of Roanoke, this is could be the Planning, Building, and Development Department which is already engaged in planning, development, and housing efforts. The city 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 cities in Virginia like Richmond, Alexandria, Charlottesville, and Norfolk have established and capitalized local housing trust funds.

Residential Rehabilitation Program (Near-Term)

In many parts of the City 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. The City currently uses a portion of its Community Development Block Grant (CDBG) funds to cover several rehabilitation programs for owner-occupied housing. The City's HUD FY 2020-2021 Annual Action Plan identifies funding for emergency home repair, limited rehab within the Belmont-Fallon and Melrose-Orange Target Areas, and major rehab in the Melrose-Orange Target Area. Between these three funding allocations, the City and its partners estimate up to 28 structures can be addressed with 1-2 structures receiving major rehab funds.

These residential rehabilitation programs are critical in assisting homeowners with the cost of rehabilitation through no – or low-interest rate loans that can be applied to specific repairs the structure may need. In a city like Roanoke, where housing values are low and structures are old,

rehab needs could quickly outpace funds and capacity leaving households with limited options to address deficiencies. To stretch funds further, the City should consider the creation of a revolving loan fund where some households (based on income) would be required to pay back to the loan at little or no interest to keep the fund capitalized allowing for multiple rounds of awards throughout the year. Money leveraged through other funding sources could also be applied to this program and repaid to the AHT over time.

Given 48% of the city's housing stock is renter-occupied, some consideration should also be given to the creation of a rehabilitation program for investor-owned properties. Tenants do not have the same ability to address deficiencies as homeowners do, relying instead of landlords or even city intervention if conditions worsen. A rental rehab program could benefit both property owners and tenants and could be coupled with a rental registry program or routine inspections of rental units over time. The rental rehab loans should have a requirement to be paid back over time, but repayment terms could be scaled to the income of the property owner or even affordability restrictions placed on the unit(s) itself.

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 City and local partners should continue to offer the down payment assistance program funds of up to $8,000 per household and possibly look for ways to leverage down payment assistance programs offered by Virginia Housing. The City 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 City 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 City 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 City 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 city may be impeded by a lack of available infrastructure or infrastructure that has fallen into disrepair. The City already commits a percentage of its annual CDBG funds to infrastructure improvements in targeted areas and this should continue over time. The City should also look at ways to leverage local infrastructure dollars against regional, state, or federal funds to increase the impact of local investments. In a place like the City of Roanoke, the emphasis may be more on repairs, aesthetics, and upsizing utilities compared to locations in the city where infrastructure may not exist and needs to be extended.

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

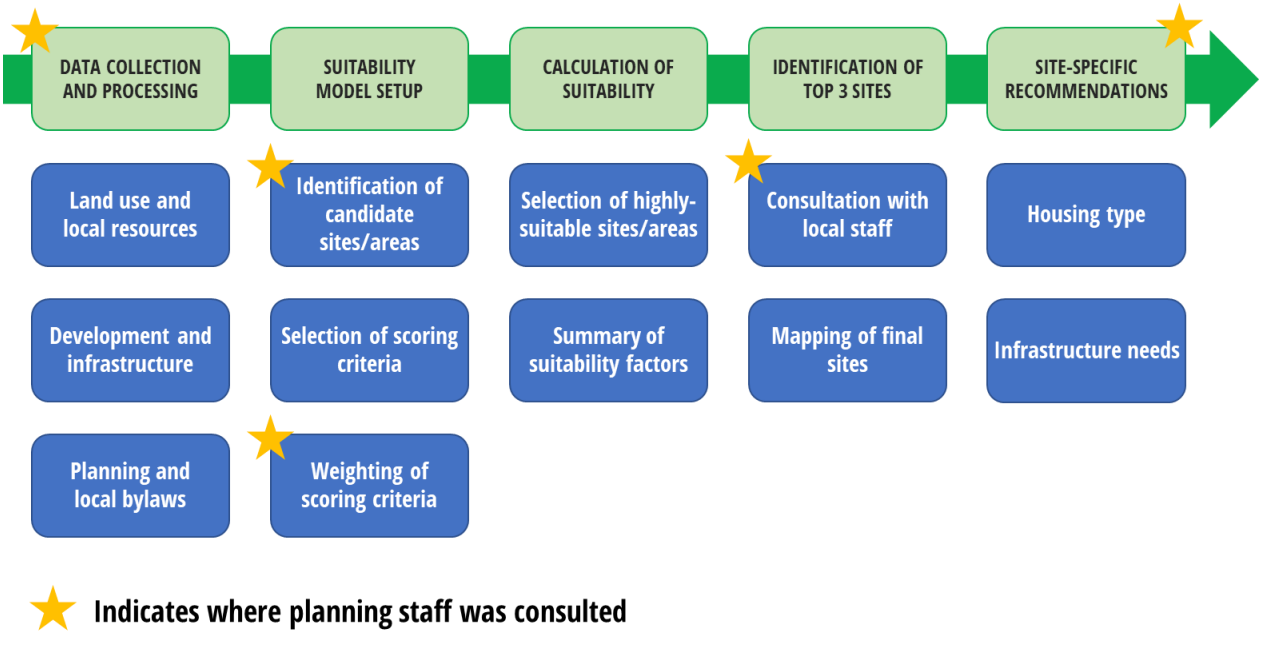

Figure 1 Land suitability model process

critical points where local feedback was solicited on the model inputs and results.

