REPORT OF THE VIRGINIA ECONOMIC DEVELOPMENT PARTNERSHIP

Southside-Southwest Virginia Barriers to Infrastructure and Supply Chain Investment (Chapter 488, 2022)

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

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Southside-Southwest Virginia Barriers to Infrastructure and Supply Chain Investment

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VEDP Virginia Economic Development Partnership

Table of Contents

EXECUTIVE SUMMARY **1**

Defining Southwest, Southside, and Rural Virginia in this Report 4

DRIVERS OF INFRASTRUCTURE AND SUPPLY CHAIN INVESTMENT **6**

Foundations of Economic Development 7

Assets for Economic Development 8

ECONOMIC CONTEXT FOR BARRIERS TO INVESTMENT IN SOUTHWEST AND SOUTHSIDE **10**

Historical Economic Challenges 11

Recent Trends Signaling Future Opportunity 16

ASSESSMENT OF BARRIERS AND RECOMMENDATIONS TO ACHIEVE ADDITIONAL INFRASTRUCTURE AND SUPPLY CHAIN INVESTMENT **20**

Virginia's Rural Funding Landscape 21

Capacity in Economic Development 25

Workforce 28

- Workforce Supply and Development 28
- Housing 34
- Childcare and Healthcare 38
- Talent Attraction Amenities 41

Site and Building Development 42

Infrastructure 48

Incentives 56

CONCLUSION **59**

ACKNOWLEDGMENTS **61**

NOTES AND SOURCES **64**

Executive Summary

The General Assembly, in House Bill 894 from the 2022 Session, tasked the Virginia Economic Development Partnership (VEDP) to determine whether barriers exist for infrastructure and supply chain investments in Southside and Southwest Virginia. The bill also requested a review of incentives that the Commonwealth and its localities should utilize or develop to retain businesses and promote new infrastructure and supply chain investments.

To accomplish this, VEDP leveraged data from a variety of sources and engaged with over 50 partners, including local governments, economic developers, regional organizations, academic institutions, nonprofits, private sector companies, and state agencies (See Acknowledgments on page 62 for a complete list of partners). Using this information, VEDP developed a report outlining barriers that exist and provides recommendations on how to address those barriers.

Many of the challenges facing Southwest and Southside Virginia today stem from the decline of four key industries — furniture, textiles, tobacco, and mining. The region has seen a loss of production and employment over the last four decades, beginning in the 1980s. Across Southwest and Southside, over $2.2 billion in Gross Domestic Product (GDP) and 60,000 jobs disappeared from just those four industries alone. Due to the high concentration of these industries in the region, the loss of these industries led to the general decline of the regional population and economies of Southwest and Southside Virginia.

The state has authorized and funded several organizations dedicated to filling the void left by the private sector losses. Tobacco Region Revitalization Commission (TRRC), established in 1999 using proceeds from the national tobacco settlement, has funded $1.4 billion in projects throughout the region and attracted over 21,000 jobs. The Virginia Coalfield Economic Development Authority (VCEDA), established in 1988 to diversify seven counties in the coal-producing region of the state, invested over $260 million in projects creating over 23,000 direct jobs. In partnership with regional and local economic developers, both organizations developed workforce, site, and other infrastructure assets over several decades, yielding benefits to the region today. Other state entities, such as the Department of Housing and Community Development (DHCD), Virginia Housing, VEDP, the Center for Rural Virginia, Planning District Commissions, community colleges, universities, and higher education institutions, have contributed additional support to developing critical assets and attracting private sector investment. Even with the economic challenge placed on this region, the people here have demonstrated creativity, resiliency, and innovation to build for the future.

The groundwork laid by economic developers, regional organizations, TRRC, and state agencies so far represents one part of what will be needed for economic transformation in the region. In recent years, Southwest and Southside are starting to see the benefits of these investments, with changes to migration patterns, the lowest unemployment in the state, and recent project wins indicating a new direction for the regions. The success of these investments and recent positive trends demonstrate that Southwest and Southside's economic challenge is not insurmountable. Even with this momentum, additional long-term focus and investment will be required to sustain and accelerate the positive trends we are seeing and to overcome the remaining barriers to infrastructure and supply chain investment in Southwest and Southside Virginia.

This report frames the barriers through the lens of private companies that could make investments in the regions and the economic developers responsible for laying the groundwork for those investments. It is important to note that while the report focuses on Southwest and Southside Virginia, many of the challenges and solutions discussed apply to rural areas across the state. Where possible, the study highlights challenges that apply to rural Virginia broadly.

The review of barriers to infrastructure and supply chain investment in Southwest and Southside identified five core challenges and determined actionable recommendations for each for policymakers to consider. Those areas are:

- Limited economic development staff
- Lack of available workforce, driven by:
  - Limited workforce development program capacity
  - Lack of workforce housing
  - Lack of childcare and healthcare facilities
  - Limited amenities for attracting new talent
- Limited portfolio of prepared sites and buildings
- Remoteness from key infrastructure
- Competitive business incentives

The recommendations in this report address the above challenges and highlight priorities for supporting economic growth in Southwest and Southside Virginia. Many recommendations involve adding new or modifying existing programs to address key challenges. With a few exceptions, this report does not specify which agencies or existing programs would be best suited for a given recommendation and leaves the decision to the discretion of policymakers. Any actions taken to implement recommendations from this report should focus on making programs accessible for recipients and flexible to address the full scope of the specific challenges identified. Programs that are too burdensome or complex may discourage distressed localities with limited resources from using them. Additionally, one size fits all solutions will restrict the potential impact of the investment for localities with diverse needs and will not be nimble enough to address new challenges that will inevitably arise.

Table 1 on the next page lists the recommendations in this report. Additional details are provided on each recommendation in the body of the report. Each recommendation directly addresses the major barriers to infrastructure and supply chain investments in Southwest and Southside Virginia. It should be noted that a piecemeal approach to implementing these recommendations is likely to yield limited results. A multi-pronged approach that combines efforts to address each of the underlying challenges would help maximize the economic growth generated by these recommendations.

Table 1
Recommendations for consideration

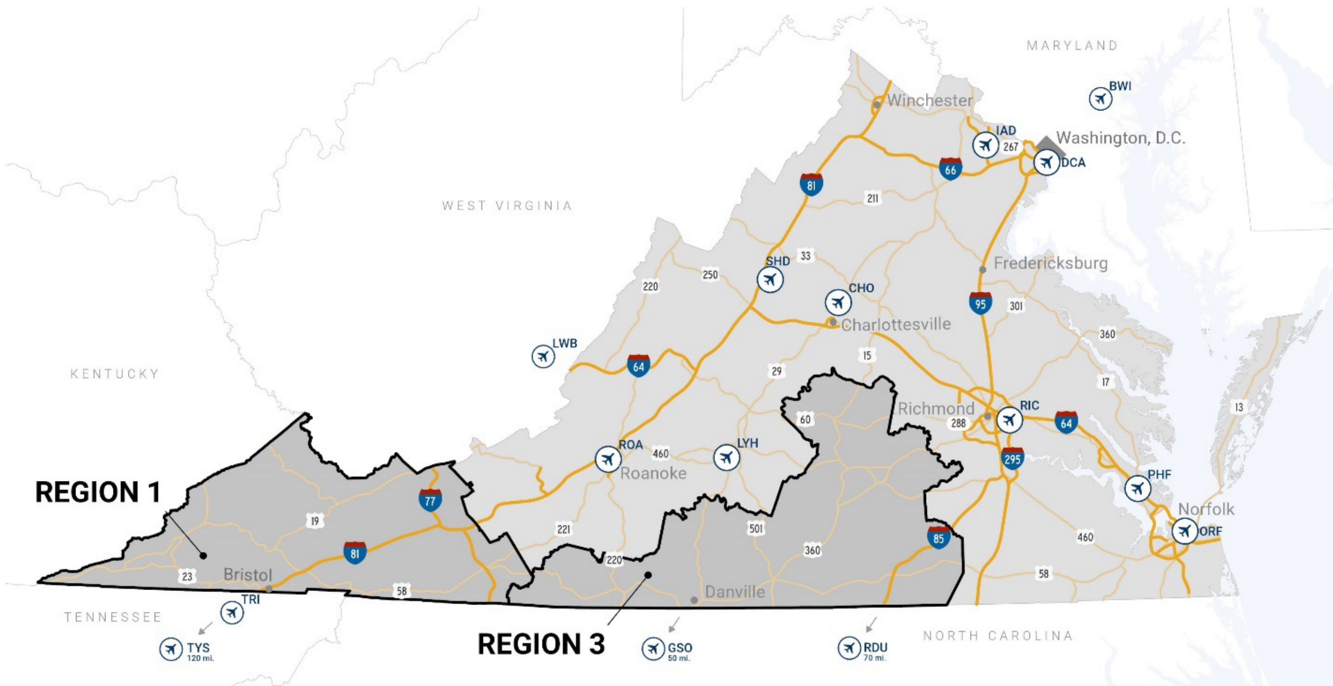
Category	Recommendations
Capacity in Economic Development	A. Develop a new program that funds staff, training, and technical resources to increase local and regional economic development capacity in Virginia
Workforce (Includes supporting issues such as housing, childcare, healthcare, and quality of life)	B. Expand GO TEC and continue to fund programs like the Virginia Talent Opportunity Partnership (VTOP), Innovative Internship Fund and Program, and dual enrollment pathways that expose students to manufacturing and other high-demand industries C. Expand eligibility for G3's Student Support Incentive Grant (SSIG) to part-time and non-Pell Grant students, providing more support to working students with non-tuition costs, like transportation, childcare, and other needs D. Expand advising and career coaching capacity at institutions with higher rates of part-time students using credentialing programs supported by G3 and Fast Forward E. Provide permanent and flexible capacity-building funding for post-secondary institutions to develop and/or expand responsive training programs for private sector businesses F. Modify existing program parameters and/or develop a new program that funds community investments in pre-development housing infrastructure in rural Virginia G. Maintain or expand Virginia's Historic Rehabilitation Tax Credit to further incentivize development among a variety of historic building types in rural areas H. Modify existing program parameters and/or develop a new program that funds community partnerships with private and nonprofit sector investments in childcare and healthcare capacity in rural Virginia I. Maintain existing enterprise zones in Southwest and Southside Virginia
Site and Building Development	J. Increase funding for site development in the Commonwealth K. Develop a program(s) that funds community efforts to develop shell buildings and source new sites
Infrastructure	L. Expand capacity in local, regional, or state organizations to pursue additional federal and state infrastructure funds (see Recommendation A) M. Leverage federal infrastructure funding to accelerate the development of planned interstates, highways, and expressways in Southwest, Southside, and other rural areas of Virginia N. Continue exploring the feasibility of additional inland ports in the Commonwealth
Incentives	O. Establish a manufacturing job creation tax credit that further incentivizes economic development in rural communities P. Develop opportunities to expand and fund transparency and speed in permitting programs

Defining Southwest, Southside, and Rural Virginia in this Report

For data analysis purposes, this study defines “Southwest” as the counties and independent cities contained in GO Virginia Region 1 and “Southside” as the counties and independent cities contained in GO Virginia Region 3 (Figure 1). The insights and recommendations to follow are applicable to counties beyond these two GO Virginia Regions that consider themselves included in either the Southwest or Southside geographies. Additionally, many of the insights and recommendations to follow will apply to rural localities and regions in Virginia outside of the study’s geographic bounds.

Figure 1

Southwest (GO Virginia Region 1) and Southside (GO Virginia Region 3) study regions

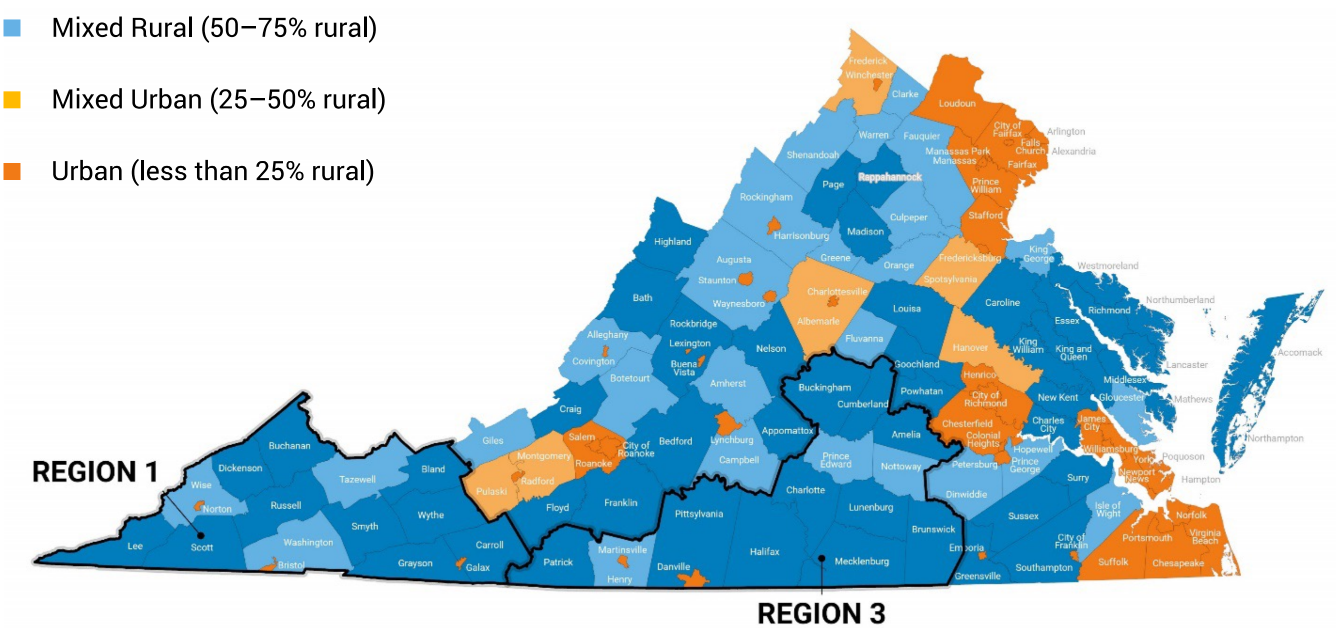


The analysis in this report also compares the study regions to other areas of the state for context. To demonstrate the unique differences between the study regions and other areas of Virginia, the report created groups of counties based on the percentage of people living in rural or urban areas. The report uses the terms “Rural” (0–25% urban), “Mixed Rural” (25–50% urban), “Mixed Urban” (50-75% urban), and “Urban” (75–100% urban) to classify localities. Due to data constraints that work to streamline Virginia’s unique independent city system, some analyses in this report pair independent cities with a county. When that is the case, the combined city/county percentage of the rural population will determine its category.

