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# Understanding the Jobs-Affordable Housing Balance in the Richmond Region

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# Understanding the Jobs- Affordable Housing Balance in the Richmond Region



**VCU** L. Douglas Wilder School of  
Government and Public Affairs  
Center for Urban and Regional Analysis

Made possible with support from The Community Foundation Serving Richmond and Central  
Virginia and the Richmond Association of REALTORS

**July 2017**

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*Prepared for and with support from*

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Richmond Association of REALTORS

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## Table of Contents

Executive Summary.....	1
Recommendations.....	3
Introduction .....	4
Jobs and affordable housing .....	4
Measuring jobs-housing balance .....	4
Approach 1: Thiessen model.....	6
Thiessen Model results: modest-wage jobs and affordable-housing units.....	9
Approach 2: gravity model.....	13
Neighborhood studies.....	19
Summary of findings .....	19
Brandy Hill Apartments, Hanover County.....	21
Broadwater Townhomes, Chesterfield County.....	24
Waterside at Ironbridge, Chesterfield County.....	27
Townes at Meredith Creek, Henrico County .....	30
The Village at Willow Run, Henrico County .....	33
Foxwood Apartments, City of Richmond .....	36
Summary of findings .....	39
Recommendations .....	41






## Executive Summary

The mismatch between location of jobs and housing has a significant impact on the efficiency and quality of life within metropolitan areas. A well-planned region strives to be a “community of short distances.” A wide range of housing choices located close to employment centers could shorten commuting distances and substantially reduce government outlays for transportation facilities, reduce household transportation expenses, and increase feasibility of pedestrian movement. These needs are particularly important to families earning modest wages.




CURA, with support from The Community Foundation Serving Richmond and Central Virginia and the Richmond Association of Realtors, has analyzed the spatial pattern of lower-wage jobs and lower-cost housing within the Richmond Metropolitan Statistical Area (MSA). The analysis reveals how low-cost housing and modest-wage jobs in the Richmond region are not well-balanced. Few areas in which modest-wage jobs cluster have comparable levels of low-cost housing (the green areas in Figure 1). The established suburban areas north, west, and south of Richmond’s urban center have a large number of retail and service jobs that pay modest wages, yet these areas provide few affordable-dwelling units for these wage earners. The large suburban donut (see blue shaded areas in Figure 1) contains over 67,000 more modest wage jobs than lower-cost housing units.

Figure 1: Jobs-Housing Ratio

### Jobs-Housing Ratio

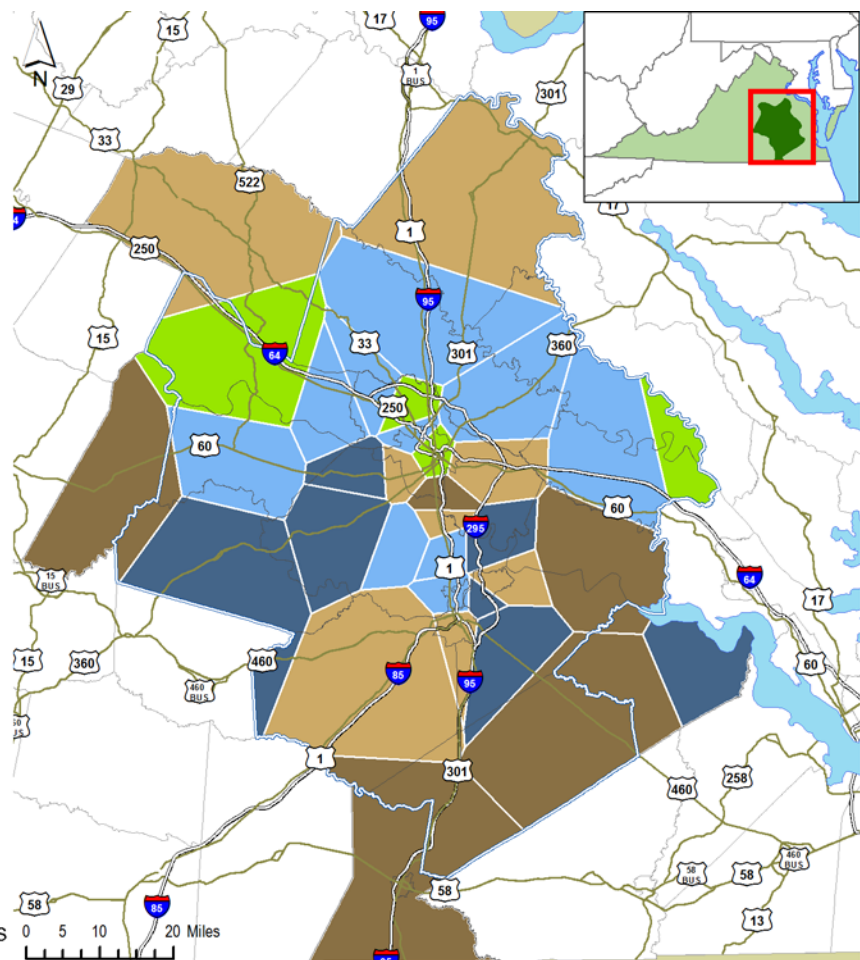
-  Housing rich (0.50 and under)
-  Housing plus (0.51 to 1.00)
-  Balanced (1.01 to 1.50)
-  Jobs plus (1.51 to 3.50)
-  Jobs rich (3.51 and over)

### Features

-  Interstate
-  US Hwy
-  Richmond MSA



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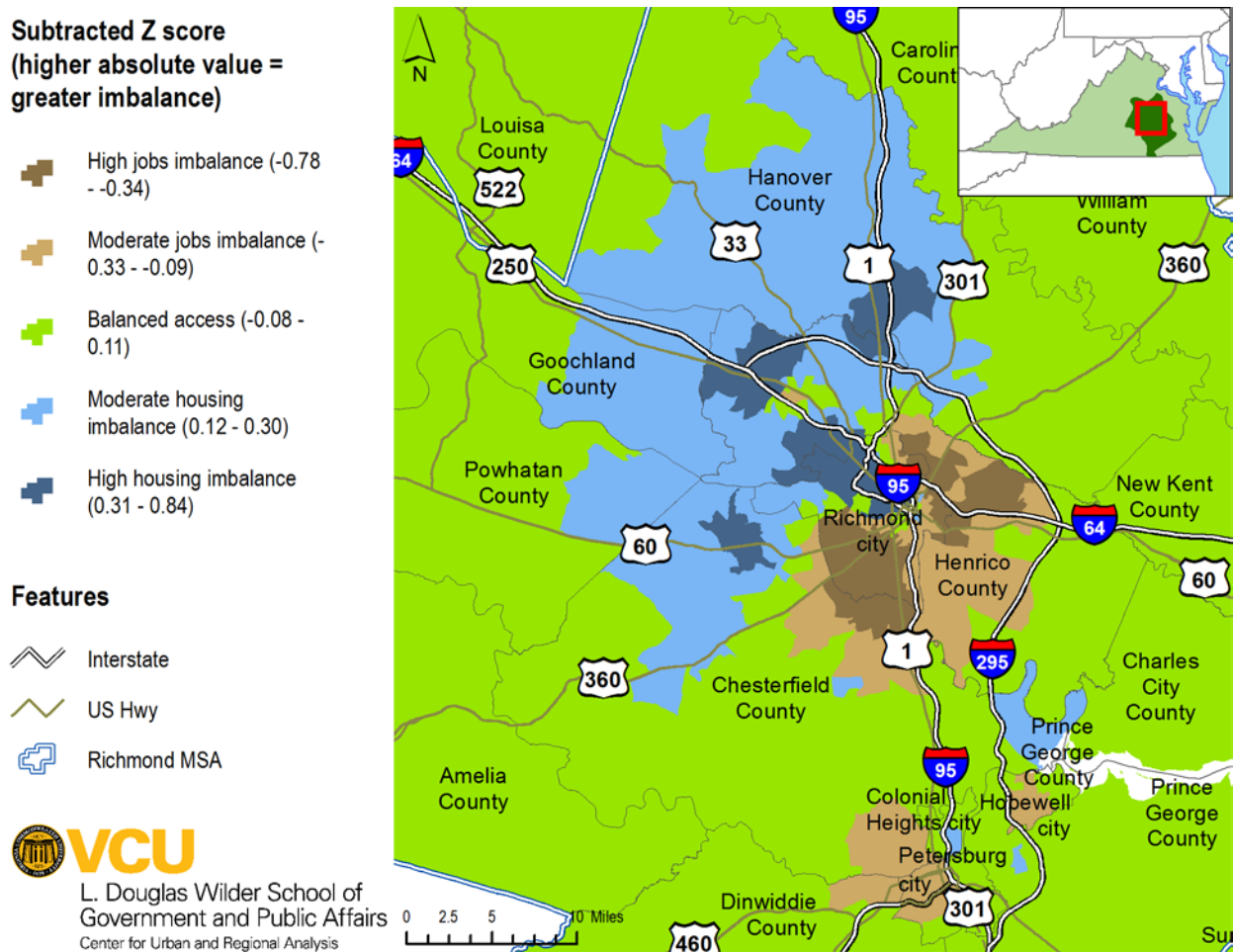


Brown-shaded areas in Figure 1 have a preponderance of lower-cost housing units. The Route 1 Corridor in South Richmond and Northern Chesterfield County, The Chippenham Parkway Corridor, Highland Springs-Sandston area and the outer-rural areas of the region have a high ratio of lower-cost housing.

The geographically-limited GRTC bus network provides access to 52 percent of the region’s lower-cost housing units and 45 percent of the modest-wage jobs within 0.25 miles of a transit stop.

A more detailed analysis calculating accessibility to lower-cost dwelling units and modest-wage jobs for each Census block group in the region revealed a similar pattern (see Figure 2). Modest-wage job accessibility dominates along the Broad Street corridor (US 250) and west into established suburbs. Access to lower-cost housing is notably higher than job access in south and east Richmond, the Highland Springs area of Henrico County, and the cities of Petersburg and Hopewell.

Figure 2: Jobs-Housing Access Imbalance



The second part of this study addressed a major obstacle to the construction of new, affordable-housing units: fears. Many new, affordable dwelling units, by financial necessity, will be built at higher densities and smaller size to reduce cost. Homeowners in nearby neighborhoods often oppose construction of these units over fear of reduced property values, higher crime, and other factors. Six higher-density,

lower-cost housing projects were studied for their impact on the nearby middle-income neighborhoods. Documentation of home sale prices, assessment values, and crime rates before and after construction of the more affordable dwelling units did not reveal any notable long-term impact on crime rates, property values, or property sales.

Two focus group discussions were held with community leaders in Chesterfield and Hanover counties, who voiced concerns about the impacts on crime, property values and reputation of the area schools. Participants agreed that more affordable housing should be located close to jobs, parks, and services to provide good access and quality of life for residents.

## Recommendations

This analysis provides strong guidance for the future location of affordable housing and businesses providing modest-wage jobs. To provide new affordable housing in close proximity to modest-wage jobs, the following areas are noted for future affordable housing units:

### High Priority

- Broad Street Corridor—from Richmond’s central business district to Glenside Drive in Henrico and the Short Pump area
- Chesterfield Towne Center area along Route 60

### Secondary Priority

- Route 360 W from Route 288 west, Meadowville Technology Park Area, Route 1 Corridor North, Colonial Heights, Chesterfield Courthouse Area

The following areas are high priority locations for creating access to jobs—through proximity or through transportation:

- Route 1 South in Richmond and Northern Chesterfield
- Chippenham Parkway Corridor
- Airport-White Oak Technology Park
- Petersburg
- Hopewell

Extension of public transit into suburban areas with a high concentration of modest-wage jobs is recommended to increase lower-income household access to jobs. Construction of sidewalks in areas of job concentration would also improve access.



## Introduction

The spatial relationship between workplace and home offers an understanding of the commuting patterns within a region and a window into the day-to-day lived experiences of its population. The proximity of jobs to one's home dictates not only how far a person must walk, bike, or drive each day; for many families, it determines whether employment is even available. Transportation costs can limit the distance a person may commute, particularly for more modest-wage jobs.

In a larger economic region, the jobs-housing relationship should be relatively balanced. Assuming that the vast majority of jobs in an economic region are held by workers who live in that economic region, the number of jobs and the number of housing units are balanced. A self-contained region in which people live and work, such as a metropolitan statistical area, presents an ideal scale for measuring the jobs-housing balance differences among subareas.<sup>1,2</sup> Subareas of a region may have imbalances. Higher-cost suburban neighborhoods may not provide sufficient affordable housing to meet the needs of modest-wage workers at nearby service-oriented jobs, or neighborhoods with higher concentrations of affordable housing may not be proximate to modest-wage jobs. An imbalance of modest-wage jobs and affordable housing presents a challenge to workers, but it also presents an opportunity for community planners.

With that in mind, CURA—with support from the Community Foundation and the Richmond Association of Realtors—has set out to better describe the spatial relationship between modest-wage jobs and housing that is affordable to modest-wage households in the Richmond region.

This study provides a geographic analysis of the location of, and relationship between, the region's affordable housing and modest-wage jobs. The analysis provides a factual basis for recommending target areas for the development of additional affordable housing units or the attraction of businesses.

The report provides two models through which the spatial relationship between jobs and housing units may be interpreted, and through those models it identifies areas in which a lack of balance or equity in access should be addressed. Following that, case studies attempt to address some of the biggest fears expressed by opponents of affordable-housing developments: crime and property values. The report then suggests steps that may be taken to incorporate this understanding of the region's jobs-housing balance into long-term strategies and solutions.

## Jobs and affordable housing

### Measuring jobs-housing balance

Suburban development throughout the second half of the 20th century is typified by the shift of housing further from urban centers, resulting in longer commutes for residents of those suburban areas. However, the growth of suburban residential communities was followed by suburban workplaces. Unlike urban centers, where development is dense and land uses are often mixed, suburban development is low-density and generally single-use. The design of suburban residential neighborhoods, office parks, and

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<sup>1</sup> Robert Cervero, "Jobs-Housing Balancing and Regional Mobility," *Journal of the American Planning Association* 55, no. 2 (June 30, 1989): 136–50, doi:10.1080/01944368908976014.

<sup>2</sup> Genevieve Giuliano, "Is Jobs-Housing Balance a Transportation Issue?," University of California Transportation Center, Working Paper (University of California Transportation Center, 1991), <https://ideas.repec.org/p/cdl/uctcwp/qt4874r4hg.html>.

commercial centers in combination with low-density development has resulted in an urban form that promotes the use of automobiles to travel from residential uses to work and commercial uses.<sup>3</sup> Further, commuting patterns suggest that the jobs that have shifted to suburban areas are often not filled by the workers living in those areas.<sup>4</sup> The jobs-housing balance is intended as a measure to describe this relationship, the distance between workplaces and workers.

Jobs-housing balance for an area or subarea is often measured in one of three ways:

- Jobs-households ratio compares the number of jobs in an area to the number of occupied households (a measure of persons). This measure may be difficult to use, as it requires adjustment to account for the average number of workers per household.<sup>5</sup>
- Jobs-housing units ratio compares the number of jobs in an area to the number of physical housing units in an area, without regard to whether those units are occupied (a measure of structures). The American Planning Association recommends a target ratio of 1.3 to 1.7.<sup>6</sup>
- Jobs-employed residents ratio compares the number of jobs in the area to the number of employed residents in the area. The ratio should result in a one-to-one relationship in a self-contained economic region. The APA recommends a target range of 0.8 to 1.25.<sup>7</sup>

CURA has taken two methodological approaches to understanding the jobs-housing balance throughout the region. The first approach utilizes job-center districts created using Thiessen polygons (all points within each polygon are closer to the center of that polygon than any other district, establishing a region of influence for each job center). The second approach uses a gravity model in which each Census block group is scored based on its access—as a measure of quantity and distance—to modest-wage job centers and affordable-housing units. Those accessibility scores allow for a comparison of the magnitude of difference between access to jobs and housing in each area.

To identify low-cost housing units and modest-wage jobs, CURA utilized MetroView—a regional information and analysis system. The MetroView system has been developed in-house by CURA’s statistical team and allows for the aggregation of housing data at the parcel level and jobs data from the U.S. Department of Labor’s Quarterly Census of Employment and Wages (QCEW) at the establishment level (see examples of intermediate work in Figure 3). Low-cost housing and modest-wage jobs have been defined as those at or below the 34<sup>th</sup> percentile of all jobs and dwellings. This cutoff is based on the percent of the region’s households that are housing cost-burdened. That is, they spend more than 30 percent of household income on housing. This resulted in housing units assessed at \$109,000 or less in 2014 and jobs that paid an annual salary of \$27,664 or less in 2015.

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<sup>3</sup> Robert Cervero, “America’s Suburban Centers: A Study of the Land-Use-Transportation Link,” *U.S. Department of Transportation*, January 1988, <https://trid.trb.org/view.aspx?id=286645>.