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

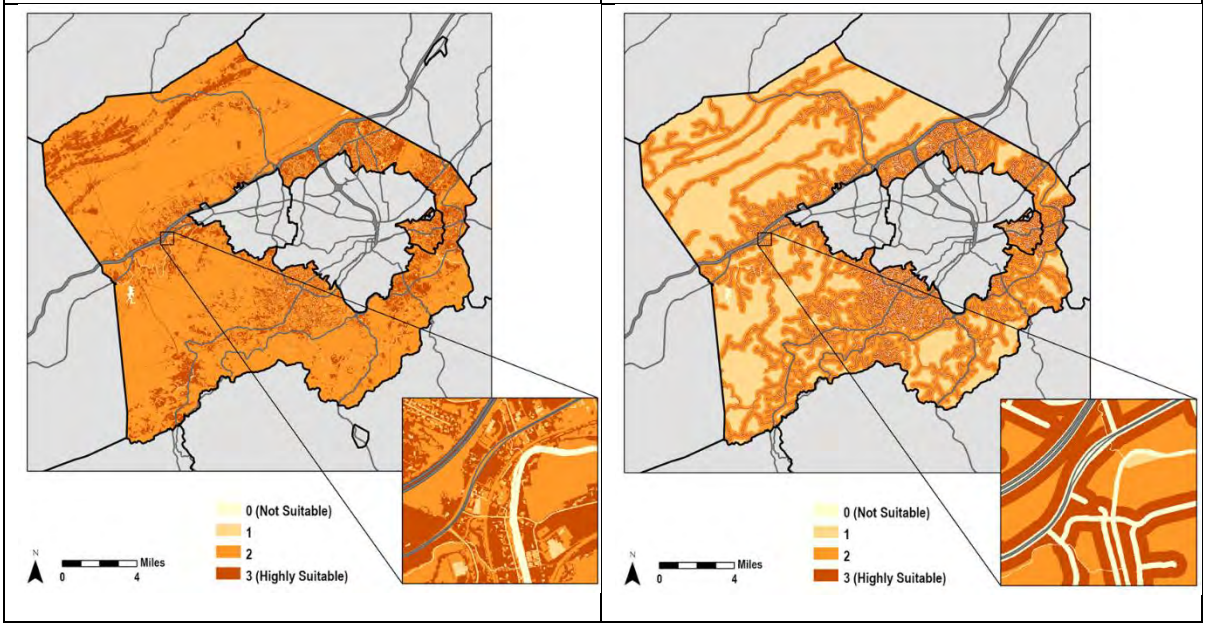

Figure 3 Land suitability score examples

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 2 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
# includes zoning ordinances for Town of Vinton and Town of Rocky Mount				**Number of Criteria:**	**13**	**12**	**16**	**15**
** 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 3 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.

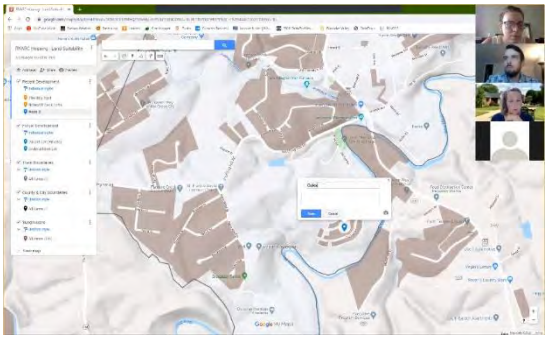

Figure 4 Mapping potential development areas

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	

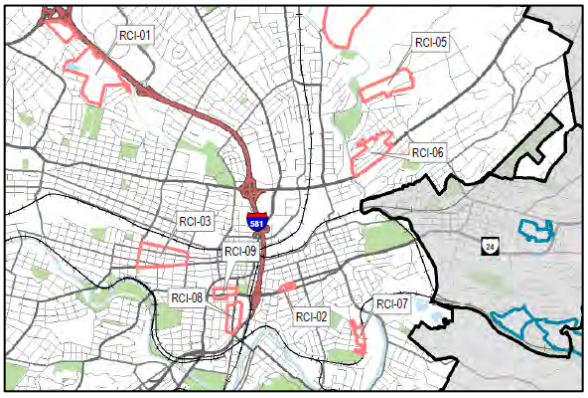

Figure 5 Development site validation and delineation

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.