The Southwest and Southside regions are almost exclusively rural (Figure 2). When making data comparisons to the study region of Southwest-Southside, the report will classify “Other Rural-Mixed Rural” localities outside of the study regions as a group. The report will also discuss “Mixed Urban” and “Urban” localities as separate groups.

Figure 2
Urban and rural counties defined by percent of rural population

- Rural (greater than 75% rural)
- Mixed Rural (50–75% rural)
- Mixed Urban (25–50% rural)
- Urban (less than 25% rural)



Source: 2010 U.S. Census[1]

The economy of Southwest and Southside Virginia is also unique in the state. For reasons discussed in the next section, the regions have a small population and GDP and the state's lowest labor force participation rate (See Table 2). These regions have a larger proportion of manufacturing workforce (13%, compared to a total working age population of 9%) and a smaller proportion of IT/Professional service workers compared to other areas of the state.

Table 2
General information about the groupings used in this report, based on 2020 data

Category	Southwest	Southside	Other Rural/ Mixed Rural	Mixed Urban	Urban
Land area (mi²)	6,010	6,798	18,621	6,103	5,220
Working-age population (16–64)	223,635	222,661	688,087	729,087	3,661,639
Labor Force Participation Rate	49%	52%	60%	63%	70%
GDP ($B)	19.6	19.0	58.7	83.9	468.0
Manufacturing workforce	14,601	14,656	35,059	55,193	105,087
IT/Professional Services workforce	6,042	4,424	20,814	31,048	454,421

Source: U.S. Census[2]; Moody's Analytics[3]; VEDP analysis

Drivers of Infrastructure and Supply Chain Investment

Drivers of Infrastructure and Supply Chain Investment

Foundations of Economic Development

At the root of this study is the question of how to overcome barriers that will lead to infrastructure and supply chain investment — essential outcomes of economic development. The recommendations in this report are based on the core principles underpinning economic development and its potential to impact communities. The four foundational ideas that lead to the recommendations described in this report are:

Foundation #1: All places should pursue economic development to maintain or improve the lives of people in their community.

The core ideas and practices of economic development apply to every locality and region — including the ones that do not want to grow in population. Economic development can, and often does, lead to growth. However, economic development can also lead to transformation without new growth. Localities and regions can help existing companies adapt to new technologies to remain competitive and work to diversify industries in the region to ensure the long-term health of the economy. Efforts to strategically transform the economy are necessary to prevent long-term economic decline when a local industry moves overseas or shrinks due to advancements in technology. Therefore, even a locality that wants to maintain its size can — and should — think strategically about economic development as a lever for positive transformation.

Foundation #2: Economic development occurs through business attraction, business expansion, or entrepreneurial/startup growth

Economic development can occur through three avenues. First, a new company can choose to locate a facility in a region. Many state, regional, and local economic developers work to attract new firms through marketing initiatives or direct outreach. Second, existing companies in a region will often expand. Ideally, economic developers are interfacing with their current companies to help facilitate potential expansion needs. Third, people can launch new businesses/startups that will grow, with economic developers providing financial and other support services to budding entrepreneurs. Any of these three avenues can lead to growth — or economic transformation — in a locality or region.

Foundation #3: Competitiveness is at the root of economic development.

All three avenues for economic development face competitive challenges. The location of a new company or a company expansion is fought over by many states (and sometimes areas within a state). Entrepreneurial growth relies on venture capital support, which is usually tied to location-based incubators or funds. Additionally, a new business can make frequent location moves as it grows, each time providing an opportunity for a competitor region to capture the firm. Therefore, localities and regions need to focus on developing assets and policies that will make them more competitive.

Foundation #4: Communities need people and funding to implement strategies, develop assets, support businesses, and compete for companies.

The first three foundational ideas describe the work needed to achieve economic development. That work requires people, without whom assets are not developed, and businesses are not matched to the resources they need. Economic developers at local and regional levels help guide the community to reach its strategic goals and work with various educational, state, and business partners to achieve those goals. The job of economic developers requires many different skills: knowledge of site development and environmental permitting, the ability to market the community to existing and prospective businesses, writing and managing grants, and coordinating with stakeholders and community members. Even within a locality, the breadth of the work requires multiple individuals to be in economic development roles to better specialize in these different functions. A strong number of experienced local and regional economic developers enables regions to better coordinate resources and achieve success.

Assets for Economic Development

When any company makes location decisions, three key assets are critical for a region to be considered:

1. A sizable workforce with industry-tailored skills
2. An available site for a new facility
3. Infrastructure to support the needs of products, executives, and workers

While the needs of a given company will vary based on its sector and size, companies are always trying to optimize all three of these factors. A company will always face tradeoffs — maybe a location has the optimal workforce, infrastructure, and incentives, but the site may need significant investment to be workable. Economic developers strive to optimize each of these assets to make their community competitive for prospective companies.

Workforce

Companies need enough workers in an area to fill jobs and require workers to have adequate skills. Areas with a workforce shortage or a talent mismatch can overcome this challenge by having the right infrastructure, such as adequate childcare, housing availability, and healthcare supports to increase the current labor force and quality of life factors to attract new talent. Workforce programs, community colleges, and universities can be leveraged to upskill and maintain adequate talent levels for the region's needs. Economic developers often guide the development of these programs and connect companies and workers to these assets.

Sites and buildings

Project-ready sites and buildings are critical assets because they save companies money and time in site prep work. Speed to market, especially for today's larger industrial projects, is vital. While site development requires significant local, regional, and state investment and staff time to execute, having a project-ready site is often the determining factor for location decisions. Strategic site investments also allow localities and regions to control where growth happens and what types of companies are brought to the region.

Infrastructure

Highway, rail, and airport access, to varying degrees, factor heavily in company location decisions. Proximity to interstates or four-lane highways is important for export-oriented industries that need to move products. Some specialized industries require rail to move their products instead and need on-site access to railroads. Corporate executives may also prefer proximity to a commercial airport to minimize travel time to their numerous company locations. Economic developers can work with various regional and state stakeholders to develop these infrastructure assets long-term and ensure that sites selected for development are in an optimal location to maximize access to critical infrastructure.

While not a traditional "asset," incentives are often leveraged as a competitive mechanism to ensure that companies choose a location after finding adequate workforce options, sites, and infrastructure. Incentives can compensate for cost challenges with essential assets and are often put towards workforce programming or site development. Capital-intensive companies, such as companies in the automotive and semiconductor industries, tend to prefer upfront incentives to help with the cost of plant construction. Incentives come into play near the end of a company's location search once the companies have found a few strong-contender sites.

Site Selection and *Area Development* are two publications that survey professionals who are influential in company location decisions. In *Site Selection's* 2022 Business Climate rankings, site selectors' most important location criterion was workforce skills, followed by state and local tax schemes and workforce development. Land/building prices and supply tied for sixth, with utilities and incentives tied for eighth. *Area Development's* Annual Consultant Survey, which surveys site selection consultants, demonstrated similar priorities from site consultants as with *Site Selection*, including an emphasis on workforce needs, infrastructure, site availability, permitting, and incentives. However, *Area Development's* ranking included key criteria not present in *Site Selection's*, including proximity to major markets, proximity to suppliers, and occupation or construction costs.

Table 3
Site Selection and *Area Development* location factor criteria

Site Selection		*Area Development*	
Location Factor Criteria	**Rank**	**Location Factor Criteria**	**Rank**
Workforce skills	1	Availability of Skilled Labor	2
State and local tax scheme	T2	Tax exemptions	10T
Workforce development	T2	Training programs/ technical schools	15
Transportation infrastructure	4	Highway accessibility	3
Ease of permitting and regulatory procedures	5	Expedited or "fast-track" permitting	8
Land/building prices and supply	T6	Available land	6T
Utilities (cost/reliability)	T6	Energy availability and costs	7
Incentives	T8	State and local incentives	4T
Higher education resources	T8	-	-
Quality of life	T8	Quality of life	18

Source: *Site Selection* magazine[4]; *Area Development*[5]

Economic Context for Barriers to Investment in Southwest and Southside

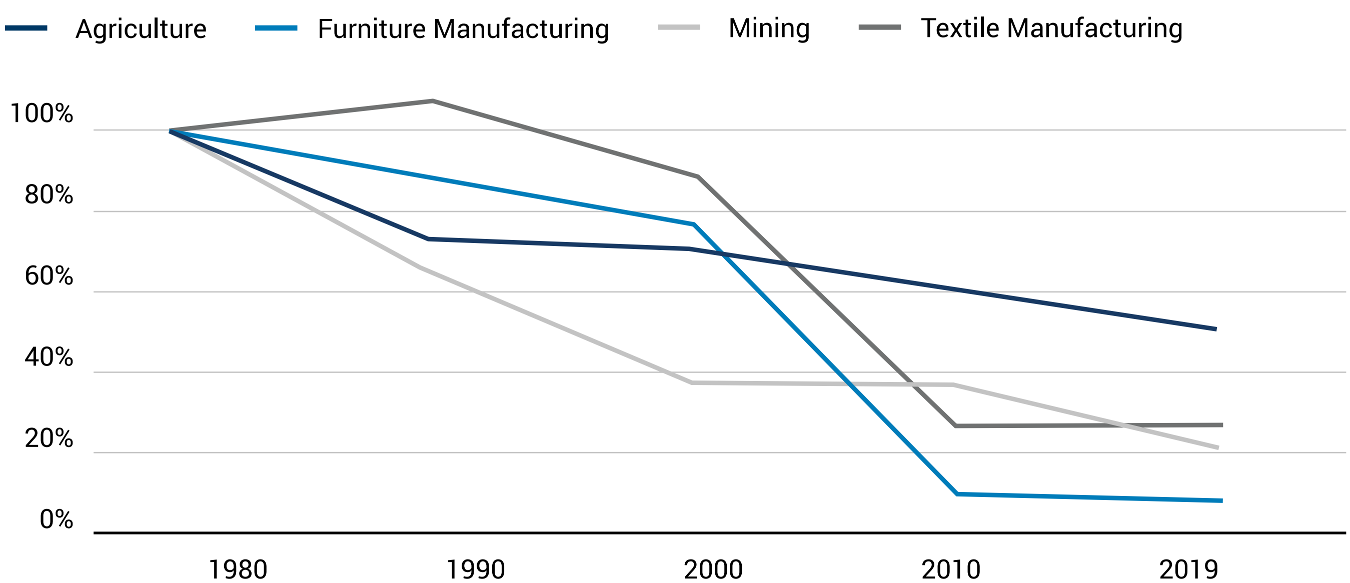
Economic Context for Barriers to Investment in Southwest and Southside

Historical Economic Challenges

The dominating feature of Southwestern Virginia is the Appalachian Mountains, rolling across the landscape for 200 miles east to west — from Patrick County to the Cumberland Gap in Lee County, the westernmost point of Virginia. The mountains gave rise to the coal production industry and provided the climate for rich farmlands in the valleys. They also gave the region its remoteness, unique aspects of cultural heritage, and natural beauty. Manufacturing, including textiles and processes related to mining, produced a robust skilled workforce that continues to serve the mining operations and advanced manufacturing sector present today. While representing 4.5% of the state's working-age population, the region today produces 19% of the value of the state's agricultural products and 6% of the value of manufactured goods.[6]

Southside Virginia carries the heart of much of Virginia's agriculture and manufacturing heritage. The region spans 150 miles across the middle of Virginia's border with North Carolina and is surrounded by the metropolitan areas of Richmond, Lynchburg, and Roanoke. It is characterized by rich farmlands that once produced much of the state's tobacco crop and historical manufacturing cities such as Martinsville, Danville, South Boston, and South Hill, which developed initially around the textile and furniture manufacturing industries. While also representing about 4.5% of the state's working-age population, the region today produces 11% of the value of the state's agricultural products and 6% of the value of manufactured goods.[7]

Figure 3
Virginia sector employment as a percentage of 1980 sector employment



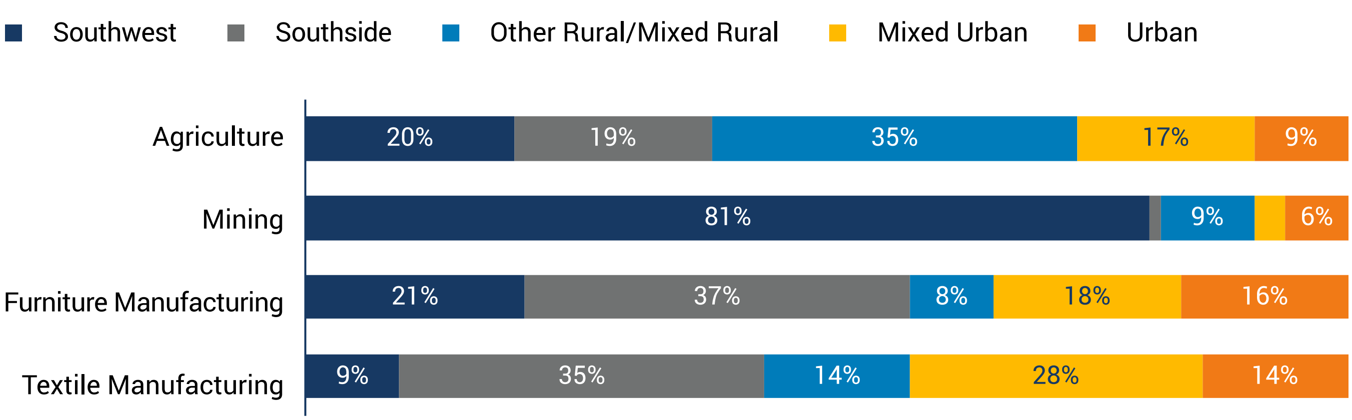
Source: Moody's Analytics[8]; VEDP analysis
Note: The data examined did not break out Agriculture into its component commodities, like tobacco; the agriculture industry as a whole will be used to represent the economic impact of the loss to the tobacco industry

Over the past 40 years, both regions saw repeated economic shocks to core industries — tobacco, furniture, textiles, and coal. For different but coinciding reasons, each of these industries saw rapid declines statewide after 1980 (Figure 3). Relaxed trade policies and aggressive competition from low-wage economies abroad led to the closure and exodus of textile and furniture manufacturing companies. Health concerns and a push to reduce smoking forced farmers to turn away from the profitable tobacco crop. Environmental concerns related to the combustion of fossil fuels, associated federal policies, and increasing costs for extracting coal in the region contributed to that industry's decline.