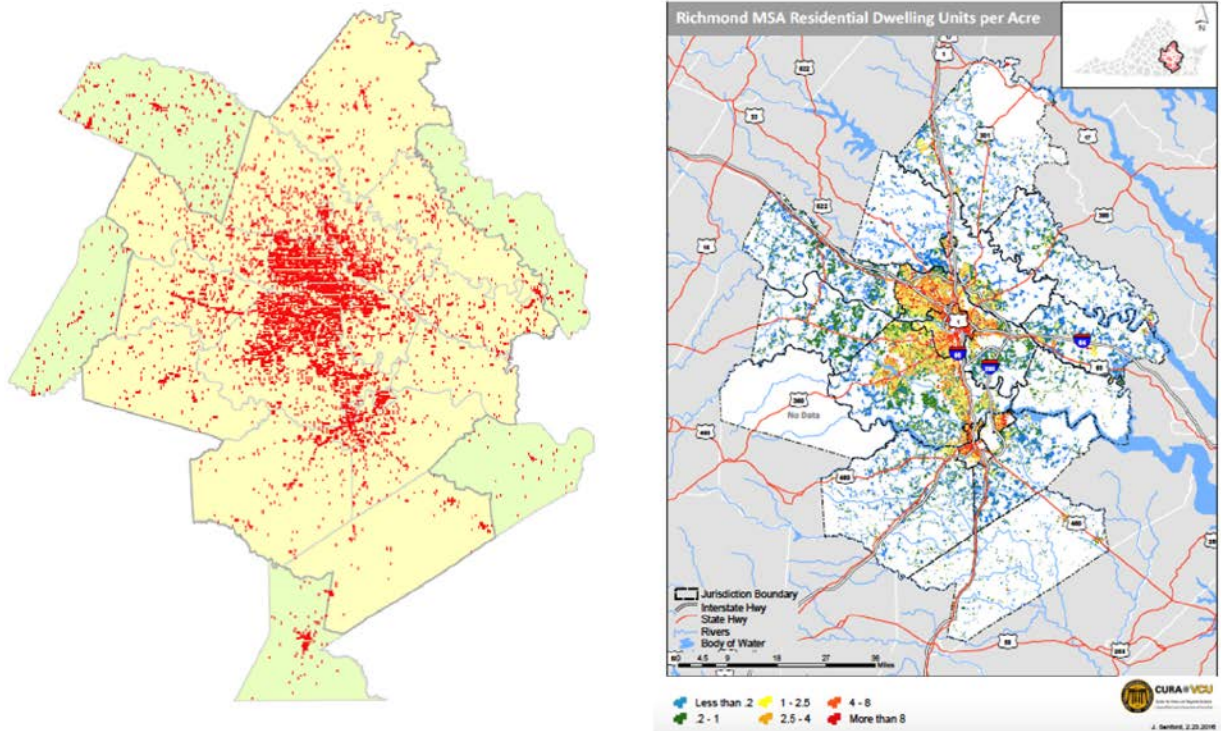
<sup>4</sup> Cervero, “Jobs-Housing Balancing and Regional Mobility.”

<sup>5</sup> Robert Cervero, “Jobs-Housing Balance Revisited: Trends and Impacts in the San Francisco Bay Area,” *Journal of the American Planning Association* 62, no. 4 (December 31, 1996): 492–511, doi:10.1080/01944369608975714.

<sup>6</sup> Fairfax County Department of Planning & Zoning, “Jobs-Housing Ratios: National Perspectives and Regional and Local Benchmarks” (Fairfax County, VA, 2012).

<sup>7</sup> Ibid.

Figure 3: Geocoded jobs and housing data from MetroView—intermediate steps prior to creation of Thiessen polygons



### Approach 1: Thiessen model

CURA’s Thiessen approach utilized MetroView’s jobs data to identify clusters and concentrations of jobs. Thiessen polygons were mathematically calculated and drawn around the center of each cluster. The resulting map (see the red boundaries in Figure 5) divides the Richmond region into 34 subareas. Any point within each subarea is closer to the center of that subarea than any other area.

Jobs and wage data were then summarized within each subarea. To determine the number of housing units in each subarea, CURA utilized MetroView’s parcel level assessment data, which allowed for an estimation of the annual cost of each unit.

Job and housing unit counts were aggregated in two ways. First, total jobs and total housing units allowed for a broad understanding of the jobs-housing balance of each subarea. Second, CURA identified modest-wage jobs and affordable-housing units by examining those at, or below, the 34<sup>th</sup> percentile of all jobs and housing units by wage or cost. As noted earlier, the 34<sup>th</sup> percentile cut-off was determined as a function of the percent of households experiencing housing-cost burden in 2014.



A table of the results, Figure 4, breaks down the jobs-housing ratio and gap for job centers as identified through the Thiessen model.

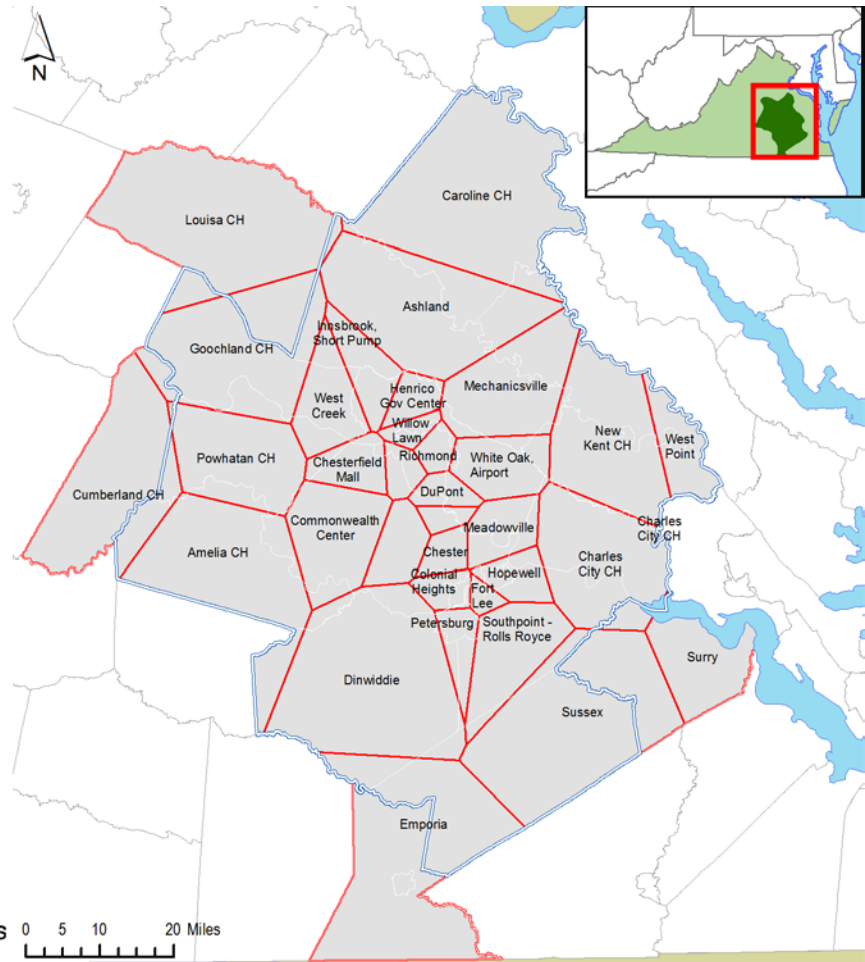
Figure 4: Table of Thiessen-based job centers

Job center Thiessen polygons	Modest wage jobs	Low cost housing units	Jobs-Housing Ratio	Jobs-Housing Gap	Low cost single family units	Low cost multi family units
Ashland	10,649	3,483	3.06	7,166	958	2,525
Richmond	34,228	31,312	1.09	2,917	11,187	20,125
Willow Lawn	17,713	7,780	2.28	9,933	739	7,041
Meadowville	3,228	837	3.86	2,391	349	488
Henrico Gov Center	21,734	14,573	1.49	7,160	806	13,767
Innsbrook, Short Pump	18,642	10,422	1.79	8,220	61	10,361
West Creek	3,181	1,890	1.68	1,292	69	1,821
Chesterfield CH	6,081	1,985	3.06	4,096	333	1,652
White Oak, Airport	11,458	16,037	0.71	-4,579	7,694	8,343
Chesterfield Mall	13,346	3,266	4.09	10,080	386	2,880
Mechanicsville	8,724	5,271	1.66	3,453	1,517	3,754
Boulders	11,290	18,506	0.61	-7,216	4,883	13,623
Defense Supply Center	2,208	2,553	0.86	-345	615	1,938
Chester	4,981	2,996	1.66	1,985	543	2,453
DuPont	4,141	11,285	0.37	-7,144	4,871	6,414
Commonwealth Center	9,717	2,761	3.52	6,956	282	2,479
Fort Lee	3,358	419	8.01	2,939	419	0
Colonial Heights	7,591	3,470	2.19	4,121	2,628	842
Southpoint - Rolls Royce	1,758	458	3.84	1,300	458	0
Petersburg	4,284	6,045	0.71	-1,761	6,045	0
Sussex	923	2,172	0.42	-1,249	2,157	15
Emporia	2,544	5,091	0.50	-2,547	4,996	95
West Point	800	574	1.39	226	538	36
Hopewell	2,416	4,332	0.56	-1,916	4,237	95
Charles City CH	417	1,413	0.30	-996	1,413	0
New Kent CH	1,139	603	1.89	536	599	4
Louisa CH	2,615	2,813	0.93	-199	2,813	0
Goochland CH	1,258	1,163	1.08	95	1,163	0
Dinwiddie	2,618	4,475	0.59	-1,857	4,459	16
Powhatan CH	1,679	514	3.27	1,165	514	0
Caroline CH	1,758	2,480	0.71	-722	2,480	0
Cumberland CH	429	1,444	0.30	-1,015	1,444	0
Surry	497	5	99.38	492	5	0
Amelia CH	845	102	8.28	743	102	0
<b>Total</b>	<b>216,907</b>	<b>172,422</b>	<b>1.26</b>	<b>44,485</b>	<b>71,655</b>	<b>100,767</b>

Figure 5: Thiessen-based job centers

**Features**

-  Thiessen Job Centers
-  Richmond MSA



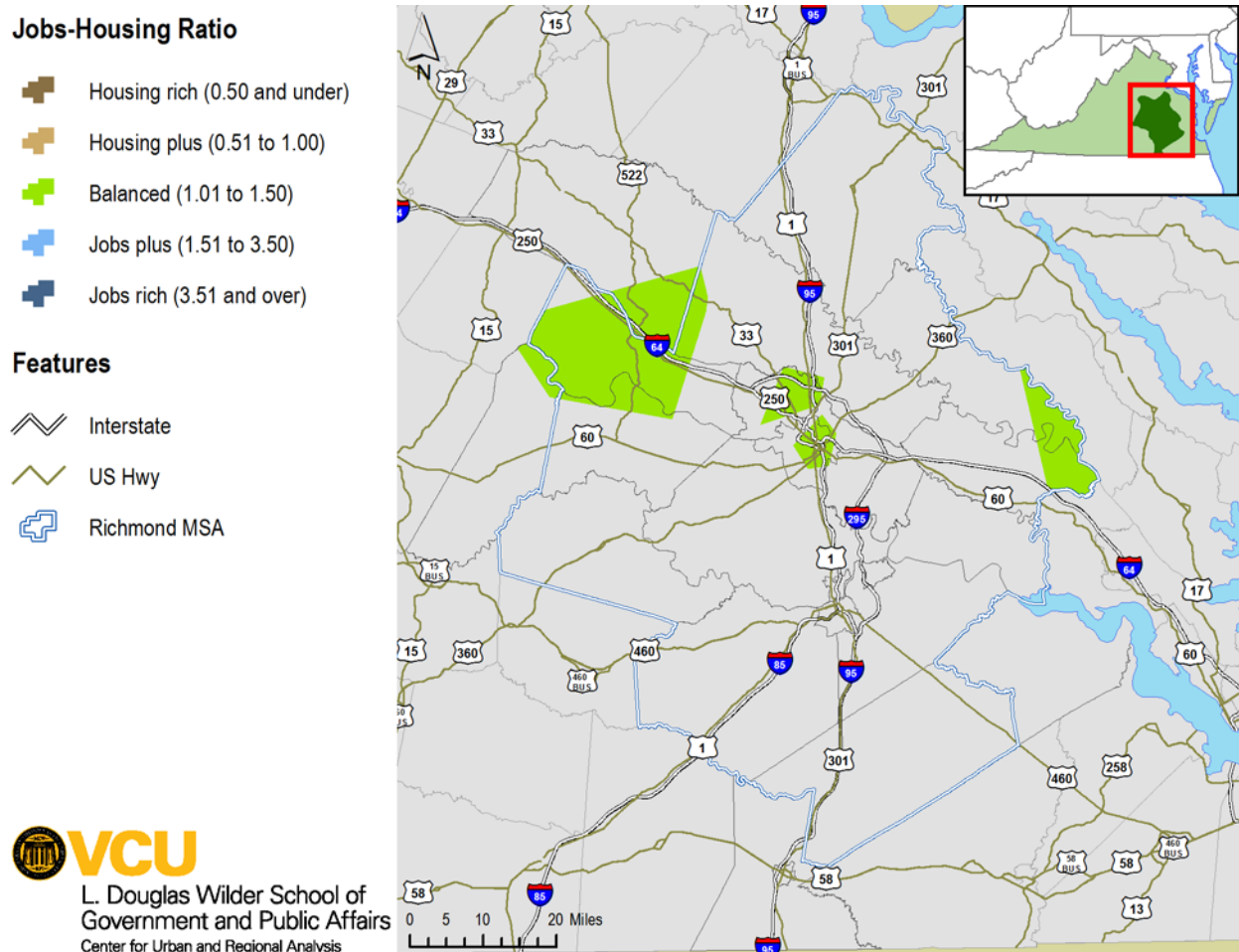
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## Thiessen Model results: modest-wage jobs and affordable-housing units

Focusing solely on lower-wage jobs and lower-cost housing units reveals imbalances where total jobs and total units appear balanced. Modest-wage jobs to low-cost housing ratios of 1.01 to 1.50 are presented as reasonably balanced around the region's overall ratio of 1.26. Where the ratio falls outside that range, jobs and housing units may be considered poorly matched or imbalanced. Although lower-cost housing and modest-wage jobs may be balanced overall, imbalances within subareas are unlikely to serve the housing needs of the workers at those jobs.

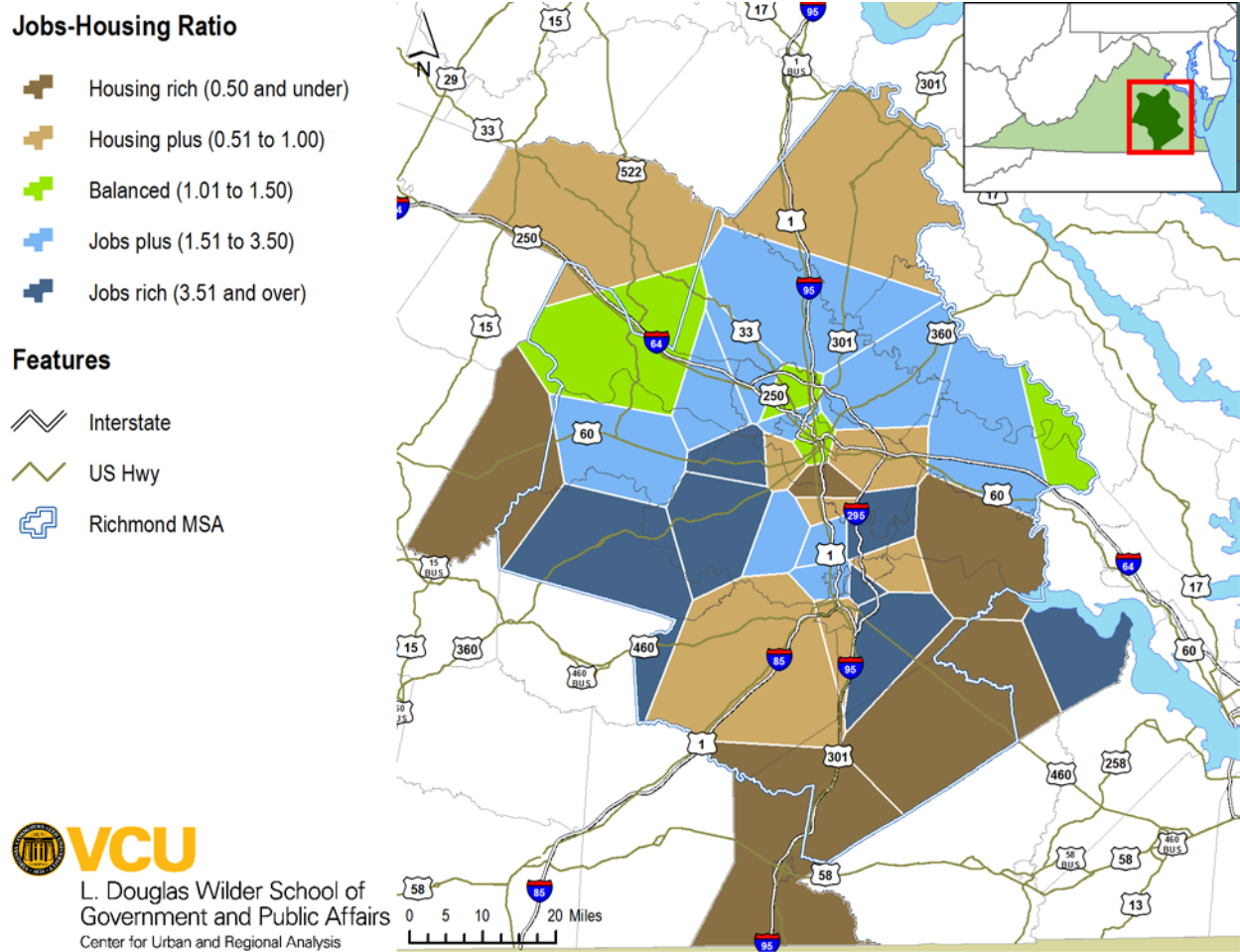
Richmond-region job centers with a balanced ratio of modest-wage jobs and lower-cost housing (see Figure 6) include two central locations along the Broad Street corridor (Henrico Government Center, Richmond city), and rural areas at the edges of the study area to the east and west (Goochland Courthouse, West Point).