The losses in these industries hit Southwest and Southside harder than the rest of Virginia because those industries uniquely dominated the economy in those regions. In 1980, Southwest and Southside Virginia collectively had 43% of the Commonwealth's furniture manufacturing workforce, 58% of textile manufacturers, 82% of mine workers, and 39% of farmers (Figure 4). Those four sectors constituted 21% of the region's total employment (Figure 5).

Figure 4

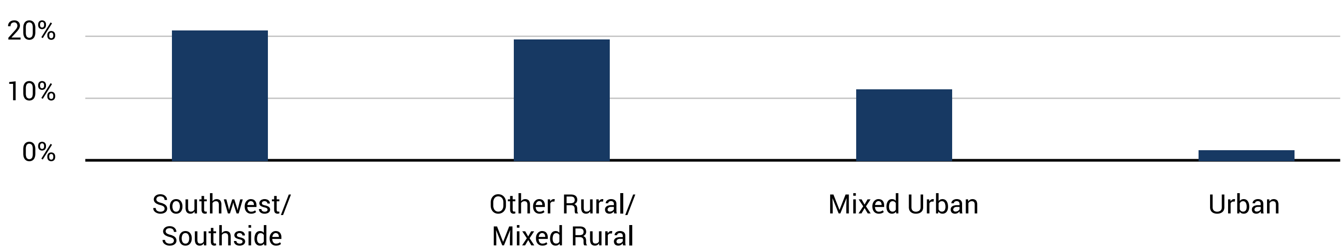
Percentage of Virginia's employment by locality grouping in 1980



Source: Moody's Analytics[9]; VEDP analysis

Figure 5

Percent of the workforce employed in furniture/textile manufacturing, mining, and agriculture by locality grouping versus total employment in 1980



Source: Moody's Analytics[10]; VEDP analysis

The total economic impact on Southwest and Southside was significant. In the four decades from 1980–2019, over $2.3 billion in economic production and 50,000 jobs were lost (Figures 6 and 7). The second hardest hit locality groups saw a GDP loss of less than $500 million (Mixed Urban, which had a moderate concentration of furniture and textile firms) and an employment loss of roughly 22,000 (Other Mixed Rural and Mixed Urban).

Figure 6

Total employment loss in the four sectors (000s)

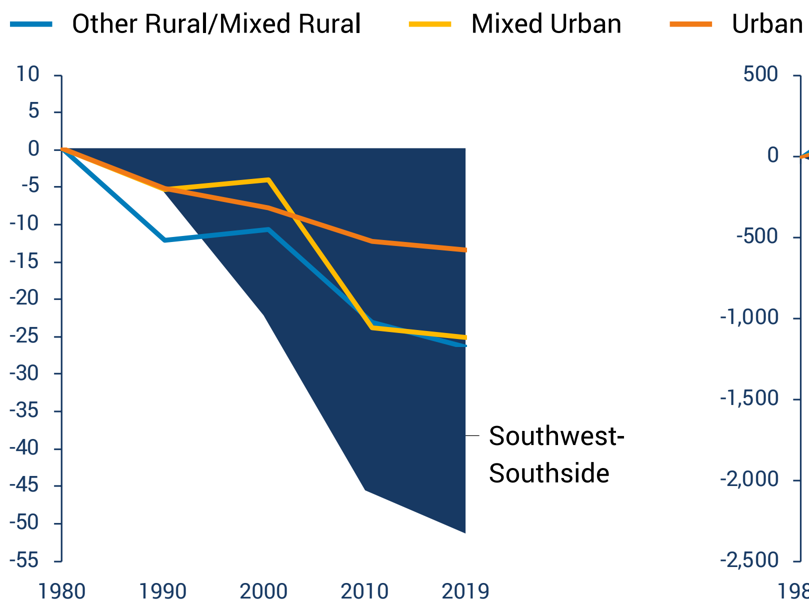
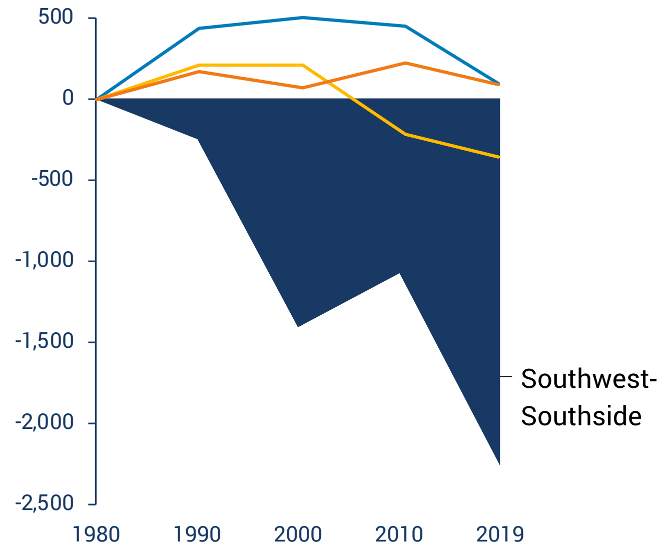


Figure 7

Total GDP loss in the four sectors ($M)

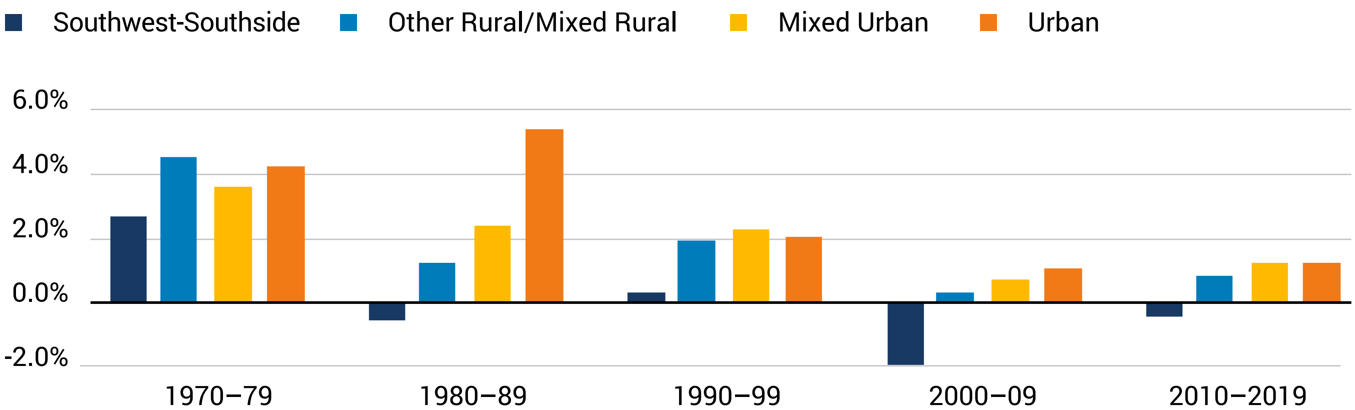


Source: Moody's Analytics[11]; VEDP analysis

The collective impact on all these industries caused employment loss in three out of four decades from 1980–2019, unmatched by any other region in the Commonwealth (Figure 8). Quantifying this loss is important for understanding why the economy in Southwest and Southside has struggled to see a revival and what level of private and public sector investment will be required to realize a sustained recovery. Due to the global trends previously discussed, there is no expectation for furniture and textile manufacturing to return to the U.S. or for tobacco farming and coal mining to return to their former production levels.

Figure 8

Average annual employment growth by region

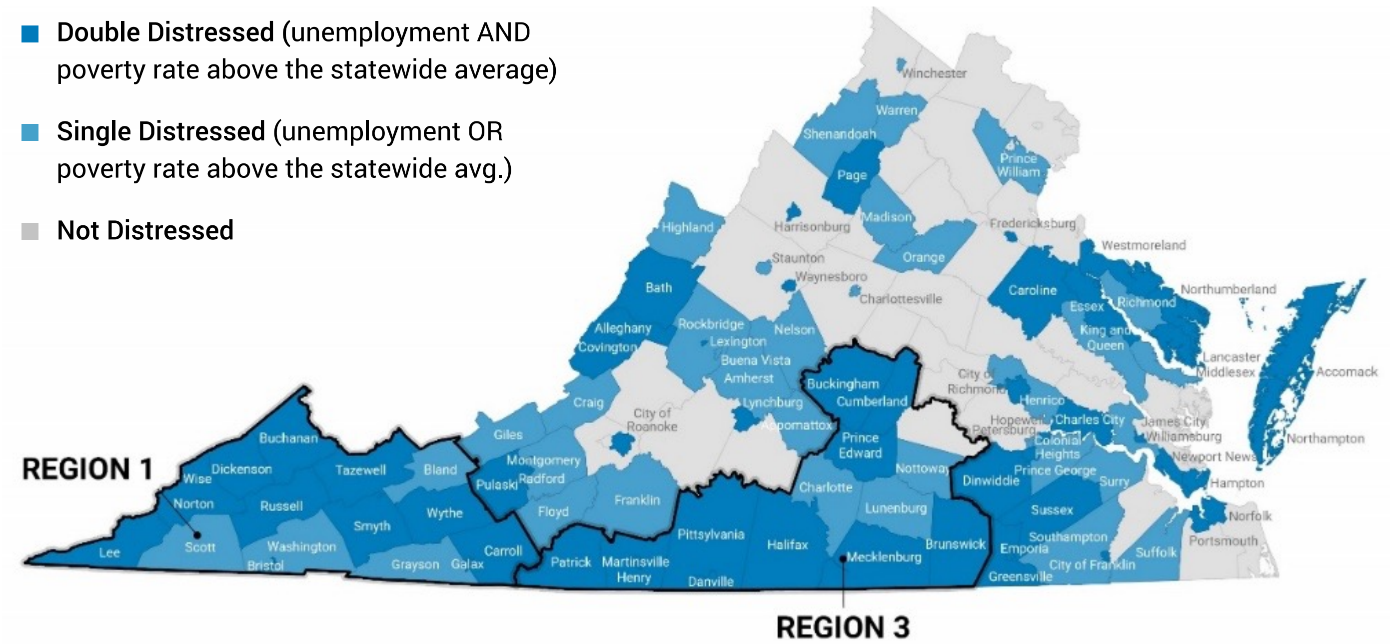


Source: Moody's Analytics[12]; VEDP analysis

The resources (primarily private sector investments and tax dollars) that would go into making a shift to developing assets for future-growth industries in Southwest and Southside do not currently exist at the levels naturally present in most metropolitan areas. This disadvantage is true for other rural areas in the Commonwealth as well. Large and medium-sized metropolitan areas (counties directly outside independent cities) have benefited in recent decades from structural advantages preferred by new-growth industries, including concentrated populations, access to global infrastructure like ports and commercial airports, and robust university systems. These structural assets have buoyed decades of growth in technical and serviced-based industries, bringing financial strength to metropolitan areas that precipitated continued asset improvements. Meanwhile, areas outside small and medium metropolitan areas, including Southwest and Southside, have repeatedly been categorized as distressed or double distressed — facing higher rates of poverty and unemployment (Figure 9).

Figure 9

Localities by VEDP distress level, with rural distress mostly concentrated in areas outside of large and medium metros



Source: VEDP[13]

In recent years, the trend has started to shift with rising employment, positive net migration, and significant company investments coming to Southwest and Southside (discussed further in the next section). Much of this positive momentum is the result of dedicated investments in workforce assets, industrial sites, and infrastructure made by communities, regional organizations, and state entities over the last two decades. However, infrastructure and supply chain investments in these regions still lag behind the rest of the state. Sustaining the positive momentum seen in recent years will require focus and additional investment from the state, regions, and localities into key assets that will propel Southwest and Southside toward future economic success.