Figure 6: Thiessen Model - Balanced Areas



Much of the region surrounding Richmond city could be considered modest-wage jobs plus or rich (see the blue shaded areas in Figure 7), meaning these areas have significantly more jobs than housing units. For example, Chesterfield’s Commonwealth Center—a housing-rich area when not limited to modest-wage jobs and lower-cost housing—has a greater than 3.5 ratio of modest-wage jobs to low-cost housing. This suggests that although the total number of housing units in that subarea is high, the number of affordable-housing units is relatively low compared to the number of modest-wage jobs in the area.

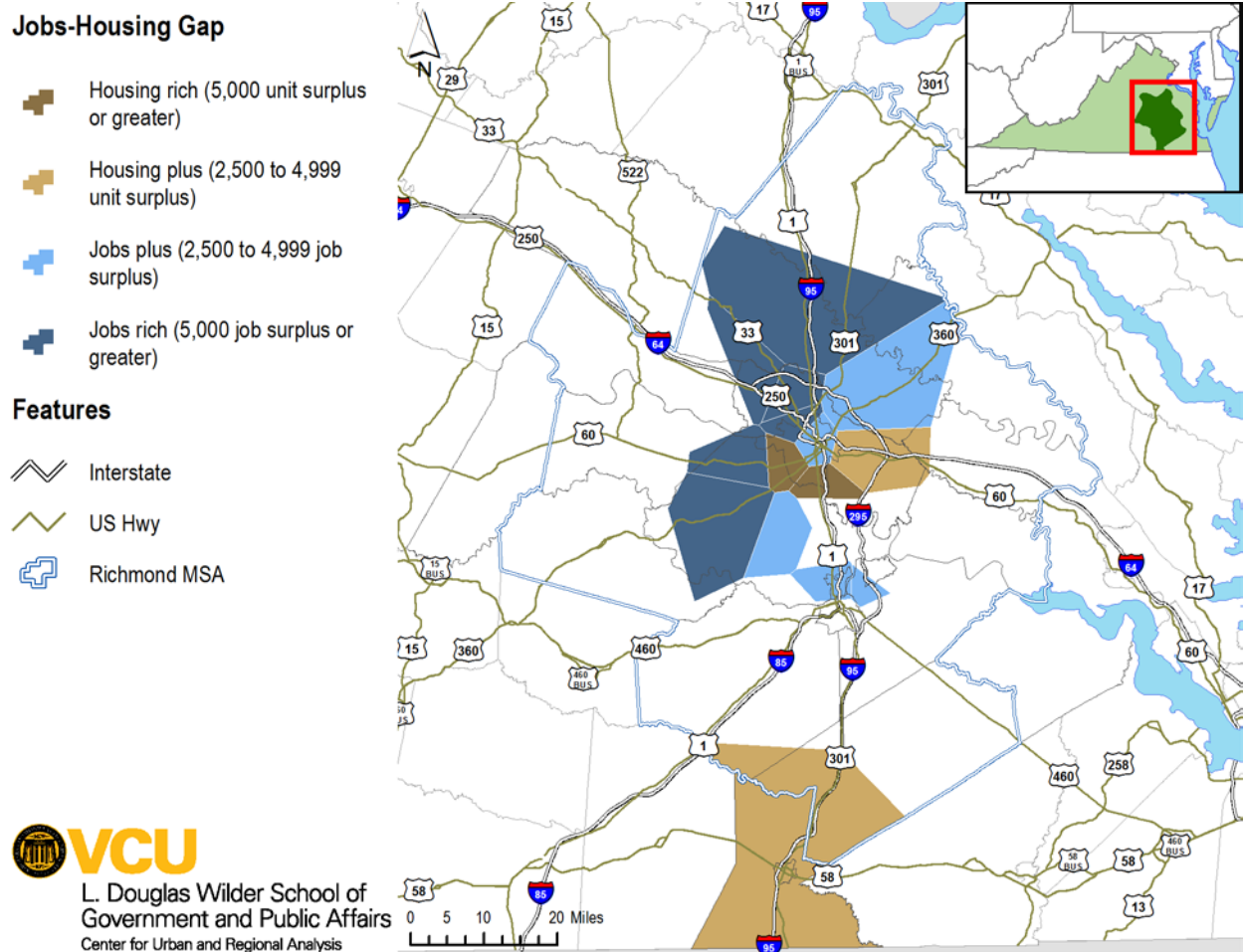
Figure 7: Thiessen Model - Jobs/Housing Ratio



On the other side of the ratio, South Richmond and some of the more rural areas further outside the center of the region exhibited an excess of low-cost housing units relative to the number of modest-wage jobs (see the brown shaded areas in Figure 7).

The density of housing in South Richmond adds a degree of significance to that imbalance. The numeric gap between modest-wage jobs and affordable-housing units offers an understanding of the magnitude of imbalance. CURA analysis indicates South Richmond has at least 5,000 more low-cost housing units than it does modest-wage jobs (see the dark brown shaded areas in Figure 8). Suburban areas to the north and west of Richmond city, stretching from Ashland to Chesterfield County, have a significant numeric surplus of jobs. The areas shaded dark blue in Figure 8 have at least 5,000 more modest-wage jobs than affordable-housing units.

Figure 8: Thiessen Model - Jobs/Housing Gap

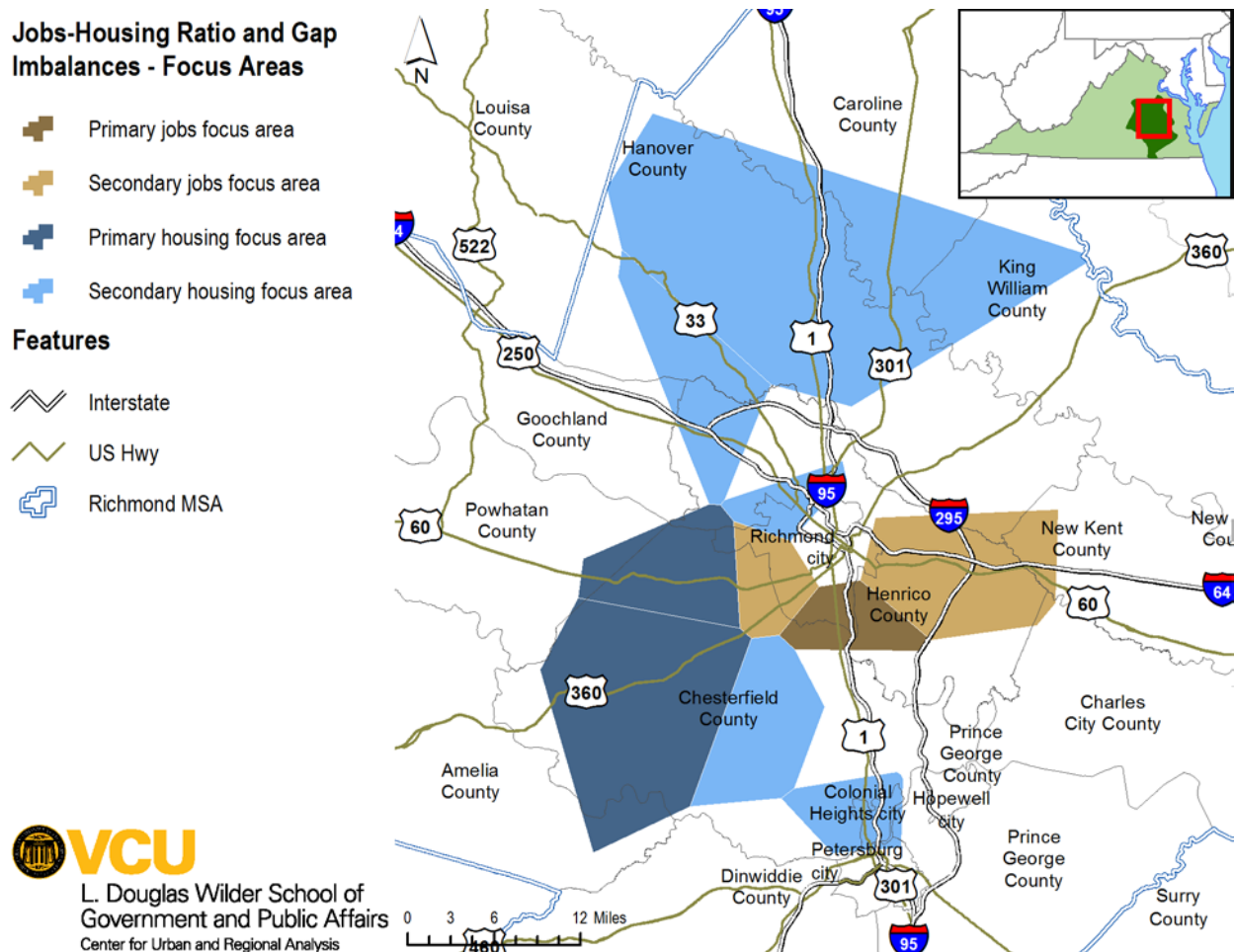




Combining ratio and numeric imbalances of modest-wage jobs and low-cost housing units offers areas of focus for housing, economic development, and transportation and transit efforts. Figure 9 shows primary and secondary focus areas for modest-wage jobs and low-cost housing units. These categories are designated as follows:

- Primary low-cost housing focus: areas with the greatest jobs-housing ratio (over 3.5) and the greatest numeric imbalance of jobs to housing units (5,000 or more jobs than housing units).
- Secondary low-cost housing focus: areas with the high jobs-housing ratios (over 1.5 but not more than 3.5) and high numeric imbalances of jobs to housing units (2,500 to 4,999).
- Primary modest-wage jobs focus: areas with the lowest jobs-housing ratio (0.5 or below) and the greatest imbalance of housing units to jobs (5,000 or more housing units than jobs).
- Secondary modest-wage jobs focus: areas with lower jobs-housing ratio (0.51 to 1.00) and a large imbalance of housing units to jobs (2,500 to 4,999).

Figure 9: Thiessen Model - Primary and secondary focus areas



The primary low-cost housing focus area covers much of North Chesterfield as well as the Route 360 corridor, including Chesterfield Towne Center and Commonwealth Center. The secondary low-cost housing focus areas extend west from Richmond city along the Broad Street corridor into Henrico County,

covering Willow Lawn, Innsbrook, and Short Pump. Secondary low-cost housing focus areas also extend north from Henrico into the less densely developed Hanover County along the I-95 corridor, including Ashland, and south through Chesterfield Courthouse and Colonial Heights.

The primary modest-wage jobs focus area covers much of the Route 1 corridor through Richmond city into Chesterfield County. The secondary jobs focus areas extend both east and west from the primary focus area, including Boulders in Chesterfield and the Richmond International Airport in Henrico.

These focus areas represent the greatest imbalances of jobs and housing in the region. Addressing these imbalances by seeking to attract jobs or additional housing could help to reduce travel times between work and home, allowing greater access to both jobs and housing for lower-income households throughout the area.

### Approach 2: gravity model

The gravity model of measuring access to jobs and housing addresses some potential issues with the Thiessen model. The gravity model utilizes block groups as a level of analysis. Job and housing unit counts are aggregated for each block group. The model then scores each block group based on its accessibility to jobs—both inside and outside of the block group. Where the Thiessen model looks at jobs and housing units within each Thiessen polygon, the gravity model scores a block group based on the number of jobs and housing units within that block group, as well as the block group's proximity<sup>8</sup> to jobs and housing units in other block groups.

Each block group receives a jobs-accessibility score and a housing-accessibility score. Closer proximity to block groups with many jobs or housing units will result in a higher score. Conversely, greater distance from those block groups will result in a lower score. The scores are standardized (Z scores describing each block group's score in terms of its departure from the mean) and may be added to create a total jobs and housing-accessibility score or subtracted to highlight accessibility imbalances.

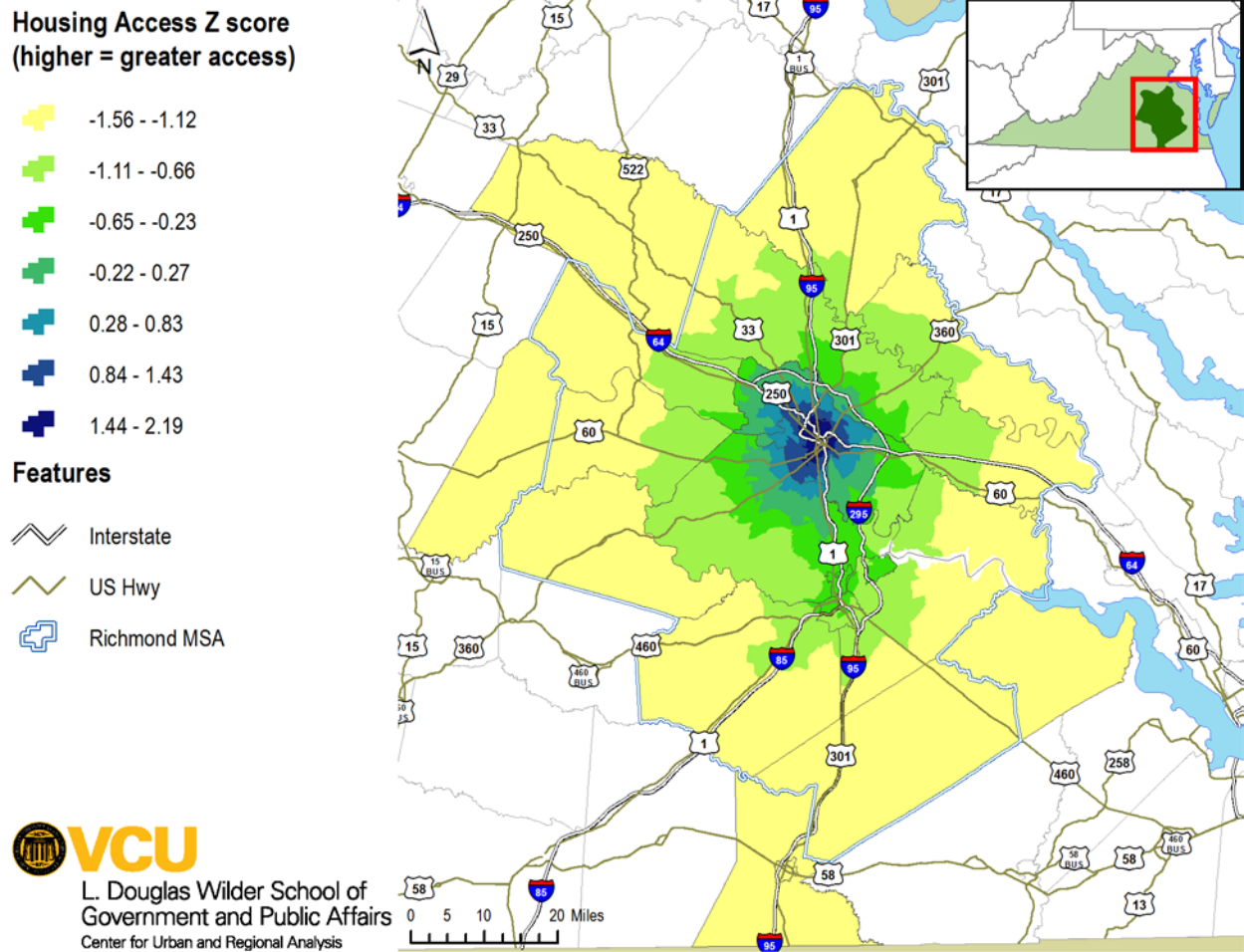
In short, the gravity model measures accessibility to jobs and housing units by block group as a function of proximity to all jobs and housing units in all subareas rather than as a ratio within a single subarea. It is a relative measure of proximity to all jobs and housing units in a region. Access differentials may be highlighted by subtracting the two scores.

In scoring low-cost housing accessibility, highest scoring block groups are also the most centrally located (see Figure 10).

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<sup>8</sup> Measured by network distance in miles.

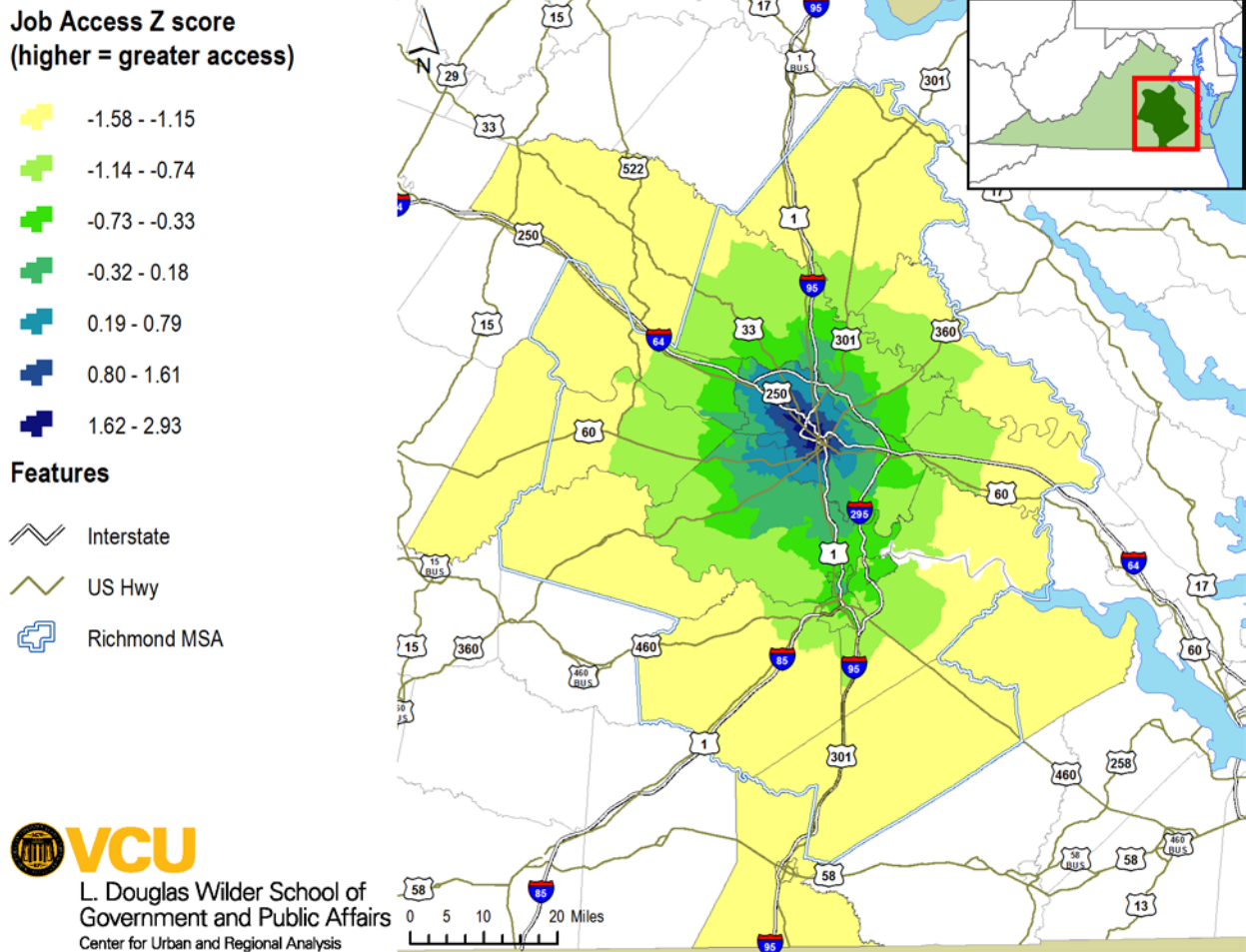
Figure 10: Gravity Model - Housing Access



The region's areas with the greatest housing-accessibility scores, primarily central Richmond and the city's Northside and East End neighborhoods, also feature some of the densest development. Affordable-housing accessibility scores decline with distance from the central city. Accessibility in block groups in Richmond's Southside remains high, while scores in West End block groups fall more rapidly. Affordable-housing accessibility falls rapidly outside the urbanized center of the region in Richmond city and Henrico County, especially moving west from the center of the city. Accessibility decays at a slower rate along the Interstate 95 corridor to the north and south.

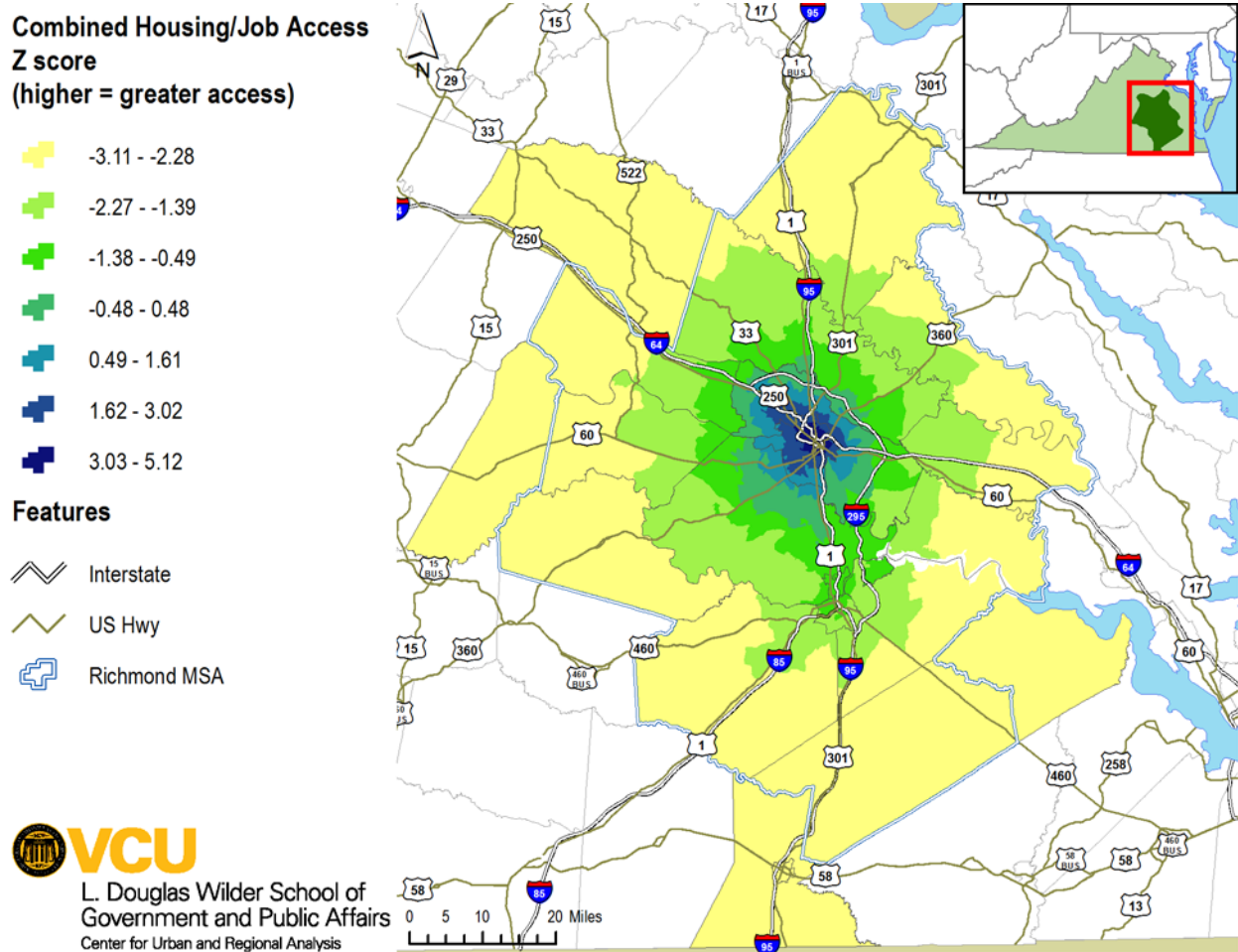
Modest-wage job access is spatially distributed similarly to affordable-housing access in the gravity model (see Figure 11). Modest-wage jobs are most accessible at the center of the region, particularly in block groups along the Broad Street corridor in Richmond city. Job-access scores remain very high along the West Broad corridor into western Henrico County (where housing-access scores decay more rapidly). Job-access scores in South Richmond block groups also suggest a difference in access between modest-wage jobs and low-cost housing.

Figure 11: Gravity Model - Jobs Access



Adding the Z scores together creates a combined-access score (Figure 12), which amplifies the centralized pattern visible in the jobs and housing access models. This result suggests that the density of modest-wage jobs and low-cost housing (and jobs and housing in general) in the center of the region guides the patterns of accessibility shown in the gravity model maps. Accessibility alone does not describe the relationship between jobs and housing. Rather, it describes density of development.

Figure 12: Gravity Model - Combined Access



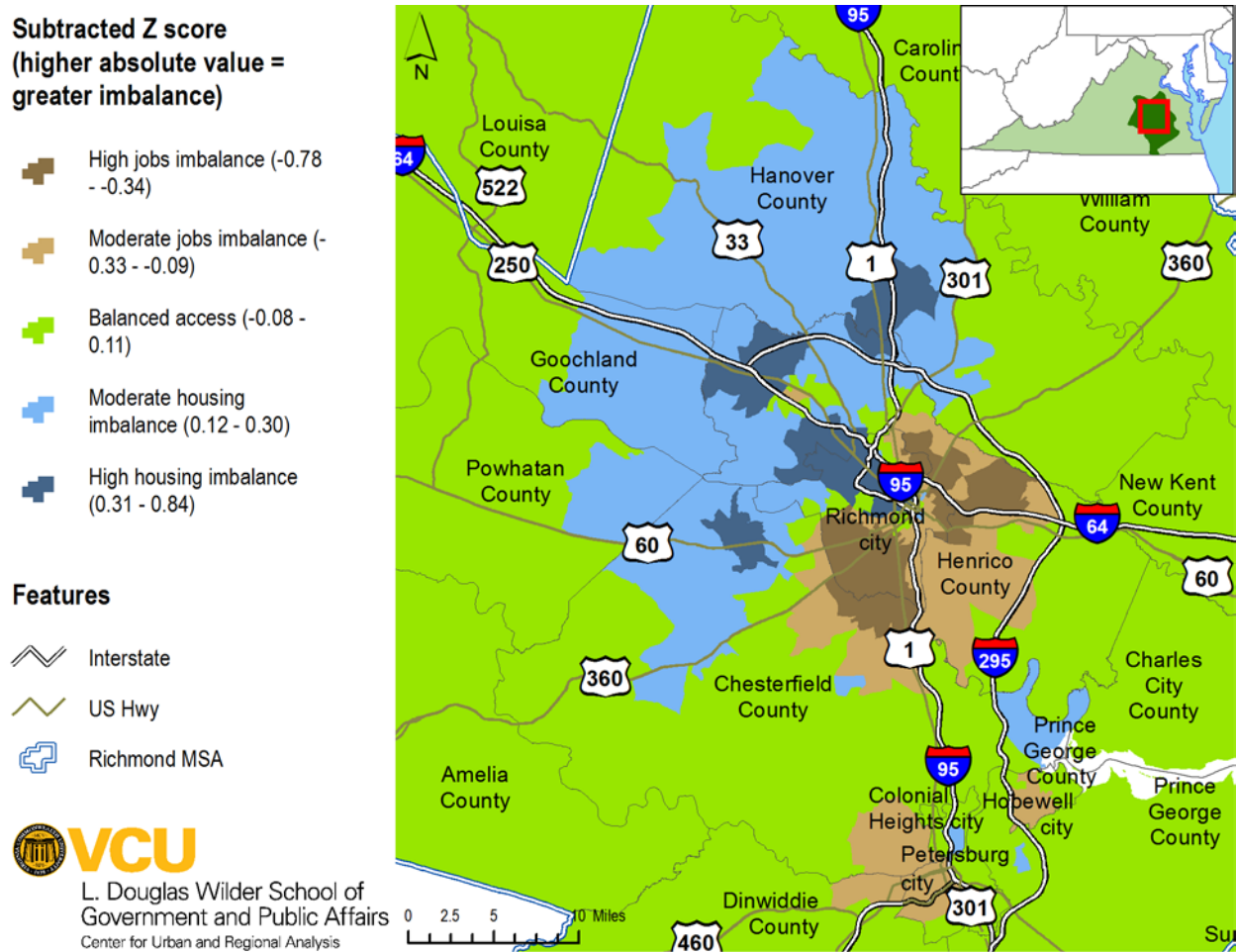
To understand the balance of accessibility, and therefore, the relationship between job access and housing access, one may subtract the Z scores. Z scores represent a standardized measurement of departure from the regional mean. Where subareas score high on both jobs and housing access (or low, for that matter), subtracting one from the other will result in a score close to 0.0, indicating the balance of access between jobs and housing is similar, regardless of whether that access is high or low. In a subarea that scores above average on one measure of access but below average on another, subtraction will result in a score that moves away from 0.0, positively or negatively, depending on which direction the imbalance of access is pointed. Subtracting Z scores provides a measure of disparity in accessibility between modest-wage jobs and low-cost housing units.

Figure 13 shows the areas of the region in which modest-wage jobs access and low-cost housing access are imbalanced. Although much of suburban Richmond has exhibited low jobs and housing access, that

low access appears largely balanced. The greatest imbalances are visible across the region’s more urbanized and densely suburbanized areas. Imbalances also appear to follow demographic patterns that, although not within the scope of this report, represent an important subject of inquiry.

Imbalances of modest-wage jobs and low-cost housing access may favor housing or jobs. The greatest imbalances favoring housing (high jobs imbalance in brown on Figure 13) are visible through Richmond city’s Southside, East End, and Northside, extending into the inner-ring suburbs of both Henrico and Chesterfield counties. These imbalances suggest that although modest-wage job access is high when viewed alone, that access is actually low relative to low-cost housing access. Hopewell city and Petersburg city also experience this imbalance.

Figure 13: Gravity Model - Jobs/Housing Access Imbalance



High housing imbalance calculations—areas in which access to low-cost housing is low relative to access to modest-wage jobs (blue-shaded areas in Figure 13)—suggest the greatest imbalance is along the Broad Street corridor, stretching west from Richmond’s downtown through much of Henrico County. The intersection of Route 60 and Huguenot Road in Chesterfield County—densely populated with big-box and chain-retail offerings, including Chesterfield Towne Center—also exhibits high measures of imbalance. And the Route 1/I-95 corridor to the north, including Virginia Center Commons and a number of big-box retailers, exhibits high-access imbalance.

Moderate housing imbalance stretches broadly across the region's western suburbs, covering North Chesterfield, western Henrico County, and large swathes of Powhatan, Goochland, and Hanover counties. Several smaller areas south of Richmond city, Colonial Heights city and Chesterfield's Bermuda Hundred area, also exhibit moderate housing imbalance.

## Neighborhood studies

One factor in the low-cost housing and modest-wage job imbalance is neighborhood opposition to construction of lower-cost housing in middle and upper-income areas. Suburban development over the last 60 years resulted in middle and upper-income neighborhoods being constructed increasingly outward from the central city, accompanied by office parks and retail and service centers.

Lower-cost housing construction, when proposed by a developer, is often opposed by neighborhood residents and associations. As residents increasingly participated in the development process through the second half of the 20<sup>th</sup> century, often through zoning hearings, their opposition could influence local governments' decisions to approve or deny development of lower-cost housing projects. Even recent mixed-income projects have faced significant opposition.

Neighborhoods oppose lower-cost housing projects for a variety of stated reasons, chiefly that developments will lower nearby property values and increase the incidence of crime.

This section analyzes historical assessment data, sales prices, and crime rates for neighborhoods surrounding six lower-cost and higher-density housing projects, before and after construction. For each housing project, half-mile and one-mile impact areas were identified, and crime, property assessment, and home sales data were aggregated. Where possible, trends in those impact areas have been compared to trends throughout the jurisdiction.

Two neighborhood focus groups were organized to discuss the study results and discuss other affordable-housing issues. The elected local government official and planning commissioner from each area participated in the focus group.