Recent Trends Signaling Future Opportunity

There have been several positive trends in Southwest and Southside as Virginia has recovered from the pandemic. First, migration patterns following the first year of the pandemic show a movement of people out of major metropolitan areas, especially Northern Virginia, to more rural parts of the state (Figure 11). Southwest saw a net positive migration of 521 people, and Southside saw a net positive migration of 1,711 people. While this did not make up for the natural loss from an aging population (Figure 10), this is an early sign that recent project wins and the flexibility allowed by remote work are helping to reverse previous outmigration trends.

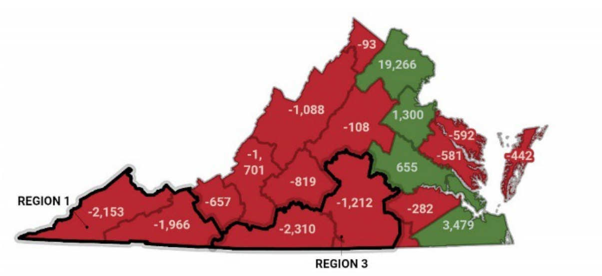
Figure 10

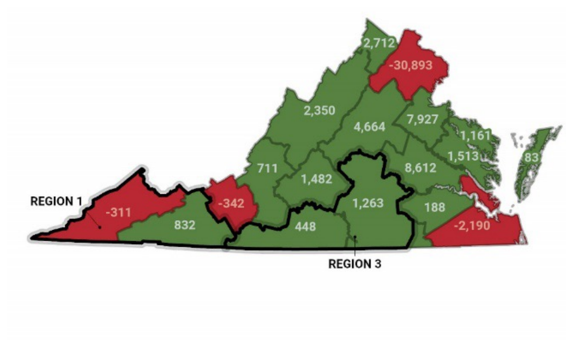
Natural population change (births minus deaths), 2020–2021

Figure 11

Net migration, 2020–2021

■ Population Increase ■ Population Decrease



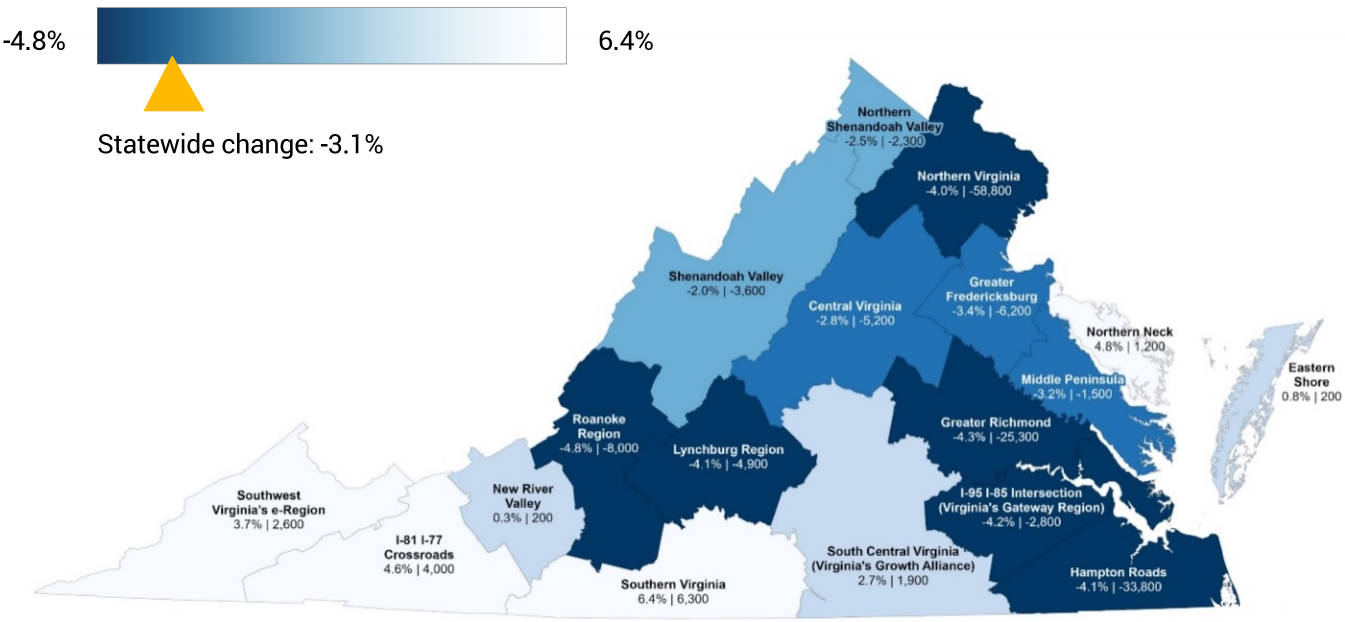


Source: U.S. Census[14]

Employment recovery from the pandemic has been stronger in Southwest and Southside Virginia than in other areas of the state (as has been the case with other rural areas). Both regions have higher employment levels than before the pandemic (Figure 12). This positive trend has also brought challenges. The region is now experiencing workforce shortages for employers, as well as housing, childcare, and healthcare shortages for workers. These will be discussed in a later section of the report.

Figure 12

Employment change from February 2020–September 2022, by VEDP Marketing Region (% of absolute employment change, not seasonally adjusted)

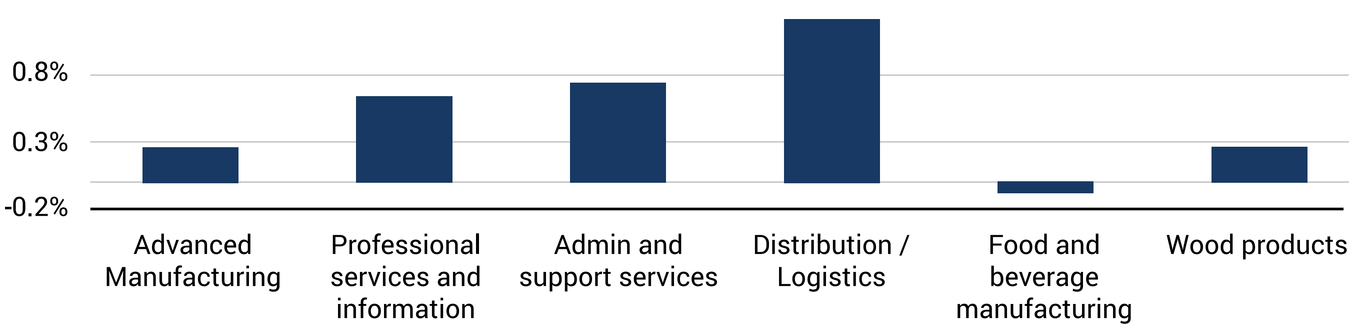


Source: Bureau of Labor Statistics, Local Area Unemployment Statistics[15]

Recent statistics showing economic growth demonstrate the success of the steps the region has taken to cultivate its industry targets. The GO Virginia Regions and regional economic development organizations (REDOs) in Southwest and Southside have conducted target industry studies to develop specialized regional priorities for workforce, site, and infrastructure investments. The primary focus of all regions has been to grow the Advanced Manufacturing/Materials and Information Technology/Professional Services sectors — an effort that has resulted in several notable recent wins. Other traded sector targets, such as Admin and Support Services, Distribution and Logistics, Food & Beverage Manufacturing, Wood Products, and Energy/Minerals, are also targets for certain subregions in Southwest and Southside[16]. Through 2025, the broader region is projected to see annual growth in nearly all of its industry target sectors (Figure 13).

Figure13

Projected average annual change in employment for target sectors in Southwest and Southside Virginia, 2021–2025



Source: Moody's Analytics[17]; VEDP analysis

This growth is a direct result of recent transformational project wins. In 2019, Morgan Olson, a step van manufacturer, announced the establishment of a state-of-the-art factory bringing 700 jobs to Pittsylvania County in Southside. Additional new investments from advanced material manufacturing firms Staunton River Plastics and SCHOCK GmbH (200 jobs in Pittsylvania County and 350+ jobs in Henry County, respectively), and expansions by Tyson Foods (370+ jobs in Pittsylvania County) and Hitachi Energy (160+ jobs in Halifax County) have laid the groundwork for a resurgence in manufacturing. The addition of IperionX's titanium demonstration facility in Halifax County and FyberX's HQ in Mecklenburg County is proving Southside's value as a place to develop new technologies.[18]

In Southwest Virginia, the announcement of Blue Star Manufacturing's nitrile glove facility in Wythe County in 2021 is the largest single investment made in both regions since before 1990, with an expected 2,400 jobs once fully operational. The region has also seen several wins in technology and services-oriented industries, such as the expansion of 1901 Group (150 jobs in Washington County), the new location of eHealth Technologies (160 jobs in Scott County), and EarthLink's customer services support center (285 jobs in Norton). Recent manufacturing wins such as Maine Five in Buchanan County (100 jobs), and Ceccato S.p.A. in Russell County (50 jobs) demonstrate the region's continued strength in manufacturing.[19]

These wins are the result of long-term collaborative investments in site development, workforce, and infrastructure. For example, the multi-year, over $9 million investment in Project Intersection, a collaboration between Dickenson, Lee, Scott, and Wise Counties and the city of Norton through a Regional Industrial Facilities Authority (RIFA), led to EarthLink's win.[20] Wythe County's development of the 160+ acre Progress Park site took several decades before ultimately landing BlueStar's transformational project.[21] Investment in workforce and technology assets, such as GO-TEC and the Institute of Advanced Learning and Research, spurred recent manufacturing wins in Southside. Financial resources from the Tobacco Region Revitalization Commission (TRRC), the Virginia Coalfield Economic Development Authority (VCEDA), GO Virginia, and other state and regional entities have all supported these and many other transformational projects.[22]

The investments above have been driven by the creative and resilient people in these regions, demonstrating the success that can come from focused and dedicated effort. Even so, Southwest and Southside are still projected to lag behind the rest of the state in employment growth this decade. Structural barriers still at work in the regions will limit the development of future-oriented target industries unless adequate investment in assets is made to overcome those barriers.

Since 2019, GOVA Regions 1 and 3 have announced:

$2.7B

CAPITAL INVESTMENT

9,986

NEW JOBS

102

COMPANIES ANNOUNCED INVESTMENT

VEDP Virginia Economic Development Partnership

Selected Announcements

Wythe County 2,464 jobs | $715.3M	Pittsylvania County 703 jobs | $57.8M	Pittsylvania County 376 jobs | $295.5M
Henry County 355 jobs | $85M	City of Norton 285 jobs | $5.4M	Washington County 250 jobs | $30M
Tazewell County 218 jobs | $198.4M	City of Bristol 200 jobs	Pittsylvania County 200 jobs | $34M
Buchanan County 181 jobs | $169.1M	Halifax County 165 jobs | $37M	Scott County 160 jobs | $0.4M
City of Danville 160 jobs | $46.2M	Pittsylvania County 150 jobs | $3.5M	Washington County 150 jobs | $1.2M
Henry County 126 jobs | $145M	Wythe County 120 jobs | $39M	Carroll County 118 jobs | $2.3M
Washington County 113 jobs | $8.0M	Halifax County 108 jobs | $82.1M	Buchanan County 100 jobs | $0.4M

Assessment of Barriers and Recommendations to Achieve Additional Infrastructure and Supply Chain Investment

Assessment of Barriers and Recommendations to Achieve Additional Infrastructure and Supply Chain Investment

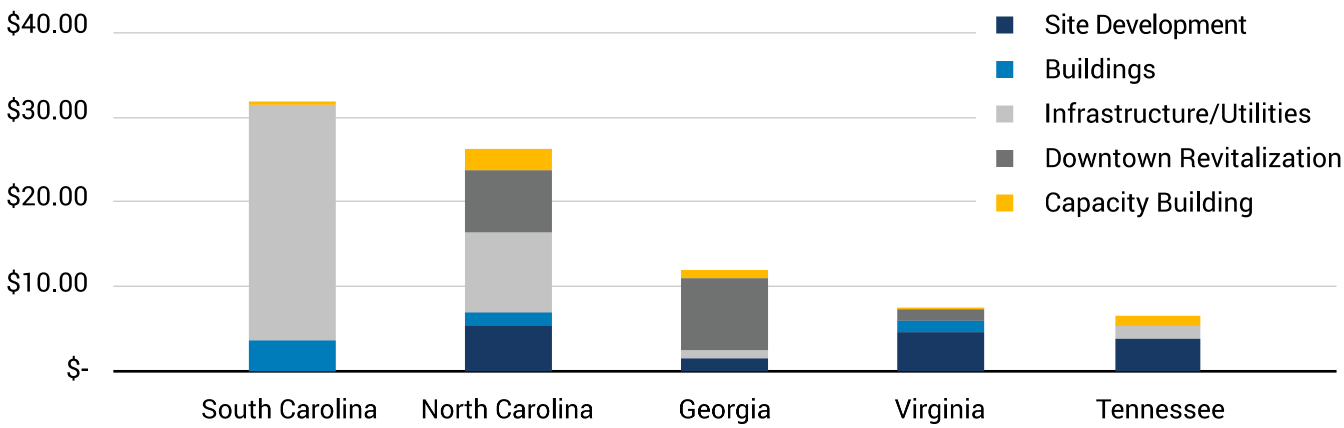
Virginia's Rural Funding Landscape

This report will examine Virginia's rural funding and programs in the context of four peer states: Tennessee, North Carolina, Georgia, and South Carolina. Other peer states will occasionally be mentioned to highlight differences or model programs.

An analysis of the four main peer states' economic development organizations shows that Virginia's competitors have placed a higher priority on funding key rural programs. Virginia does have notable organizations, such as TRRC and VCEDA, which have historically provided significant funding for economic development efforts across Southwest and Southside Virginia. These programs have provided targeted funding for infrastructure, sites, workforce, and other assets over the last two decades that have generated economic growth – especially in recent years. TRRC has made substantial and consistent investments across the Southwest and Southside region, totaling $1.47 billion in grants and loans between 1999 and 2021. However, on a per capita basis, Virginia is outspent by South Carolina and North Carolina on key aspects of rural development. It is competitive with Tennessee and Georgia in terms of per capita spending. Still, Virginia does not have designated state agency infrastructure and carve-outs for rural funding that can be found in those states, which ensure consistent funding for rural communities over time.

As shown in Figure 14, South Carolina and North Carolina spend the most in terms of per capita investment in programs that directly benefit rural areas, such as programs for site development, infrastructure improvements, and local capacity building. For capacity building programs specifically, Georgia and Tennessee spend three times as much per capita as Virginia, and North Carolina spends eight times as much as Virginia per capita – led by their $5 million Rural Transformation Grant program. Despite this, Virginia has made notable investments in some of these areas and will substantially increase its statewide investment in site development in FY23.

Figure 14
Approximate annual per capita state investment in rural economic development programs (Rural and Mixed-Rural populations), most recent fiscal year estimates



Source: Various annual reports, state budget documents, and grant reporting systems from state agencies in Georgia, North Carolina, South Carolina, Tennessee, and Virginia[23]
Note: This is an estimate of what each state allocates to these key program areas on an annual basis using publicly accessible data from the most recent fiscal year. There is significant variation in budget and grant reporting practices across states. Georgia and Tennessee do not provide as much detailed reporting on economic development grants as other states; total grant funding may be higher than shown above.

Virginia's peer states have addressed rural economic development challenges through a combination of targeted rural grant programs and staff resources funded and designated specifically for rural issues. To varying degrees, neighboring states have also reduced silos and consolidated some rural development programs under economic development agencies. This is facilitated by public-facing efforts by Governors and other decision-makers to make rural issues a policy priority.

In Georgia, Governor Kemp created a Rural Strike Team within the state's Department of Economic Development tasked with securing and managing major new projects in rural areas. A recent ranking by *Site Selection* magazine placed seven rural Georgia counties in its list of top-50 high performing non-metro counties, with two in the top five. The ranking credited the strike force with establishing a culture of collaboration between the state's economic development organization and its partners in rural counties.[24]

North Carolina's Rural Economic Development Division (REDD) is housed within the state's Department of Commerce and offers grants and capacity-building programs that support economic competitiveness in rural communities. In FY 2022, it's staff of 12 distributed approximately $55 million in grant funding for site development, infrastructure, and capacity building.[25] A significant portion of this funding, approximately $25 million, came from a one-time infusion of federal American Rescue Plan funds. In addition to grants, REDD began a $3.5 million training and technical assistance pilot program for local government staff in 2021, which aids with local strategic planning and project development.[26] REDD's grant investments were supplemented by approximately $15 million in additional funding for rural site and infrastructure development from the Golden Leaf Foundation, a grantmaking entity funded with tobacco settlement funds and is separate from the state's Department of Commerce. North Carolina's Rural Center is another major support organization in the state. It operates as a nonprofit with a budget of approximately $5 million and a staff of 30.[27] This year, the North Carolina legislature allocated $202 million in federal funding to the Rural Center to support small businesses.[28]

South Carolina established the Rural Infrastructure Authority (RIA) to support investments that enhance economic growth in the state's most distressed counties. Last year, it distributed $30 million in grants supporting 64 projects. Since its founding in 2013, it has awarded over $205 million across the state, which generated an estimated 11,500 new jobs.[29]

Tennessee established a Rural Task Force in 2016, which led to the development and implementation of a statewide rural strategy.[30] This strategy has resulted in focused investments in the ThreeStar local capacity building program, dedicated annual funding for site development in rural communities, and a rural development division with a staff of 10 within the state's Department of Economic and Community Development.[31]

Each of these states has bolstered rural initiatives in other ways, for example, by leveraging tobacco settlement funds — similar to Virginia — for rural economic development (Georgia and North Carolina), by integrating rural community carve-outs into existing economic development incentive programs (Tennessee), and by offering resources and services directly to rural communities through dedicated internet platforms (all four states). The websites of each state economic development organization have a unique landing page for all their rural programs and resources.[32]

In contrast with other states, the Center for Rural Virginia, a nonprofit organization created by the General Assembly at the recommendation of a 2001 report by the Rural Virginia Prosperity Commission, is Virginia's only organization dedicated solely to rural economic development across the Commonwealth.[33] The Center plays an important role in advocating for rural Virginia and supporting the leadership development for rural communities but currently lacks the elevated mandate and funding that established rural agencies have in other states.

Use of Tobacco Settlement Funds in Virginia and North Carolina

Tobacco settlement funds play an important role in the rural economic development landscape in both Virginia and North Carolina. In Virginia, for example, TRRC has distributed over $1.4 billion in grants and loans to Virginia's Tobacco Region since its inception. How those funds have been administered over time provides useful insight into why Virginia may need to increase its investments to remain competitive (Table 4). Virginia's TRRC has less funding to distribute each year in large part because of the way the Commonwealth chose to draw down its share of tobacco settlement funding in the years immediately following the settlement. TRRC's only funding source is its endowment, and the organization is shifting toward offering more loans rather than grants to sustain its assets over the long term.

North Carolina's tobacco settlement funds are distributed to the Golden Leaf Foundation in smaller annual increments, which will continue in perpetuity. The North Carolina General Assembly has also made ad hoc supplemental appropriations during some years, typically for specific one-time programs. Golden Leaf is a 501(c)3 nonprofit foundation, which gives it the ability to access other sources of funding through private donations, though it does not appear to have done so in recent years. The upshot is that while TRRC has had a very substantial economic development impact over the past two decades, its long-term ability to compete is constrained due to its financial structure.

Table 4
Comparison between North Carolina’s Golden Leaf Foundation and Virginia’s Tobacco Region Revitalization Commission

Program Detail	North Carolina	Virginia
Entity name	Golden Leaf Foundation	Virginia Tobacco Region Revitalization Commission
Funding sources	Annual tobacco settlement fund allocation; ad hoc state appropriations; endowment income; private foundation funds (potentially)	Endowment income from lump sum tobacco fund allocation in 2005
Grants awarded (FY22)	$126.8M	$18.3M
Assets (FY22)	$1.2B	$363.7M

Source: Golden Leaf Foundation Annual Report[35]; Virginia Tobacco Region Revitalization Commission Annual Report[36]

Context for Recommendations to Follow

The recommendations in the following sections describe a variety of policies to address key challenges facing communities in Southside and Southwest Virginia. Many of the states mentioned above already have programs to address these challenges, and those programs will be described in greater detail for decision-makers to consider when developing policies for Virginia.

Capacity in Economic Development

Capacity in Economic Development – Barriers

Economic development capacity should be a top priority of localities, regions, and the state because without dedicated economic development staff, localities and regions are heavily disadvantaged when it comes to their ability to increase infrastructure and supply chain investment. Project wins heavily depend on economic developers' ability to cultivate community assets (through grants, stakeholder engagement, and other avenues), market those assets to prospective or expanding companies, and work with companies as they work through their location decision-making process. For communities without an economic developer, the Chief Administrative Officer of a locality often takes on this role. Adding economic development work to the requirements of running a locality, even with an experienced administrator, means that essential elements of economic development in the community will be sacrificed.

Following a statewide assessment of local and regional economic development organizations in January 2020, VEDP determined that over three-quarters of rural localities had fewer than two economic developers — almost half had no dedicated economic developer at all. Mixed Rural localities were doing slightly better, with just over half employing two or more dedicated economic developers. In Southwest and Southside, a mostly rural part of the state, only one-third of localities were sufficiently staffed with two or more dedicated economic developers, and a third had no dedicated economic developer. Most Mixed Urban and Urban localities (85%) had at least two dedicated economic developers, and only two did not have an economic developer.

This assessment highlighted how critical economic developers are to realizing supply chain investment in an area. A locality with two or more dedicated economic developers is twice as likely to secure a project, demonstrating the difference made by having dedicated staff resources for economic development (Figures 15 and 16).

Figure 15
Annual likelihood of a locality winning a project compared to the number of dedicated economic developers, based on 2019–2022 project data

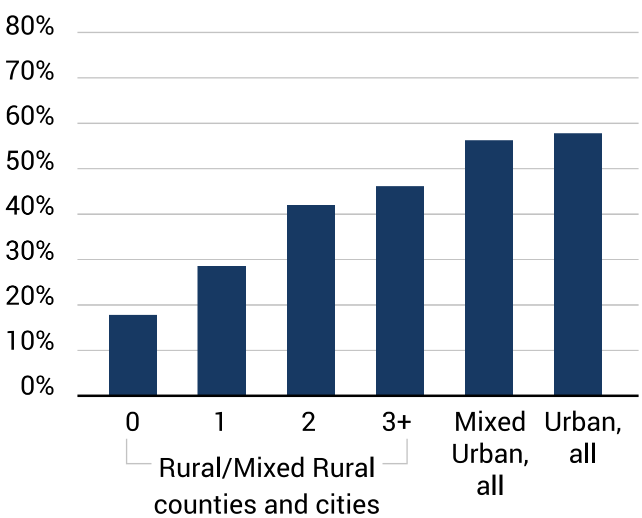
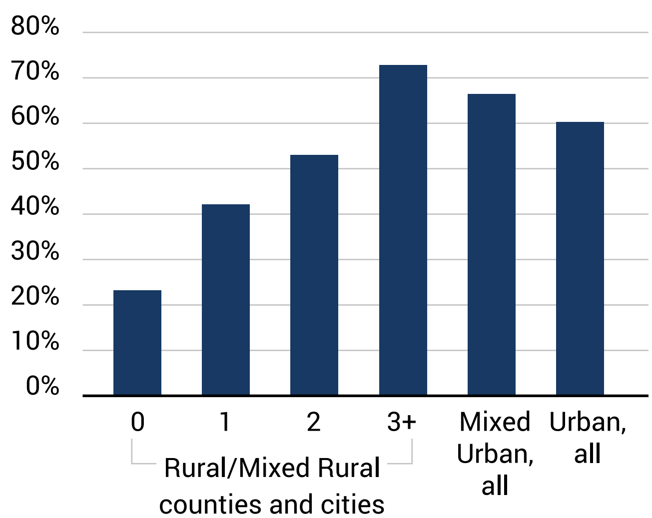


Figure 16
Percent of localities that won a project compared to the total number of dedicated economic developers, based on 2021–2022 project data

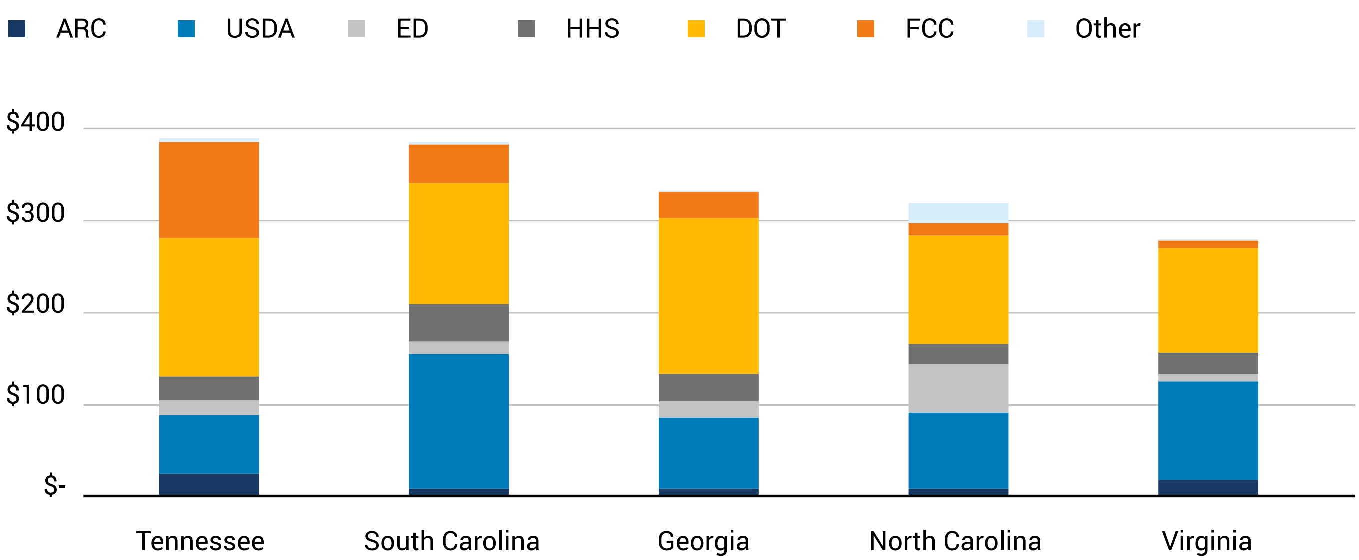


Source: VEDP's 2020 Local and Regional Competitiveness Assessment[37]; Virginia local economic development websites; VEDP Announcements & Closings Database[38]; VEDP analysis
Note: Includes new and expansion projects

Capacity challenges in economic development are demonstrated in other ways. In addition to working on project attraction and expansion, economic developers either write grants to improve community assets or help coordinate stakeholders to apply for grant funding. Compared to neighboring states in the Southeast, Virginia has received the lowest amount of federal grant funding per capita for rural areas (Figure 17). Additional economic development staff capacity would enable more communities and regions to develop strong applications to secure these grants.