## Summary of findings

Analysis of the six developments and their surrounding neighborhoods does not suggest that the construction of the developments had any apparent long-term impact on property values, property sales, or crime incidents. Average assessments and average sales follow patterns that suggest greater influence from external factors such as the state, national, and global housing markets, the foreclosure crisis of the late 2000s, and the Great Recession that lasted from 2007 to 2009.

This analysis cannot make any definitive claims about the causes of trends in assessed values, sales values, or crime incidents, as it has not taken into account other factors that likely play a role. Employment rates, lending rates, income levels, migration patterns, and micro- and macro-economic conditions can influence neighborhood conditions as well. That many of these developments were constructed in the years immediately preceding a global economic recession makes identifying their influence on the surrounding neighborhoods separate from the influences of the recession difficult.

In short, the data analyzed provides no evidence that the six housing developments had any significant impact on property values, sales prices, or crime rates in the immediately surrounding neighborhoods.

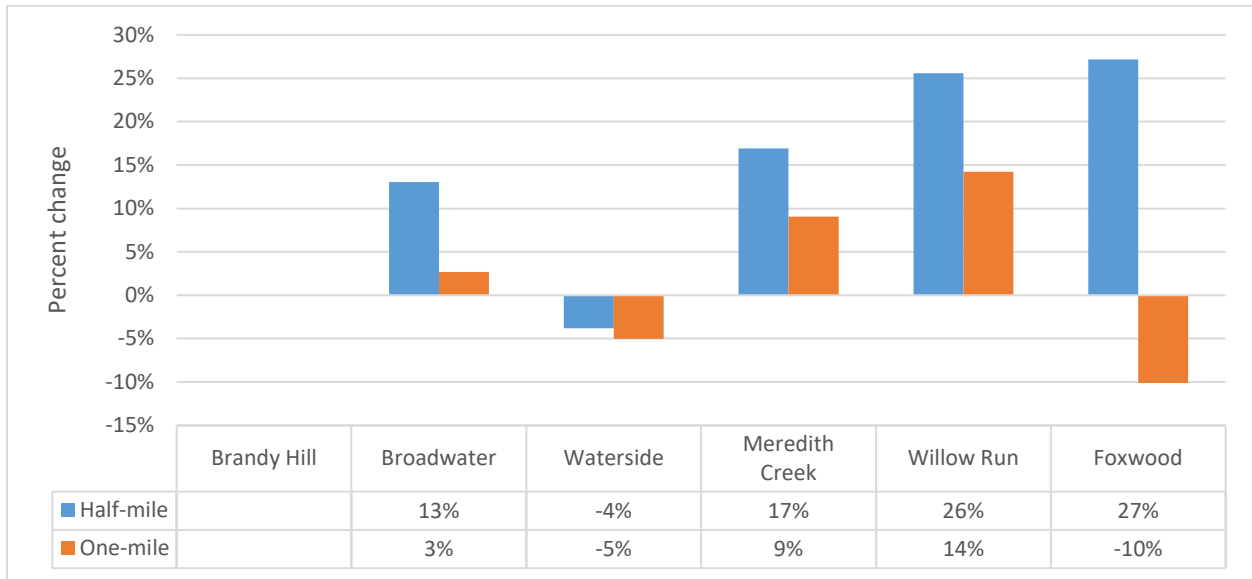
Across neighborhoods, areas within 0.5 miles of each development exhibited greater increases (or smaller decreases) in average sales values than areas within 1.0 miles (see Figure 14). The average sales value of properties within 0.5 miles of Foxwood in Richmond city experienced a different trend than values within 1.0 miles. However, the timing of the diverging trends several years after the construction of Foxwood



Apartments suggests Foxwood Apartments has not played any significant role in the lagging average-sales value of properties around the site (see Figure 42, p. 38).

No similar pattern could be discerned in sales values or crime incidents across housing developments.

Figure 14: Percent change in average sales price of neighborhoods around housing developments





Source: Richmond Association of Realtors

## Brandy Hill Apartments, Hanover County

Brandy Hill Apartments in Hanover County includes 136 two and three-bedroom units. The development, built in 2005, sits between commercial development along Mechanicsville Turnpike and a primarily single-family neighborhood to the south (see Figure 15 and Figure 16). Amenities include an outdoor pool. As of August 2016 units rent for \$970 to \$1,080 per month.

Figure 15: Brandy Hill Impact Areas

### Impact area boundaries

-  Brandy Hill 0.5 miles
-  Brandy Hill 1.0 miles

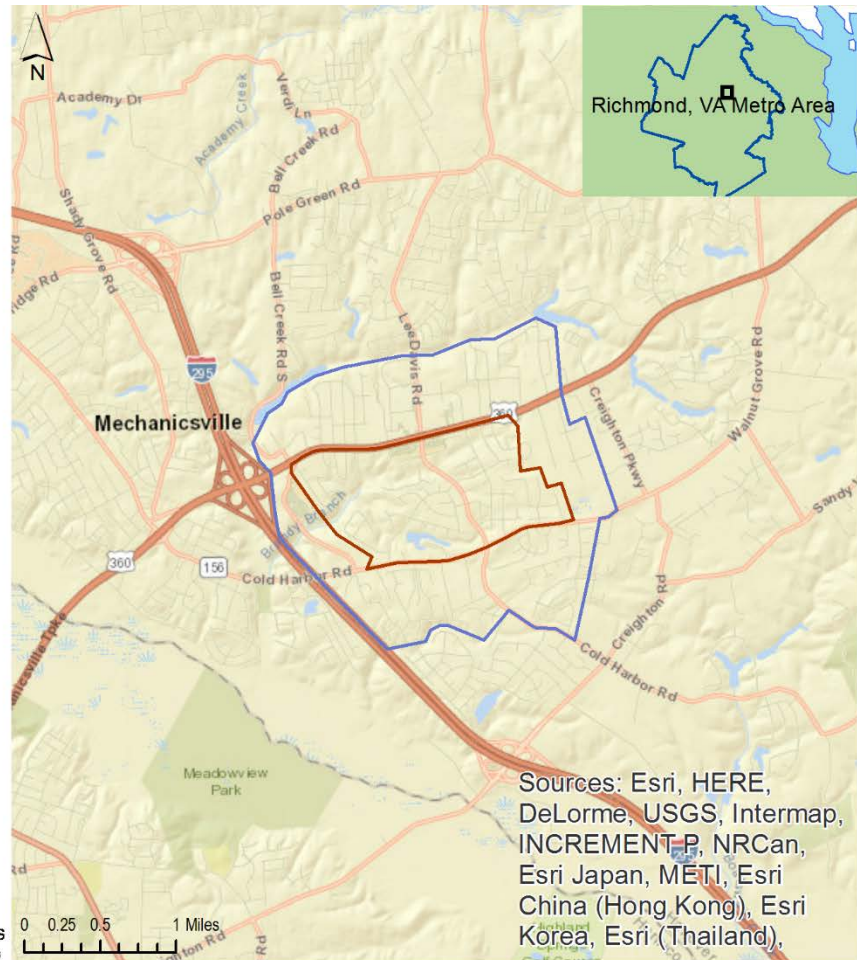


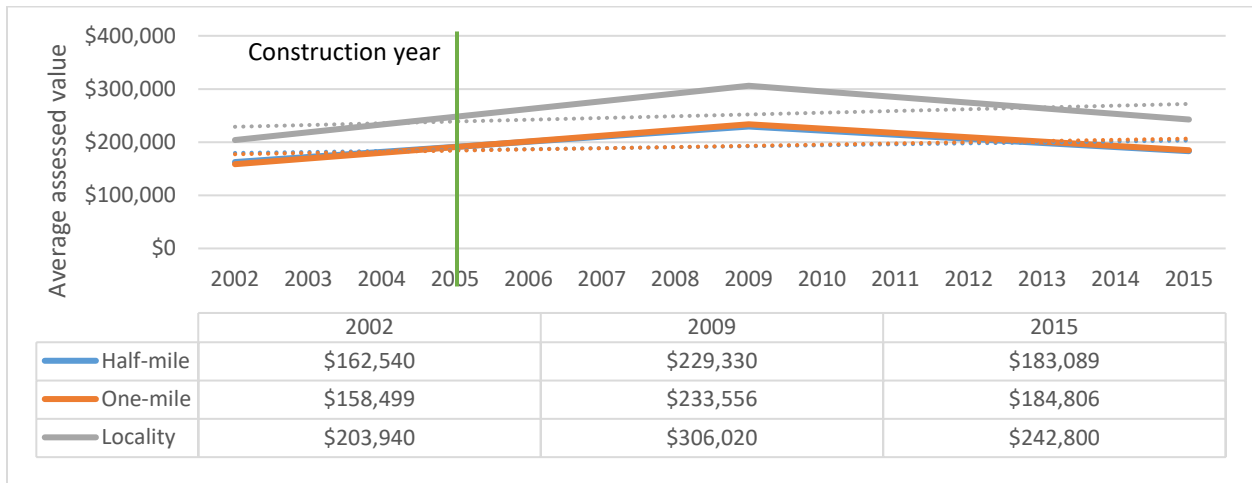
Figure 16: Brandy Hill Units and Nearby Houses



Average-assessed values for tax parcels within 0.5 and 1.0 miles of Brandy Hill apartments between 2002 and 2015 followed a similar trend to average assessments throughout Hanover County (see Figure 17). Values increased through 2009 and fell through 2015, resulting in an overall slow but positive trend.

The average-assessed value within 0.5 miles of Brandy Hill Apartments increased by 13 percent between 2002 and 2015. Within 1.0 miles, the average increased by 17 percent. And Hanover County’s overall average assessed property value increased by 19 percent.

Figure 17: Property values surrounding Brandy Hill Apartments (2015 dollars)



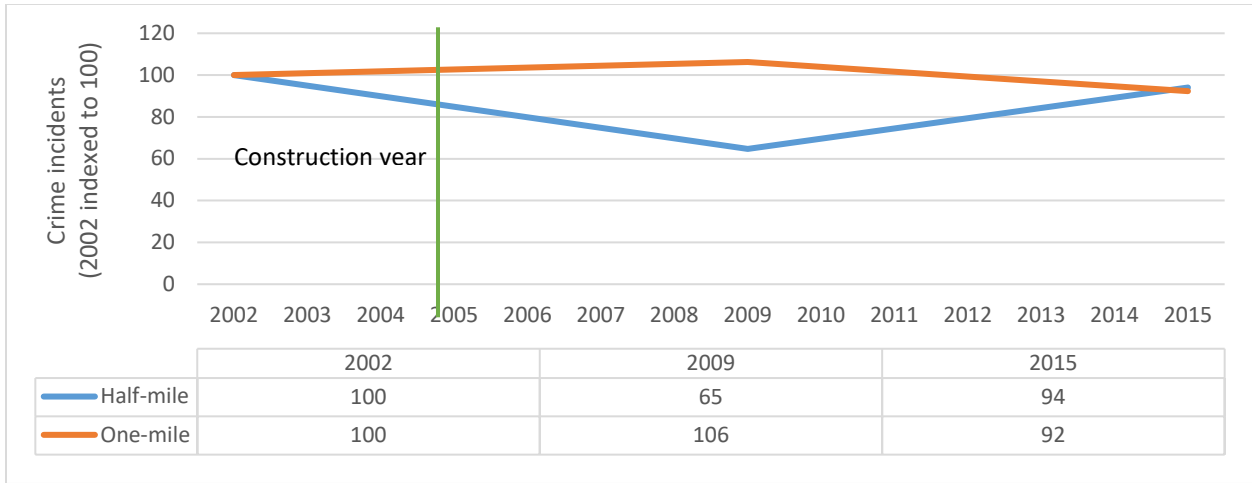
Source: Hanover County Assessor’s Office

*[Sales data insufficient for comparative analysis.]*

Crime incidents in the 0.5 mile radius area surrounding Brandy Hill Apartments fell significantly between 2002 and 2009, while incidents within a 1.0 mile radius rose slightly (see Figure 18). However, the number of incidents within 0.5 miles began as a relatively low number (22), making it susceptible to large percentage swings when the actual number of incidents changes only modestly (a decline of 12). Incidents within an 0.5 mile radius rose between 2009 and 2015 to levels similar to that of the 1.0 mile radius.

The data does not provide any evidence that the construction of Brandy Hill Apartments in 2005 had a lasting impact on the number of crime incidents in the area.

Figure 18: Crime incidents (Group A) surrounding Brandy Hill Apartments





Source: Hanover County Sheriff's Office

## Broadwater Townhomes, Chesterfield County

Broadwater's 223-unit townhome community was completed in 2004. The development is located off Harrowgate Road near the Chester area of Chesterfield County (see Figure 19). A significant number of residents receive housing subsidies in the form of vouchers. The development's site design is suboptimal, featuring uniform buildings and street-facing parking lots. The units themselves appear in good condition. A recreational area in the rear of development lacks visibility and accessibility. The surrounding neighborhoods feature large-lot, single-family houses (see Figure 20).

Figure 19: Broadwater Impact Areas

### Impact area boundaries

-  Broadwater 0.5 miles
-  Broadwater 1.0 miles

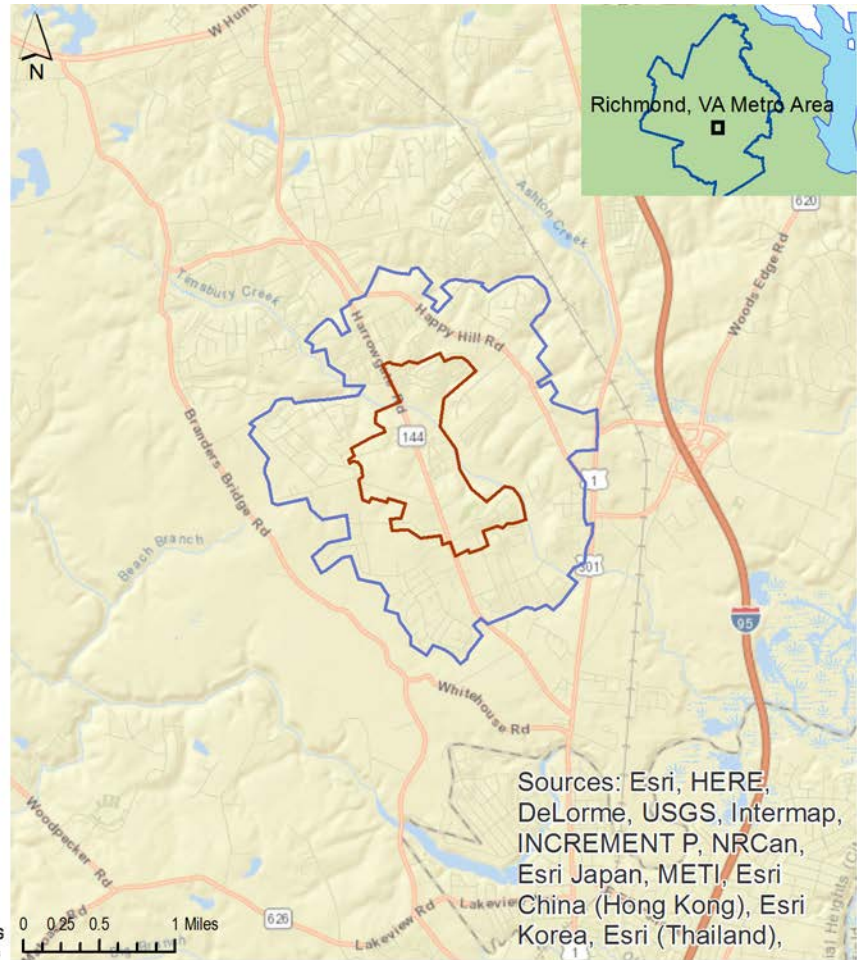
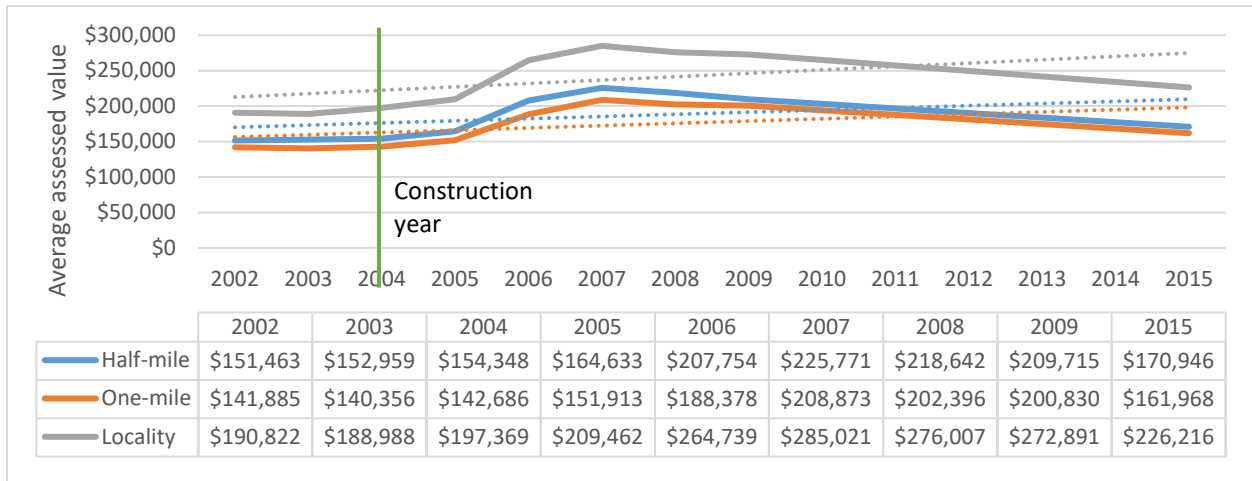


Figure 20: Broadwater Units and Nearby Houses



The average assessed value of properties within 0.5 and 1.0 miles of Broadwater Townhomes has trended upwards at rates comparable to Chesterfield County’s overall average-assessed property value (see Figure 21). Average assessments peaked in 2007, with property values within 0.5 mile of Broadwater 49 percent higher than their 2002 average, the same percent increase seen in the county average. Values within 1.0 miles increased by 47 percent over the same period. Average values in 2015 indicate a decline from 2007. Across the entire period (2002 to 2015), the average-assessed value within 0.5 miles increased by 13 percent, compared to 14 percent within 1.0 miles and 19 percent county-wide.