Figure 17

Federal rural development funds per capita (Rural and Mixed-Rural populations), FY17–FY22



Source: Brookings Institution[39]; U.S. Department of the Treasury[40]; VEDP analysis

Note: Agency abbreviations are as follows: Appalachian Regional Commission (ARC); U.S. Department of Agriculture (USDA); U.S. Economic Development Administration (EDA); U.S. Department of Health and Human Services (HHS); U.S. Department of Transportation (DOT); Federal Communications Commission (FCC); Other (assorted low-dollar programs from the Department of Interior, Department of Justice, and Department of Labor).

In addition to staff, providing planning and resource development support would greatly expand the capabilities of economic developers to support asset development, work with stakeholders, and support project investment. Economic developers in Southwest and Southside have made strides with limited resources. Still, financially supporting strategic plans, target industry studies, marketing material development, and site and infrastructure studies would enable under-resourced localities to move economic development efforts forward.

The presence of strong regional economic development organizations is also critical to unlocking additional infrastructure and supply chain investment. Regional organizations often streamline marketing and business attraction resources and facilitate collaboration across localities. The organizations can also fill gaps in local economic development capacity. Their ability to serve as a facilitator and collaborators is important for the success of Southwest and Southside and should be considered in developing recommendations for capacity support programs.

Capacity in Economic Development – Recommendations and Models for Success

Recommendation A: Develop a new program that funds staff, training, and technical resources to increase local and regional economic development capacity in Virginia. The program should:

- Provide matching funds for local and regional organizations to hire economic development staff
- Provide matching funds for localities and regional economic development organizations with staff to conduct strategic plans and target industry studies, develop marketing plans and resources, and seek expert resources for new site identification analyses and infrastructure planning

Several neighboring states have already placed a high priority on capacity building for economic development (Table 5). North Carolina's Rural Community Capacity Grant, launched in 2022 as a part of its new Rural Transformation Grant program and funded at approximately $3.5 million, provides educational programming, technical assistance, and focused guidance to local government staff in rural and distressed communities.[41] In 2019, Tennessee started the ThreeStar Program to incentivize localities to assist communities in asset-based planning, funded at $2.5 million. Tennessee's Department of Economic and Community Development also has a separate program to assist localities in developing marketing assets.[42] The NC Rural Center, a nonprofit state partner focused on rural development, also supports capacity building efforts. The organization runs the Rural Economic Development Institute, which has trained 1,300 leaders since it began in 1987.[43]

Currently, Virginia's only funded capacity development effort is the Virginia Rural Leadership Institute (VRLI), conducted through the Center for Rural Virginia. The VRLI completed its inaugural year this November with a cohort of 29 members who received training on economic and community development topics and were paired with a mentor to support the development of a community-impact project. The force of this program is already being felt in communities like Pulaski, where an impact project is leading to the renovation of several buildings downtown with plans for further enhancements.[44]

Based on current capacity challenges in economic development, primarily throughout rural Virginia, best practices identified in programs in North Carolina and Tennessee may serve as a model for funding to increase local and regional economic development capacity.

Table 5
Capacity building programs in Virginia and competitor states

Program	State	Agency	Program Description	Annual Expenditure
Virginia Rural Leadership Institute	VA	Center for Rural Virginia	Supports leadership development for rural Virginia leaders and professionals	~$0.1M
Rural Community Capacity (Rural Transformation Grant)	NC	REDD	Supports professional development and education for building local capacity, provides technical assistance to localities	$5M
Rural Economic Development Institute	NC	NC Rural Center	Trains rural leaders on collaborative leadership skills and rural development strategies	Unknown
ThreeStar Program; Marketing Assistance Program	TN	TNECD	Supports strategic planning, staffing, and resource development for localities; separate marketing program leverages state ECD resources to develop marketing materials for localities	$2.5M

Source: Center for Rural Virginia[45]; North Carolina's Rural Economic Development Division[46]; Tennessee Economic & Community Development[47]

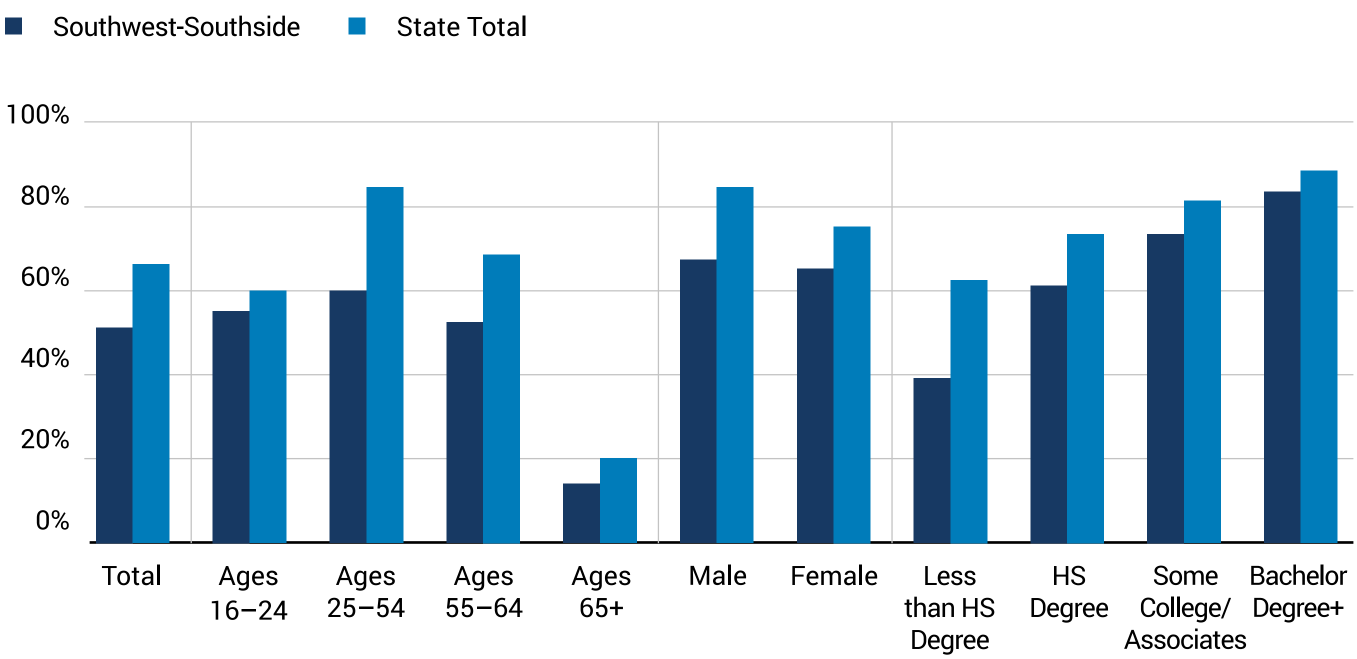
Workforce

Workforce Supply and Development – Barriers

Over the past year, businesses nationwide have been dealing with a workforce shortage. VEDP's Regional Talent Solutions and Business Outreach team and local economic developers have confirmed this challenge with the businesses they interface within Southwest and Southside. Businesses have been trying various methods to attract workers, including providing more flexible hours and increasing pay. While much of the current labor stems from the economic rebound from COVID-19, the shortage is being felt more acutely in Southwest and Southside Virginia because of previous population declines and a current labor force participation rate that significantly lags behind other parts of the state. The labor force participation gap has widened over the decades and impacts workers of all ages, genders, and education levels (Figure 18).

Figure 18

2020 Labor force participation rates, Southwest-Southside and VA total comparison



Source: U.S. Census[48]

Several structural issues are contributing to the workforce shortage and the lower labor force participation rate in Southwest and Southside. Skill mismatches between the current workforce and the needs of new employers and technologies are one factor driving this gap. Other structural issues are more of a challenge in these regions compared to other areas of the state, including shortages in housing, childcare, and healthcare. Vibrant main streets, cultural and natural resources, broadband, and other amenities critical for attracting and retaining talent in rural areas are also more limited across the region. These issues will be discussed separately from this section's focus on traditional workforce upskilling and reskilling barriers.[49]

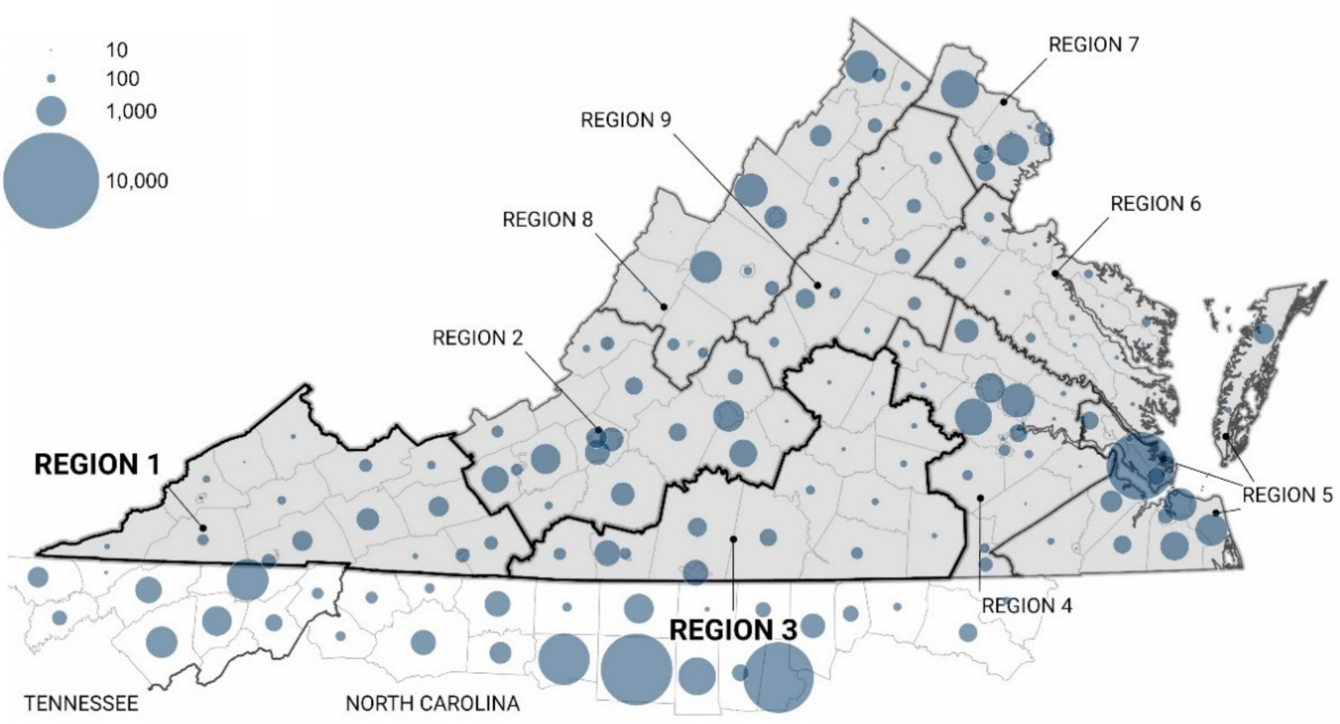
The workforce development system in Southwest and Southside faces both short-term and long-term challenges. In the short term, businesses are constrained by their ability to hire new workers and upskill existing employees to leverage rapidly changing technology.[50] Many state programs and local educational institutions address some aspect of this need, but there are several limitations with current state programs. VEDP's workforce training offerings, the Talent Accelerator Program or the Virginia Jobs Investment Program (VJIP), help fill this gap for new and expanding companies but are not designed to support existing businesses facing immediate labor challenges.[51]

Tuition assistance programs, like G3 and FastForward, are targeted at students and workers and enable company employees to take available training.[52] FastForward, which funds up to two-thirds of the cost of training upon completion, is in its seventh year and boasts a 93% completion rate. Additionally, 24,000+ graduates (about 72% of program participants) have chosen to remain and work in Virginia following their FastForward program.[53] While these programs are building out the talent pipeline, they do not directly support potential custom training needs companies may require involving new equipment or skills. Additionally, these programs are limited in their ability to cover non-education costs that create barriers for students, such as childcare, transportation to the institution, or housing for students attending classes full-time. G3, for example, provides a Student Support Incentive Grant (SSIG) to cover these costs, but only for students enrolled full-time.[54] Working adults or people needing limited credentials do not receive this additional support. Institutions also provide advising and career coaching to help people access additional resources. Still, fewer staff in these roles at Southwest and Southside institutions serve an outsized number of part-time students.

Southwest and Southside Virginia's workforce supply challenge is not the same for localities in competitor states just over the border. Companies locating across the Virginia state line benefit from closer proximity to the metropolitan areas and postsecondary institutions of Raleigh-Durham, Greensboro-Winston-Salem, the Tri-Cities (Johnson City, Kingsport, Bristol), and Knoxville (Figures 19 and 20). To compete with rural border localities in Tennessee and North Carolina, Southwest and Southside will need to continue to invest in growing the supply of skilled workers for companies that will increasingly prioritize talent when making location decisions.