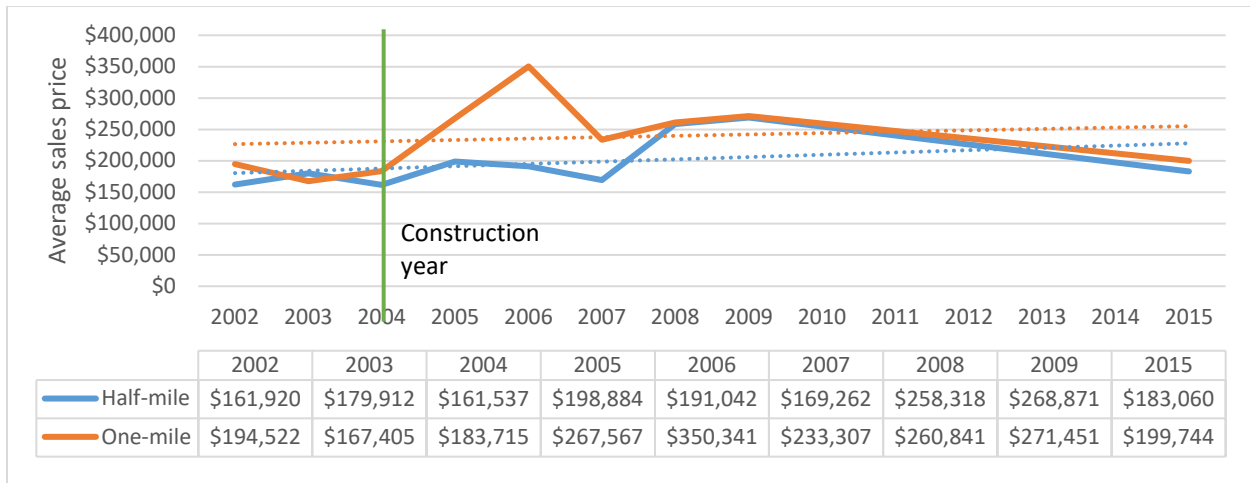
Figure 21: Property values surrounding Broadwater Townhomes (2015 dollars)



Source: Chesterfield County Department of Real Estate Assessments

The average sales price of homes within 0.5 miles of Broadwater increased by 13 percent from 2002 to 2015, compared to an increase of 3 percent for homes within 1.0 miles (see Figure 22). However, the overall slow, positive trend between the two remains similar when factoring in additional years of data.

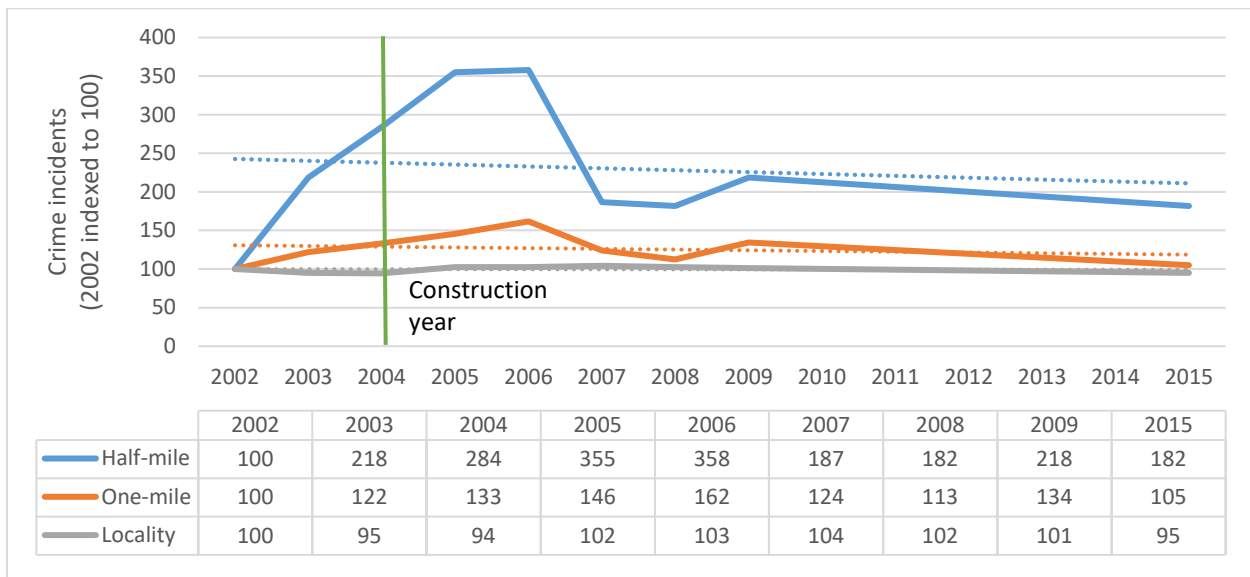
Figure 22: Average property sales price surrounding Broadwater Townhomes (2015 dollars)



Source: Richmond Association of Realtors

Crime incidents have overall trended flat or slightly downward (see Figure 23). Incidents within 0.5 miles of Broadwater increased significantly between 2002 and 2005 before experiencing an equally large decline between 2006 and 2007. Due to the variability of these numbers year-over-year, changing the baseline period by a single year, from 2002 to 2003, would suggest much larger downward trends within 0.5 and 1.0 miles of Broadwater. Crime incidents within Chesterfield County have shown little variance, ranging from 94 to 104 when indexing the baseline year to 100.

Figure 23: Crime incidents (Group A) surrounding Broadwater Townhomes





Source: Chesterfield County Police Department

## Waterside at Ironbridge, Chesterfield County

Built in 1996 using HUD subsidies, Waterside includes 126 rental units, an outdoor pool, and proximity to a small lake. The development's location near Ironbridge Road places it within a well-planned mixed-residential neighborhood that includes single-family homes, townhouses, apartments, and commercial activities (see Figure 24 and Figure 25).

Figure 24: Waterside Impact Areas

### Impact area boundaries

-  Waterside 0.5 miles
-  Waterside 1.0 miles

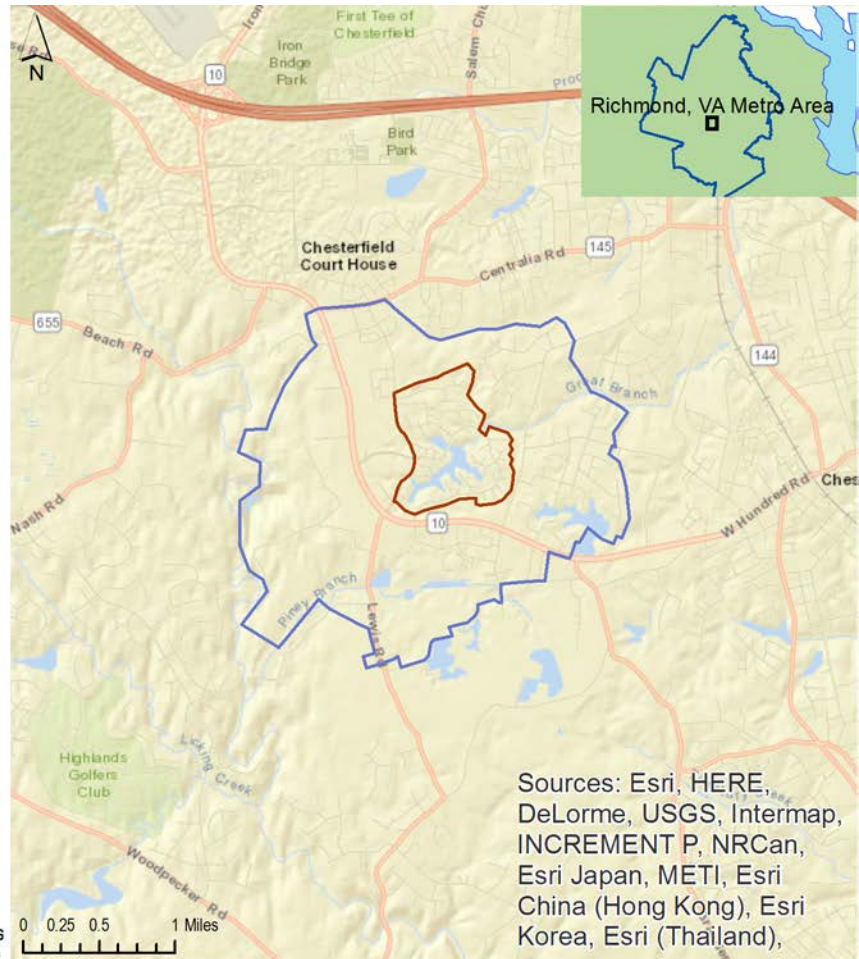


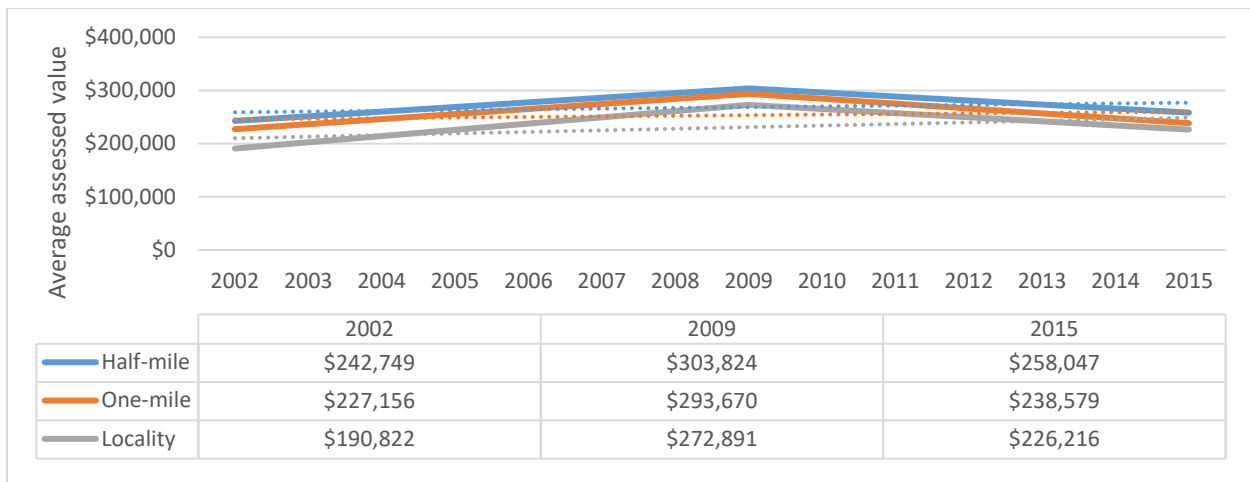


Figure 25: Waterside Units and Nearby Houses



Average property values within 0.5 miles and 1.0 miles of Waterside at Ironbridge and in the whole of Chesterfield County trended upwards between 2002 and 2015 (see Figure 26). Average values county-wide increased at a much faster rate between 2002 and 2009 than the areas around Waterside. However, all three areas experienced similar declines in average-assessed value between 2009 and 2015.

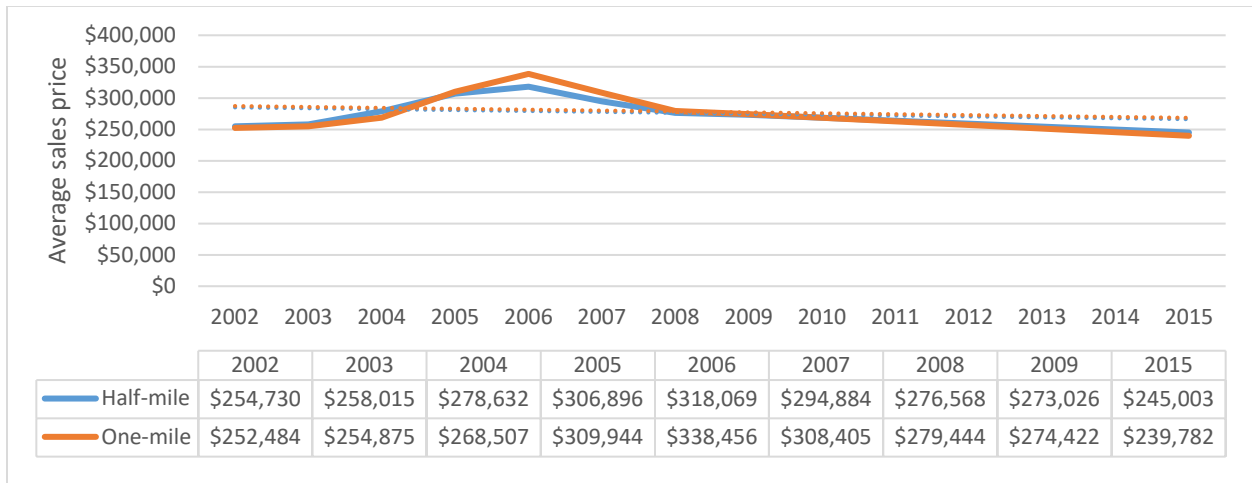
Figure 26: Property values surrounding Waterside at Ironbridge (2015 dollars)



Source: Chesterfield County Department of Real Estate Assessments

The average sales price of homes within 0.5 and 1.0 miles of Waterside trended slightly downwards between 2002 and 2015 (see Figure 27). Sales prices rose slightly faster within 1.0 miles between 2002 and 2006, but any difference in sales averages between the two disappeared in 2008. Overall, average sales prices within 0.5 miles fell 4 percent between 2002 and 2015, compared to a 5 percent decline within 1.0 miles in the same period.

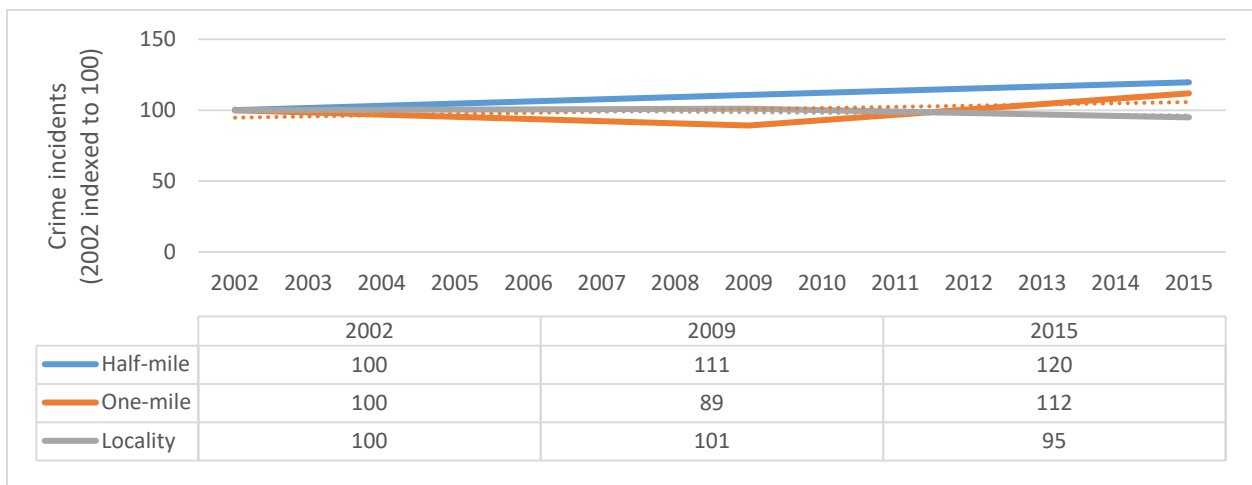
Figure 27: Average property sales price surrounding Waterside at Ironbridge (2015 dollars)



Source: Richmond Association of Realtors

Crime incidents have risen slightly faster within 0.5 miles of Waterside than within 1.0 miles between 2002 and 2015 (see Figure 28). Crime incidents countywide have fallen slightly in the same period. Additional years of data for the areas within 0.5 and 1.0 miles of Waterside may provide additional shape to the trend in each location. .