Figure 19

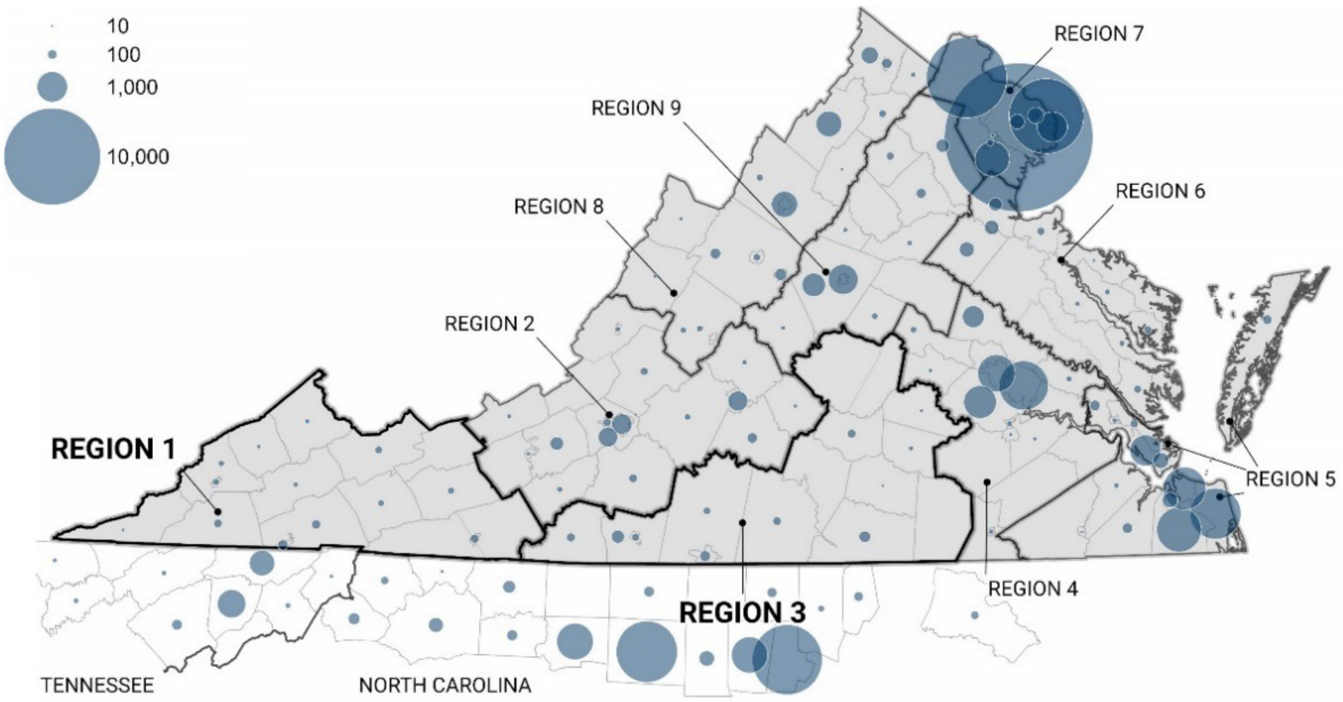
Manufacturing jobs by locality (2022)



Source: Lightcast[55]

Figure 20

Professional, Scientific, and Technical Service jobs by locality (2022)



Source: Lightcast[56]

Long-term, the region will need to increase the number of degree and non-degree holders with skills in computer science, engineering, and skilled trades. As industries incorporate more automation and data-driven processes into their facilities, a greater proportion of manufacturing employees will be these skilled workers. Tech and professional service sectors also have a higher demand for people with computer science and data analysis skills and prioritize talent above all other location factors.[57]

Nearly all of Virginia's community colleges and higher learning institutions provide customized training for existing businesses and hold those trainings either at the institution or on-site at the company. However, there are limited funding mechanisms to support start-up costs for new programs to provide these resources. These programs need, at minimum, additional staff to provide training and can require developing new resources or purchasing equipment. The state has funded $8 million in G3 Innovation Grants in FY23 to scale up programming to meet demand. However, those funds are one-time allocations and will not continue to support institutions as workforce demand and training equipment change in future years. The state also established the Advanced Manufacturing Talent Investment Program and Fund with $2.5 million in resources starting in FY24. If funded and expanded adequately long-term, this program will greatly increase postsecondary institutions' capacity for training workers in several priority sectors.[58]

Southwest and Southside may draw talent from flagship institutions outside of these regions. However, community colleges and public/private four-year universities within Southwest and Southside provide the most reliable supply of skilled labor that could supply future industrial growth. The region saw just under 500 awards (degrees and credentials) from tech and computer science-oriented programs (Figure 21) and about 900 awards for manufacturing-oriented programs in 2022 (Figure 22).

Figure 21
Computer Science, Math, and IT-Engineering awards from all in-region awards post-secondary institutions, by GO Virginia region (2022)

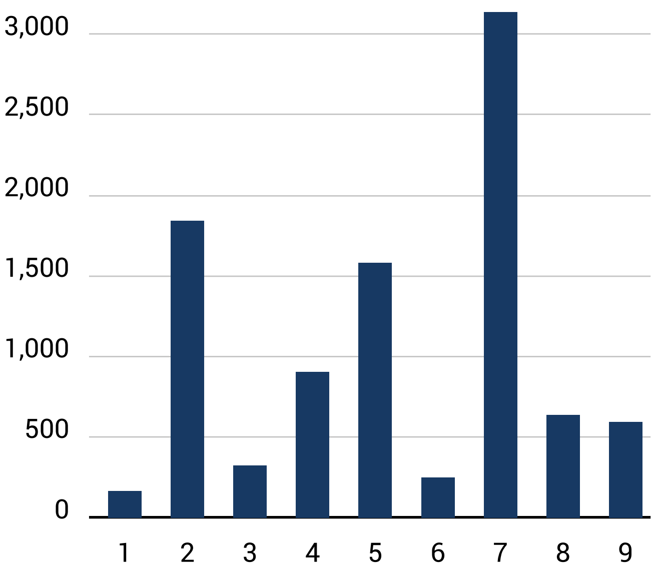
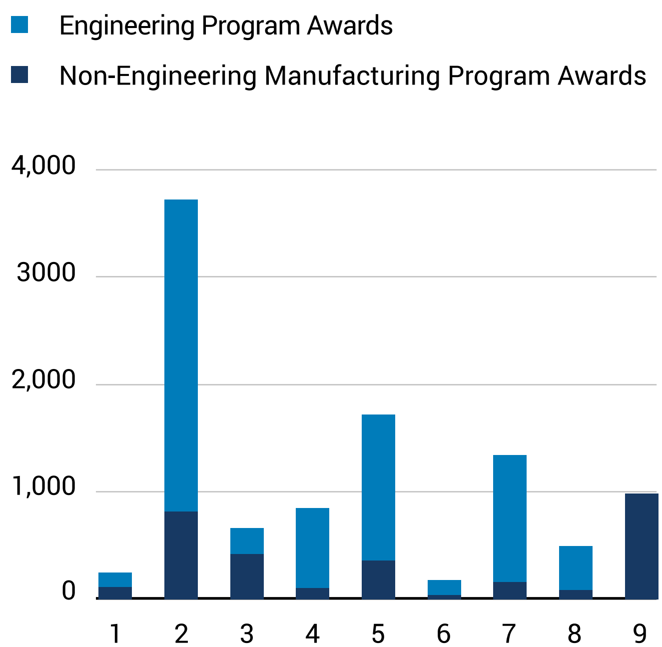


Figure 22
Math, Engineering, and Technical awards from all in-region post-secondary institutions, by GO Virginia region (FY22)



Source: SCHEV[59]; VEDP analysis

Growing the number of students accessing degree and credential programs at institutions in Southwest and Southside will require additional operational funding and additional student demand for the programs. New instructional staff will be a chief priority for higher education institutions as they expand programing now and in the future. Many of these instructors will need to be attracted from outside the region, or additional investments will need to be made to develop instructors of programs. The region will also need to generate additional student interest in pursuing degrees and credentials in these critical workforce programs. Additional state, regional, and local focus on engaging students in the K-12 system and providing internship and apprenticeship opportunities will be critical to generating this demand long term.

Workforce Supply and Development – Recommendations and Models for Success

Recommendation B: Expand GO TEC and continue to fund programs like the Virginia Talent Opportunity Partnership (VTOP), Innovative Internship Fund and Program, and dual enrollment pathways that expose students to manufacturing and other high-demand industries

A. Funding an expansion of GO TEC that would allow the program to spread into K-12 schools across other areas of the state and increase the number of schools served in Southwest and Southside Virginia

B. Continue to support and expand programs such as:

- VTOP
- Innovative Internship Fund and Program
- Department of Education K-12 CTE programs
- Dual enrollment pathways at postsecondary institutions

To address the challenge of long-term interest and workforce supply for high-demand positions in the manufacturing and technology fields, the GO TEC program has pioneered a unique model that has already seen incredible success in Southside. Working with middle and high school students, the program uses a hub and spoke model to progressively introduce students to resources and programming within targeted, in-demand career pathways. The program forges partnerships between K-12 schools, higher education institutions, and industry partners. It is currently funded through GO Virginia grants, but the success of the program merits strong consideration for permanent funding to further develop and expand the use of this program to other areas in the state.[60]

Other programs are also critical for promoting and developing student interest in high-demand fields. VTOP and the Innovative Internship Fund and Program encourage and enable students to pursue internships with employers. K-12 career and technical education (CTE) programs and dual enrollment pathways expose students to career opportunities earlier, which is critical for developing talent pipelines to industries and providing students with direct skills to advance their careers. Continuing to fund these programs, and expand them when demand exists, are important for developing a quality workforce in Southwest, Southside, and the rest of Virginia.[61]

Recommendation C: Expand eligibility for G3's Student Support Incentive Grant (SSIG) to part-time and non-Pell Grant students, providing more support to working students with non-tuition costs, like transportation, childcare, and other needs

G3 provides tuition assistance for qualifying students looking to pursue degrees or credentials in high-demand fields. At least 20 other states have some sort of state-funded aid program for postsecondary education, as do many cities and regions. Like G3, most programs around the country cover remaining tuition and fees after receiving all other forms of aid (usually federal). Some state programs, however, expand the flexibility of aid so that students can apply funds to other expenses like rent, food, or childcare. Oregon, for example, provides tuition coverage and a minimum of $1,000 of support to all students, regardless of whether they have other grant aid for tuition that can cover other expenses. Virginia's G3 program includes a Student Support Incentive Grant (SSIG), where full-time students receiving Pell Grants can receive middle-dollar coverage. However, students pursuing credentials or degrees while working are considered part-time and do not qualify for this additional aid. Many of these students face challenges in completing credential or degree programs, such as paying for childcare or covering the cost of gas. Modifying the eligibility requirements for G3's SSIG will reduce barriers and enable more people to use the programs, therefore increasing the workforce quality in Virginia.

Recommendation D: Expand advising and career coaching capacity at institutions with higher rates of part-time students using credentialing programs supported by G3 and Fast Forward

Advisors and career coaches at postsecondary institutions can support students by connecting them with jobs or unlocking additional financial support services. This staff role forms an important bridge between private sector opportunities and program offerings. As G3 and FastForward expand the number of students seeking credentials or attending part-time degree programs, additional support staff will be necessary to work with students as they navigate programs and career opportunities.

Recommendation E: Provide permanent and flexible capacity building funding for post-secondary institutions to develop and/or expand responsive training programs for private sector businesses. This program should:

- Provide permanent and accessible startup funding, either through grants or other mechanisms that help educational institutions develop training programs for local employers
- Enable educational institutions to use that startup funding to invest in resources such as equipment, materials, instructors, transportation, and other expenses to improve worker and employer access to the program

For employee training, community colleges and other higher education institutions provide customized training opportunities for employers either at the institution or on-site. Programs like Mountain Empire Community College's Center for Workforce and Innovation in Wise County or the Southern Virginia Higher Education Center in Halifax develop training curricula for high-demand regional skills, provide state-of-the-art equipment for employees and students to train with, and work with companies to build out additional programming when needed.[62] Institutions often lean on grant funding to develop these programs. Southside Virginia Community College (SVCC), for example, has utilized grant funding from TRRC to develop and expand its healthcare programming to respond to the increased regional need for skilled nurses and other professions. These funds allowed SVCC to purchase new state-of-the-art equipment and establish a weekend option for students enrolled in its nursing degree program.[63]

Virginia's workforce-oriented programs have incredible success rates. For example, the Power Line Worker Training program, offered by Southside, Wytheville, and Mountain Empire Community Colleges, has nearly a 100% employment rate among completers.[64] As the Commonwealth becomes more sophisticated at aligning higher education programming with future employer needs, providing a permanent funding source that allows institutions to continue to develop, expand, and improve workforce programs will be critical to ensure this alignment is successful.

Housing

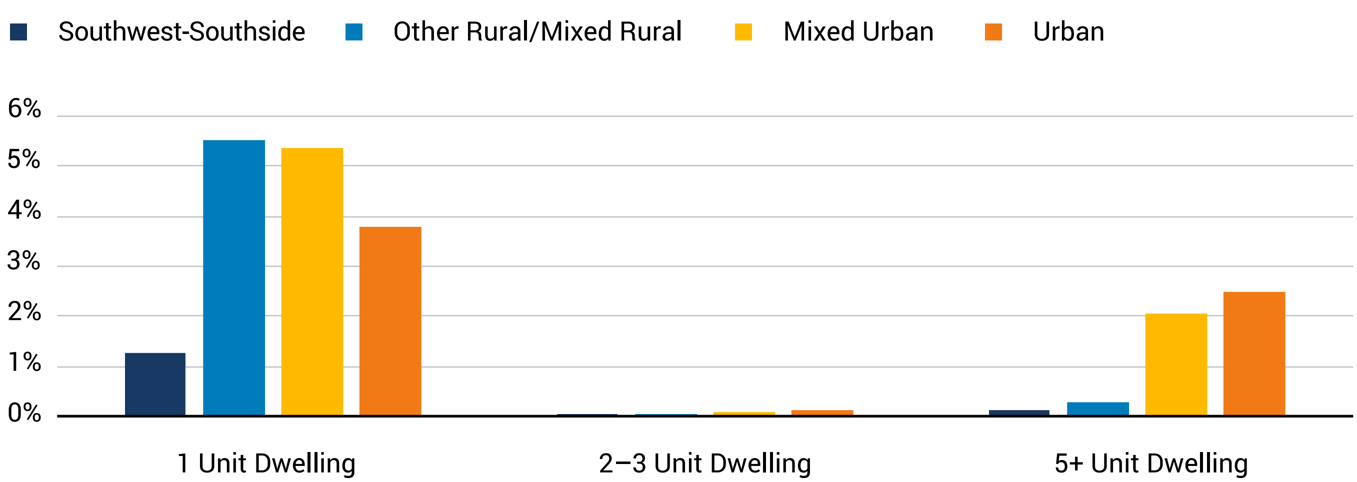
Housing - Barriers

Housing is a critical factor for attracting and retaining talent. When companies make location decisions, one of the questions they rightfully ask is, "Where will my employees live?" With the current national housing shortage, having current or planned housing stock can give communities a competitive edge, while a lack of housing options may steer projects away.