Figure 28: Crime incidents (Group A) surrounding Waterside at Ironbridge





Source: Chesterfield County Police Department

## Townes at Meredith Creek, Henrico County

The Townes at Meredith Creek community, built between 2002 and 2004, features 116 units of townhomes. The site sits at the intersection of Gaskins Road, Springfield Road, and Hungary Road, just off the Broad Street Corridor in Henrico County (see Figure 29). The townhomes range in size from 1,800 to 2,100 square feet with 2 to 3 bedrooms and 2.5 bathrooms. They range in price from \$236,000 to \$289,000. The community features an outdoor pool.

Figure 29: Meredith Creek Impact Areas

### Impact area boundaries

-  Meredith Creek 0.5 miles
-  Meredith Creek 1.0 miles

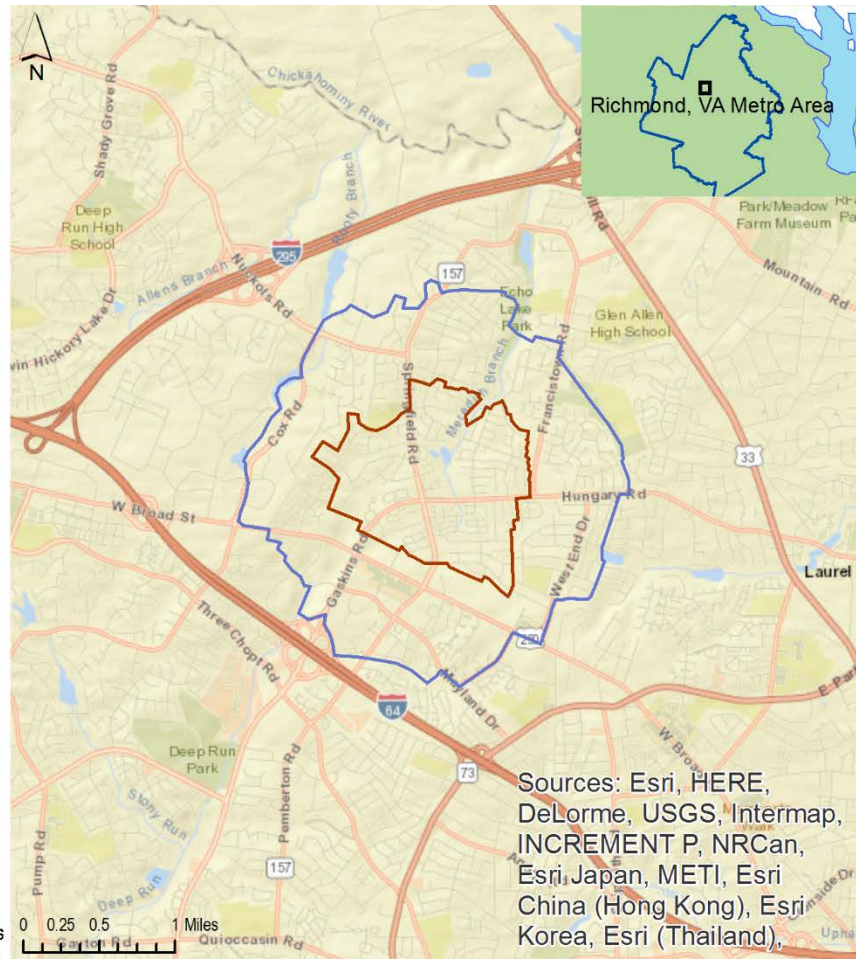
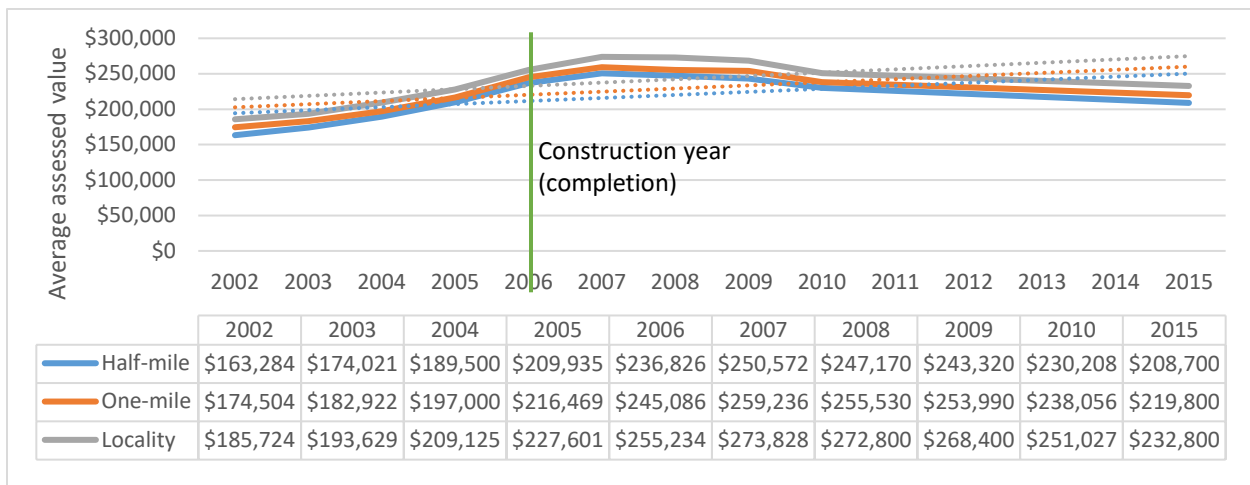


Figure 30: Meredith Creek Units and Nearby Houses



The Townes at Meredith Creek in Henrico County does not appear to have influenced property assessments within 0.5 or 1.0 miles. Average assessments in these areas follow the same trend seen in Henrico County: growth through 2007, followed by slow contraction (see Figure 31). The overall trend in all three areas is positive.

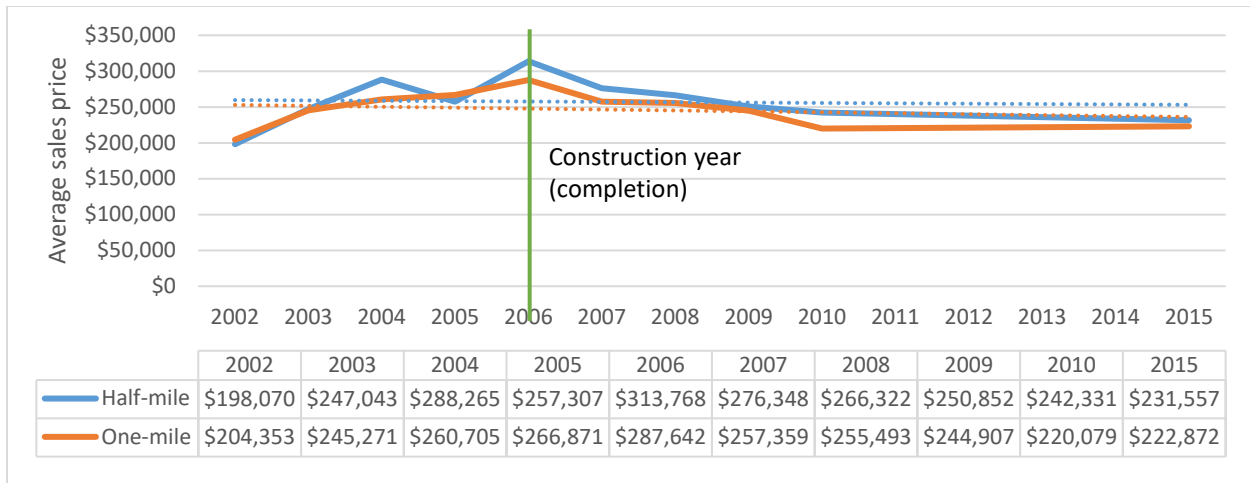
Figure 31: Property values surrounding Townes at Meredith Creek (2015 dollars)



Source: Henrico County Department of Finance

The average sales price of properties within 0.5 and 1.0 miles of Townes at Meredith Creek reached a peak in 2006—around the end of construction and near the start of the global economic recession (see Figure 32). The average sales price within 0.5 miles of Meredith Creek rose at a faster rate than the average price within 1.0 miles through 2006 and fell at a slower rate through 2015.

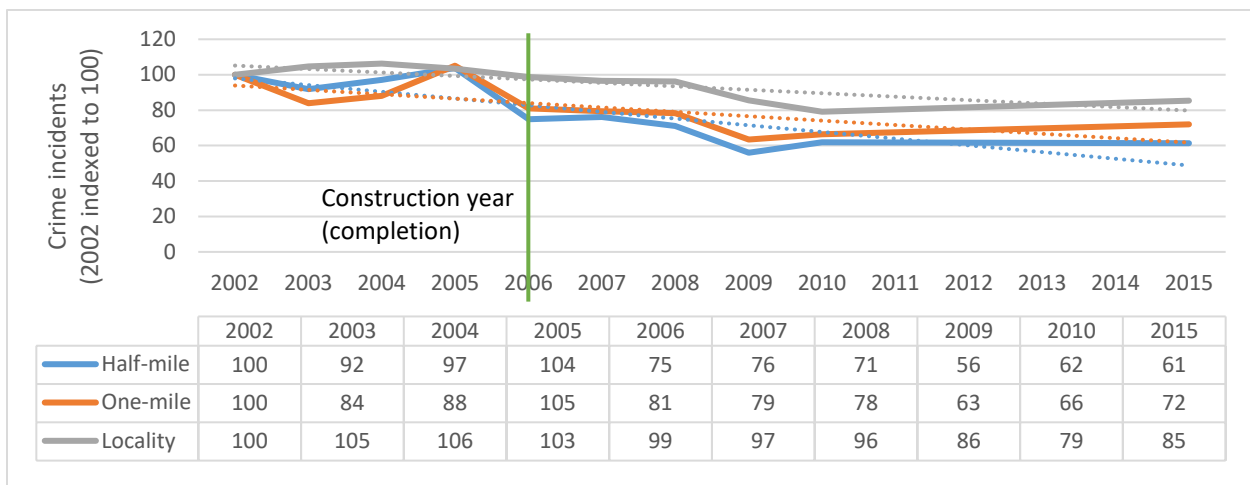
Figure 32: Average property sales price surrounding Townes at Meredith Creek (2015 dollars)



Source: Richmond Association of Realtors

Crime incidents trended downward in all three areas between 2002 and 2015 (see Figure 33). However, the number of incidents within 0.5 miles fell at faster rate than within 1.0 miles or within the county. The number of incidents near Meredith Creek spiked in 2005, just prior to the completion of construction, but otherwise followed county trends relatively closely.

Figure 33: Crime incidents (Group A) surrounding Townes at Meredith Creek





Source: Henrico County Police Division

## The Village at Willow Run, Henrico County

The Village at Willow Run is a community of 87 Ryan-built townhouses ranging in size from 1,600 to 1,800 square feet. The site lies northwest of Henrico County's Lakeside neighborhood (see Figure 34). The homes are valued between \$170,000 and \$215,000. The community was developed between 2006 and 2007.

Figure 34: Willow Run Impact Areas

### Impact area boundaries

-  Willow Run 0.5 miles
-  Willow Run 1.0 miles

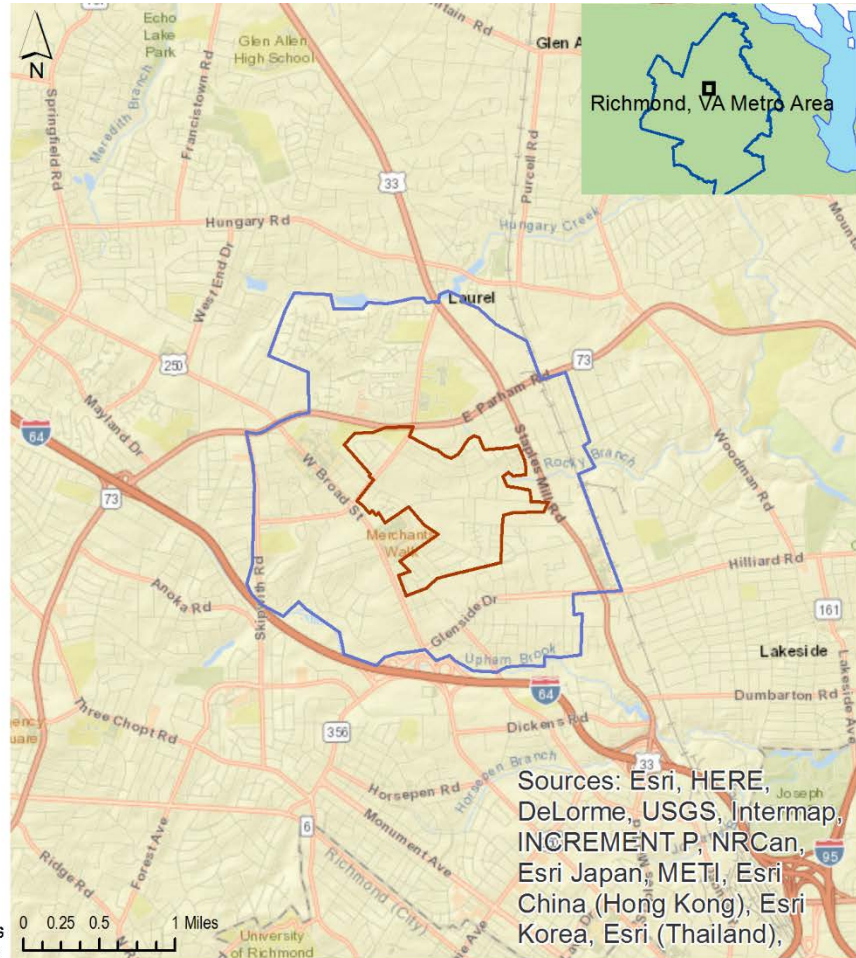
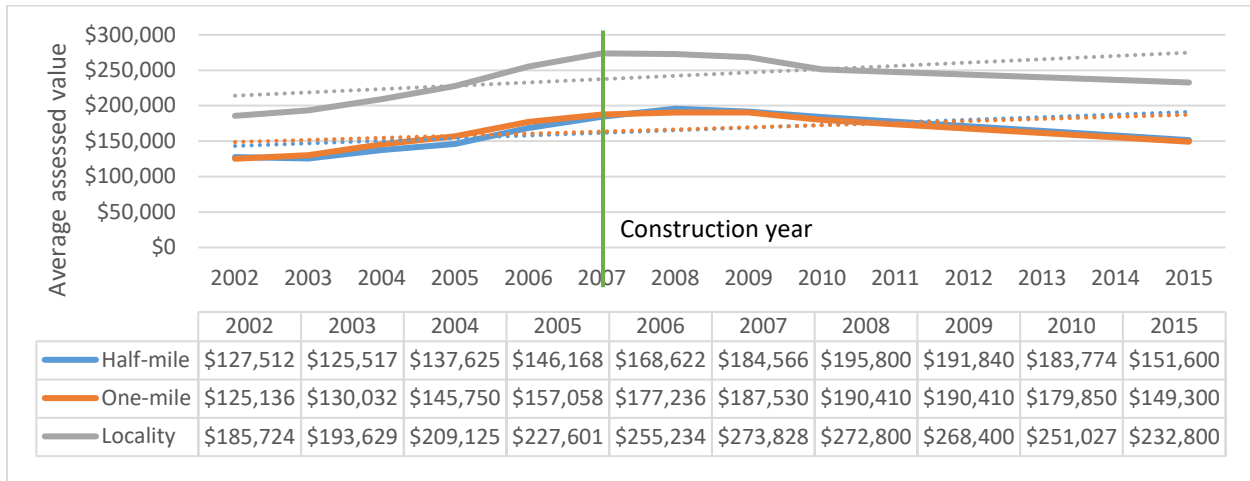


Figure 35: Willow Run Units and Nearby Houses



Average assessments near the Village at Willow Run in Henrico County, constructed in 2007, have followed countywide trends. Assessments within 0.5 and 1.0 miles and county-wide rose steadily from 2002 to 2007, remained flat from 2007 to 2009, and fell slowly afterwards (see Figure 36). There is no evidence in these numbers that the construction of the Village at Willow Run had any impact on average property assessments near the construction site.

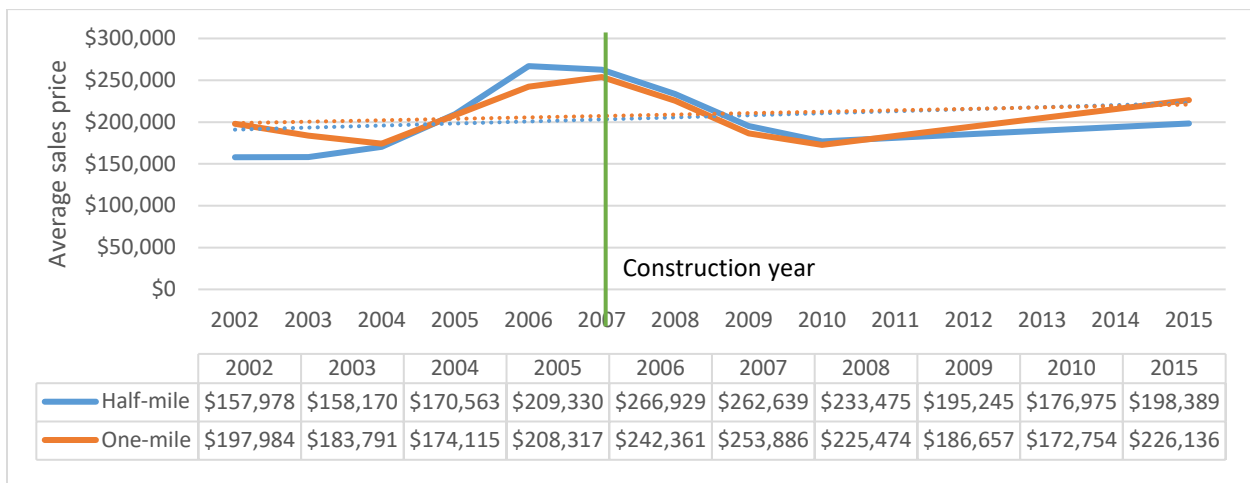
Figure 36: Property values surrounding the Village at Willow Run (2015 dollars)



Source: Henrico County Department of Finance

Average property sales within 0.5 and 1.0 miles of Willow Run have exhibited similar trends between 2002 and 2015. The average in each area experienced a peak near 2007 and a decline through 2010 (see Figure 37). That each geography experienced the same trend suggests the decline is not a function of proximity to Willow Run. Rather, turbulence in the nation’s housing market in those years may have played a greater influence.

Figure 37: Average property sales price surrounding the Village at Willow Run



Source: Richmond Association of Realtors

Crime incidents within 0.5 and 1.0 miles of Willow Run experienced downward trends similar to Henrico County between 2002 and 2015 (see Figure 38). The data does not suggest the construction of Willow Run had any significant impact on the number of crime incidents within 0.5 or 1.0 miles of the site.

Figure 38: Crime incidents (Group A) surrounding the Village at Willow Run



Source: Henrico County Police Division





## Foxwood Apartments, City of Richmond

Foxwood Apartments in Richmond city includes 60 rental units built in 2005 and financed with Low Income Housing Tax Credits (LIHTC). The development sits near the city's southern boundary with Chesterfield County, west of Broad Rock Boulevard (see Figure 39). It is largely surrounded by a forested area, isolated from nearby single-family residential neighborhoods (see Figure 40).

Figure 39: Foxwood Impact Areas

### Impact area boundaries

-  Foxwood 0.5 miles
-  Foxwood 1.0 miles

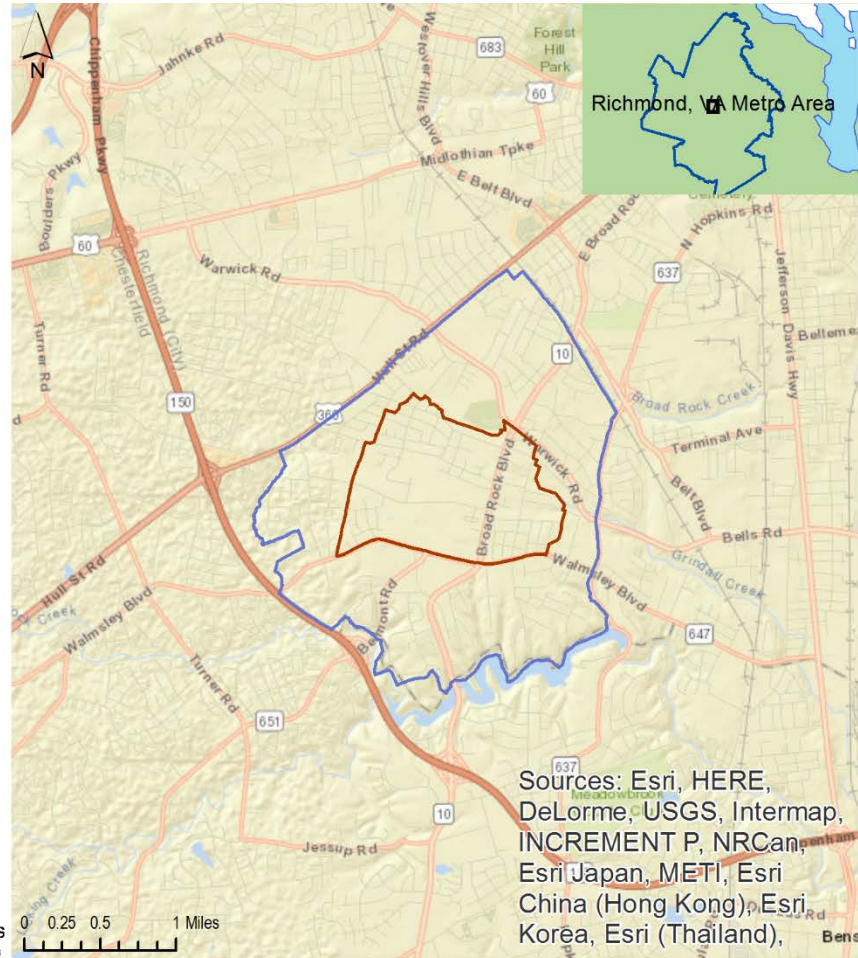


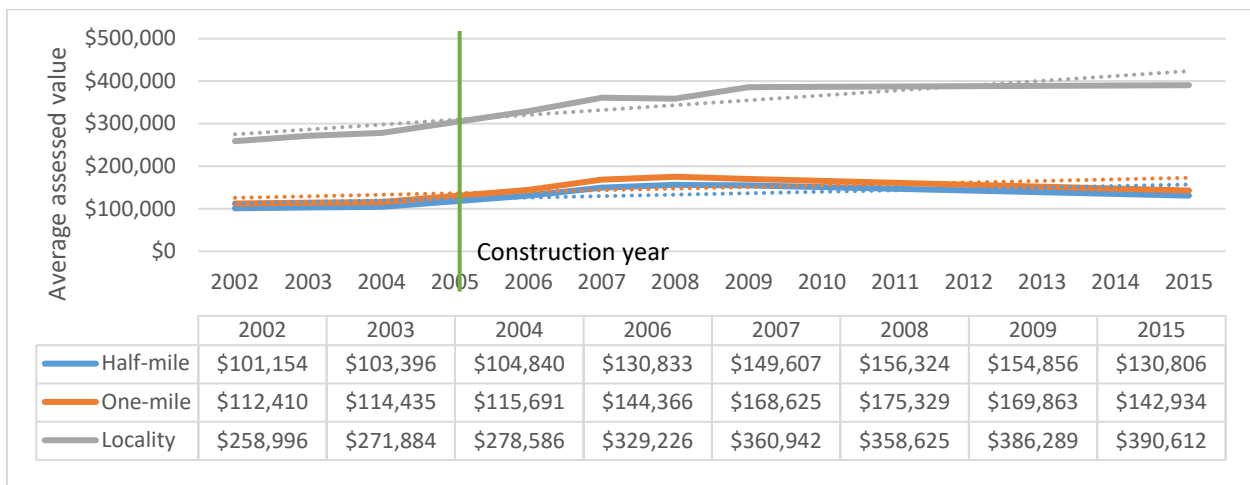
Figure 40: Foxwood Units and Nearby Houses



Foxwood Apartments in the City of Richmond was constructed in 2005. Average property assessments within 0.5 and 1.0 miles of Foxwood have followed almost identical trends from 2002 to 2015; increasing through 2008 before a slow decline into 2015 (see Figure 41). Citywide, the average assessment value experienced a similar positive trend through 2008 but continued to increase through 2009. The 2015 city average suggests flat growth from 2009 to 2015.

That these trends diverge immediately following the 2008 global recession and foreclosure crisis (rather than following the construction of Foxwood in 2005) suggests external economic forces and trends likely play a greater influence in property value changes than the construction of Foxwood Apartments. The average assessed values around Foxwood increased in the years following its construction.

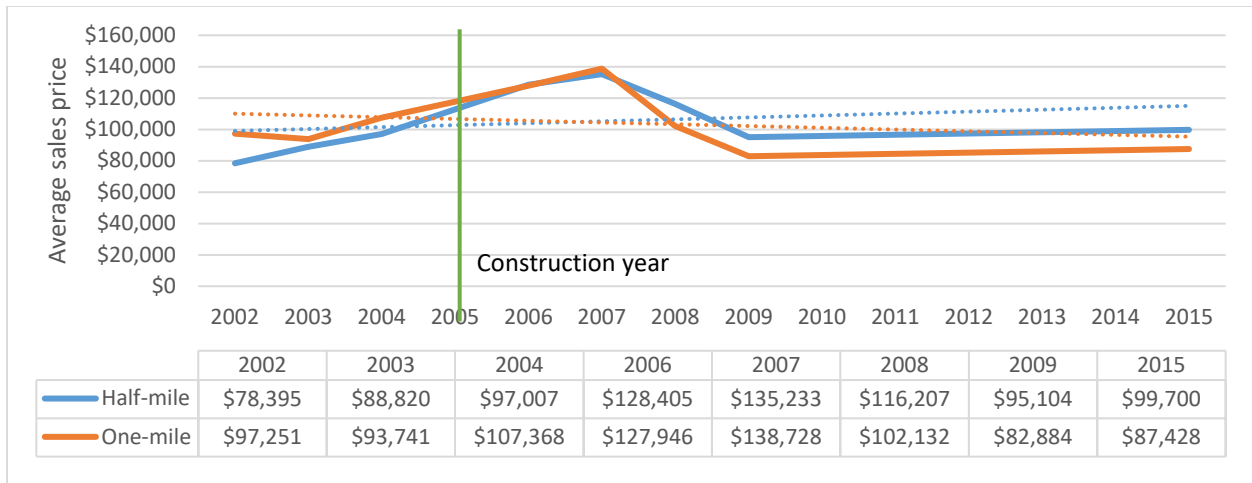
Figure 41: Property values surrounding Foxwood Apartments (2015 dollars)



Source: Richmond Department of Planning & Development Review

The average sales price of properties within 0.5 and 1.0 miles of Foxwood demonstrates a clear upward trend through 2007, followed by a sharp downward trend through 2009 (see Figure 42). Properties in the immediately surrounding neighborhood of 0.5 miles have ultimately fared better than those within 1.0 miles, but the trends remain similar. There is no evidence that the construction of Foxwood in 2005 had a discernible impact on average property sales prices within 0.5 or 1.0 miles.

Figure 42: Average property sales price surrounding Foxwood Apartments (2015 dollars)



Source: Richmond Association of Realtors

Crime incidents within 0.5 miles and 1.0 miles of Foxwood followed a downward trend similar to that of city-wide crime incidents from 2002 to 2015 (see Figure 43). The data does not suggest that the construction of Foxwood has had a significant impact

Figure 43: Crime incidents\* surrounding Foxwood Apartments



Source: City of Richmond Crime Incident Information system

\*Including homicide, sex offense, robbery, assault, burglary, vice, theft, and vehicle theft incidents. Excluding incidents classified as "other."

## Summary of findings

Modest-wage jobs and housing affordable to those who work those jobs are not efficiently distributed throughout the Richmond region. Two separate models—the Thiessen model and the gravity model—show that areas rich in modest-wage jobs do not often provide the same access to affordable housing. Likewise, areas in which affordable-housing units are concentrated—Richmond’s East End and Southside and Henrico’s Highland Springs—have low access to modest-wage jobs relative to the concentration of lower-cost housing.

Areas rich with affordable housing may provide a ready labor pool for modest-wage jobs, including retail and service occupations. Encouraging businesses to locate close to the following areas would help to alleviate the travel time and costs for Richmond region residents:

- Richmond city: south of the James River, along the Route 1 corridor, and in the East End
- Henrico County: near Highland Springs, Varina, and the Richmond International Airport

Locating affordable-housing units closer to concentrations of modest-wage jobs would offer those workers important time and cost savings in addition to greater access to employment opportunities. The following areas offer the greatest opportunities to improve balance through an increase in affordable-housing units:

- North Chesterfield, including the Chesterfield Towne Center area on Route 60 and the Route 360 corridor.
- The Broad Street Corridor, including Willow Lawn, Innsbrook, and Short Pump.

These areas also tend to lie in a portion of the suburban ring around Richmond city.

Six focus groups conducted with housing experts, planners, and neighborhood residents offered different perspectives on the need, impact, and development challenges of affordable housing. Participants came from housing nonprofits, affordable-housing development organizations, local governments, and some of the housing developments analyzed in this report.

Focus groups with Richmond area housing professionals highlighted the difficulty in attracting low-cost housing to suburban green-field sites. Several participants noted that acquiring green-field sites in closer proximity to retail jobs often creates expenses that don’t effectively allow for the construction of affordable units. Another noted that concentrations of retail tend to follow concentrations of higher income households, suggesting property values are high. One participant suggested incorporating some measure of balance in the Qualified Allocation Plan set by the Virginia Housing Development Authority for the distribution of Low Income Housing Tax Credits.

Housing experts and area planners acknowledged Not In My Backyard (NIMBY) attitudes as a challenge to development. One expert described having success in working directly with residents in neighborhoods to overcome negative perceptions of affordable housing. The case studies of six neighborhoods provide no evidence that the construction of affordable units, single and multi-family, have a negative impact on property values, incidence of crime, or sales values. In some cases, the areas closest to affordable developments experienced greater increases in value, although no causal relationship can be determined.

Focus groups with planners and residents of some affordable communities suggested that community activities—mentoring programs, community policing, after school programs—had positive impacts on

neighborhoods, and perceptions of increased incidence of crime surrounding affordable developments may not be based in reality.

Still, a focus group in a more suburban/rural neighborhood suggested that perceptions of increased crime—and the resources required to address it—persist. Participants suggested data does not and cannot tell a complete story about how a development impacts a neighborhood. Another participant said data doesn't matter if people don't want to accept it. Several participants suggested discomfort with home renters, as opposed to home owners. However, some of those participants also stated that communities need all types of housing. Another suggested providing all housing types across a wider geography to address imbalance.

When asked directly, respondents stated that affordable housing should be constructed near jobs, recreation, education, and activities and that it should be geographically scattered. An elected official stated that the government should discourage concentrations of families receiving housing-choice vouchers within the same development.

Finally, some planners suggested that building affordable units in areas with high land values will remain difficult. They suggested a focus on helping people move from one place to another, via transit or otherwise.

## Recommendations

### Improving the Jobs – Affordable Housing Pattern

1. Focus construction of new affordable-housing units on sites with good access to job locations – especially modest-wage jobs. High priority sites include the following:

- Chesterfield Towne Center Area
  - Mall site parking lot: provide high density apartment units within a mixed income housing project as a component of the intensification of the Chesterfield Towne Center site. These units should principally be designed for senior and working adults.
  - Surrounding area sites with construction of sidewalk access to area businesses. These units should be designed for families with children in a mixed-income townhouse project.
  
- Broad Street Corridor from Downtown to Short Pump
  - Redevelopment sites along Broad Street to provide high-density affordable apartment units in a mixed use, mixed income projects. These units should principally be designed for senior and working adults.
  - Sites off Broad Street within walking distance of business uses within the Broad Street corridor– These units should be designed for families with children in a mixed-income townhouse project.
  
- Route 360 W Corridor from Route 288 west to Winterpock Road area
  - Sites generally located between business uses oriented to the Route 360 W and the nearby residential neighborhoods. Specific sites are available near Market Square in Brandermill, Commonwealth Center, south of Walmart located west of Winterpock Road, and other locations.
  - Sites should be developed for families, seniors, and adults in mixed-income projects.
  - Sidewalks should be constructed to provide pedestrian access to business uses.

2. Focus some of the new economic development projects with a predominance of modest- wage jobs in locations with good access to lower-cost housing. High priority sites include the following:

- Route 1 S Corridor in south Richmond and northern Chesterfield,
- Industrial area near the Richmond International Airport
- Chippenham Parkway Corridor from Route 1 S to Forest Hill Road

3. Expand the Greater Richmond Transit Company fixed-route transit service area to include concentrated locations of low-cost housing and modest-wage jobs.

4. Construct sidewalks within locations of modest-wage job concentrations and connecting to residential neighborhoods with concentration of lower-cost housing.

5. Continue to monitor property value and crime incident information to address neighborhood fears and concerns.