The national housing shortage is also impacting Southwest and Southside, but due to lower profit margins in the region for developers, there has not been the same level of private sector investment that has occurred in other areas (Figure 23). Across single-unit and multi-unit dwellings, construction is significantly lower than in other rural areas, where the rate of people moving into units is roughly the same (Figure 24). Southwest and Southside saw only 5,538 new units authorized in the last five years, while the rest of Rural-Mixed Rural Virginia saw 29,529 authorizations. As a result, the housing stock in the region is older and lacks various modern housing types desired by families and younger workers. According to stakeholders across the economic development community in Southwest and Southside, the housing strain has increased since the pandemic, with the region seeing a net migration of nearly 1,900 people between 2020 and 2021. Recent project wins, such as Blue Star (which will add 2,400 workers to the Mount Rogers region), SCHOCK GmbH, and Tyson Foods (adding a combined 700+ workers to Southside), will exacerbate current shortages.

Figure 23

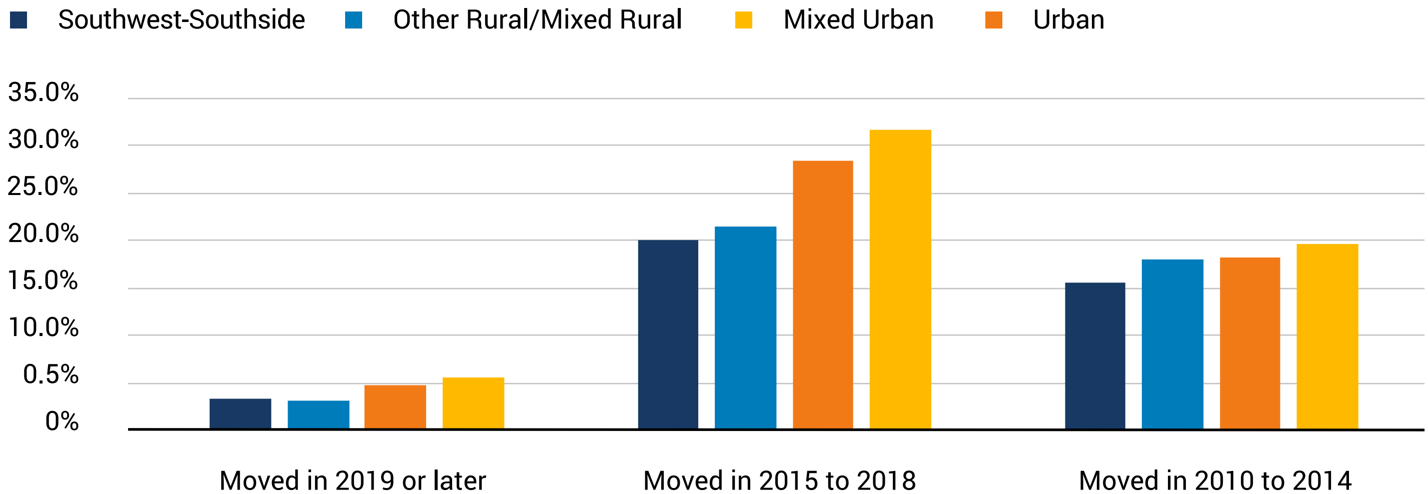
New units authorized (2016–2021) as a percentage of existing 2015 units



Source: U.S. Census[65]; VEDP analysis

Figure 24

Percent of units based on when new homeowners/tenants moved in, excluding move-in data prior to 2010



Source: U.S. Census[66]; VEDP analysis

With a national housing shortage underway and construction costs higher (costs have increased by 8% since the end of 2019, according to the U.S. Census Construction Price Index), the market for housing construction will continue to disadvantage Southwest and Southside Virginia.[67] Data from the National Association of Realtors highlights the disparity of home values between the region and other parts of the state (Table 6). Cost-conscious and risk-averse developers have a greater incentive to build in other rural and metropolitan areas of the state and will continue to do so without reductions in development costs or increases in housing values in rural areas.

Table 6

Average locality median home price comparison across groupings, Q2 2022

Grouping	Average County Median Home Price, 2022	Value as a Percent of Southwest-Southside's Median Home Value
Southwest-Southside	$145,416	100%
Other Rural-Mixed Rural	$272,077	187%
Mixed Urban	$263,659	181%
Urban	$432,052	297%

Source: U.S. Census[68]

Virginia Housing, the Commonwealth's housing finance agency, operates several grant programs aimed at addressing these challenges (Table 7). Most of these grants are funded through a portion of the agency's revenue through loan servicing. In addition to these grant programs, Virginia Housing administers the Low-Income Housing Tax Credit (LIHTC), a significant driver of affordable rental housing production and preservation. However, these programs do not directly address the barriers preventing market-rate developers from building in Southwest and Southside.

Table 7
Virginia Housing grant programs

Program	Description	Grant Amount
Planning grants	Support for pre-development studies, assessments, community engagement efforts, and related activities	Up to $50,000
Development grants	Support for preparing deteriorated vacant properties for residential or mixed-use redevelopment or demolition of blighted structures	Up to $150,000
Grants to PDCs	Support for planning district commissions statewide in efforts to address housing shortages and related issues	$1M–$3M per PDC

Source: Virginia Housing[69]

These programs, in addition to DHCD's housing programs and resources, do not address the market challenge that has persisted in Southwest and Southside Virginia. With market forces pushing developers to continue building elsewhere, new programs or modifications to existing programs will need to occur to spur the level of private investment needed to meet the demand.

Housing – Recommendations and Models for Success

Recommendation F: Modify existing program parameters and/or develop a new program that funds community investments in pre-development housing infrastructure in rural Virginia. The program(s) should:

- Provide matching funding that localities can use to extend utility, broadband, and road infrastructure to a future residential development site, purchase property for future development, and modify existing land or structures on a future residential development site
- Provide additional funding for schools and local services (such as police and fire) for communities that have secured commitments from a residential developer
- Incentivize communities to zone for multifamily housing units (in line with a recommendation from JLARC's 2021 study of Affordable Housing in Virginia)[70]

Several localities in Southwest and Southern Virginia are now combating their housing shortage through various methods. Many localities and regions have begun conducting housing studies that demonstrate to potential developers the housing need. In August of 2022, Southside hosted the Southern Virginia Housing Summit with potential developers to showcase what has been done in the community and highlight opportunities for development.[71] Several communities are also trying a site preparation approach to attract developers. Wise

County is leveraging an Abandoned Mine Land Economic Revitalization (AMLER) grant to demolish an old high school and prepare the land for future multifamily development. They are also exploring other local tax credits to entice developers to the area. Pittsylvania is working with developers for an 800-unit housing development by extending water and sewer lines. Danville is planning to purchase land and extend utility services to prepare for future developers. In service of supporting project wins in the region, housing development in this way is a tool for economic development. The trailblazing efforts of these and other localities provide a framework that could be expanded upon using state resources.[72]

Several state programs provide models Virginia could pursue. The Massachusetts Housing Choice initiative is a grant program that incentivizes localities to incorporate new construction of affordable housing into their long-term planning processes so that housing stock becomes more diverse over time. Localities demonstrating a multi-year commitment to developing affordable housing can apply for up to $250,000 in grants for various purposes, including planning, infrastructure improvements, and other capital investments. Massachusetts budgeted $4 million for this program in FY23, and there are currently 85 qualifying localities. After a successful initial pilot of the Housing Choice initiative, Massachusetts created a separate $3 million program for rural and small towns, which can apply for up to $400,000 in funding per award cycle.[73]

Another potential model is Nebraska's Rural Workforce Housing Fund (RWHF), administered by the state's Department of Economic Development along with several other housing-focused programs. The RWHF provides competitive matching grants for affordable housing projects in rural communities that can demonstrate an economic development benefit to increasing their affordable housing stock, such as difficulty filling open positions or attracting workers due to a lack of housing. Funds can be used for a variety of purposes, including infrastructure development and building rehabilitation or demolition. In FY22, Nebraska allocated $30 million to this program.[74]

Recommendation G: Maintain or expand Virginia's Historic Rehabilitation Tax Credit to further incentivize development among a variety of historic building types in rural areas. Ways to expand the use of the tax credit include:

- Lowering the assessed value thresholds for a rehabilitation project to qualify for the credit
- Increasing the percentage of eligible rehabilitation expenses that can be claimed for the tax credit
- Raising the cap for the maximum credit a project can receive
- Modifying any of the above program parameters by locality (e.g., distressed localities could have lower rehabilitation expense requirements to qualify)

Revitalization of historic downtowns hinges on this tax credit. It has been leveraged largely in major urban areas, driving much of the downtown improvements seen in Richmond and other areas. Rural parts of the state are starting to utilize this tax credit even more since major cities have fewer historic buildings left to develop. Carroll County used the tax credits to rehabilitate a former high school in 2021.[75] Many of the market-rate redevelopments in Danville's River District have leveraged the Historic Rehabilitation Tax Credit. The future redevelopment of White Mill, an iconic former industrial building on the Dan River, will also be financed in part through the state and federal versions of these tax credits.[76] The state should maintain this credit as developers shift their focus to rural downtowns. To accelerate rural downtown redevelopment, modifying the requirements and caps on the credit will allow more properties to be profitable for redevelopment.

Childcare and Healthcare

Childcare and Healthcare - Barriers

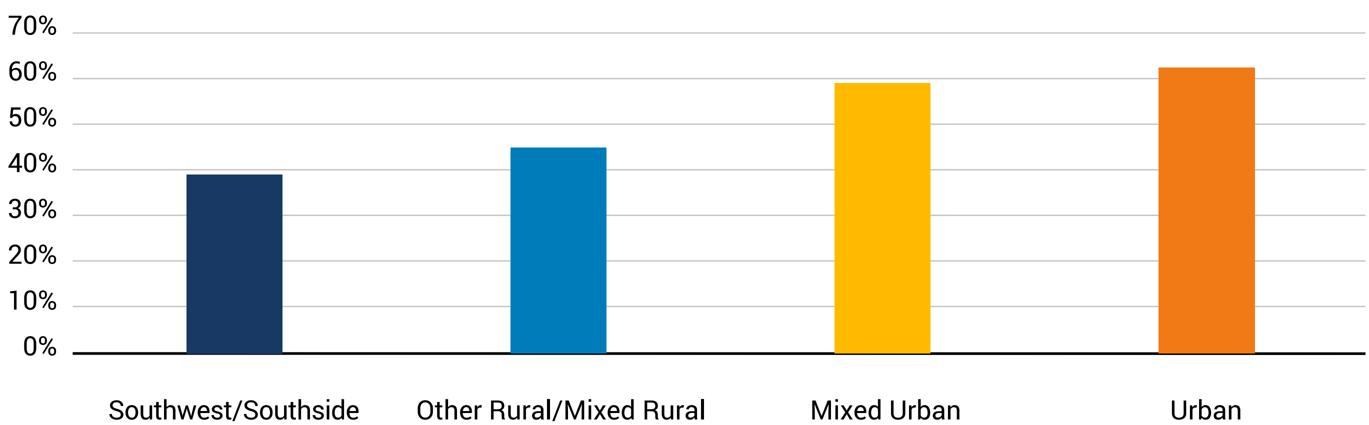
A shortage of childcare and healthcare resources can make it difficult for people to successfully enter or remain in the labor force when the demands of a job compete for the ability to provide care for other family members. The availability of childcare services also contributes to a robust workforce by providing parents with the flexibility to pursue additional education and training. According to a 2021 Bipartisan Policy Center survey, 64% of nonworking rural parents said childcare responsibilities significantly influenced their decision to not participate in the workforce.[77]

Similar to challenges with housing in the Southwest and Southside region, gaps in childcare and healthcare resources are not being reasonably closed with the private sector alone. The region has the widest gap in the state in terms of available childcare options (Figure 25). The regions have the capacity to serve roughly 39% of children under five. Factors contributing to the gaps in childcare services include limited available center startup capital and shortages in the early childhood workforce. The lack of available options strains existing childcare facilities, forcing parents to make difficult tradeoffs between going to work or staying home to care for their children.

It is important to note that in rural areas like Southwest and Southside Virginia, family-based childcare is often preferred. Nationwide, home-based providers account for approximately 20% of licensed childcare slots in rural America, compared to 9% and 14% in suburban and urban settings, respectively. Any solutions to address this challenge should be flexible enough to incorporate various types of childcare that could be made available in the region.[78]

Figure 25

Percent of childcare spots for children five and under relative to total number of children five and under in Virginia



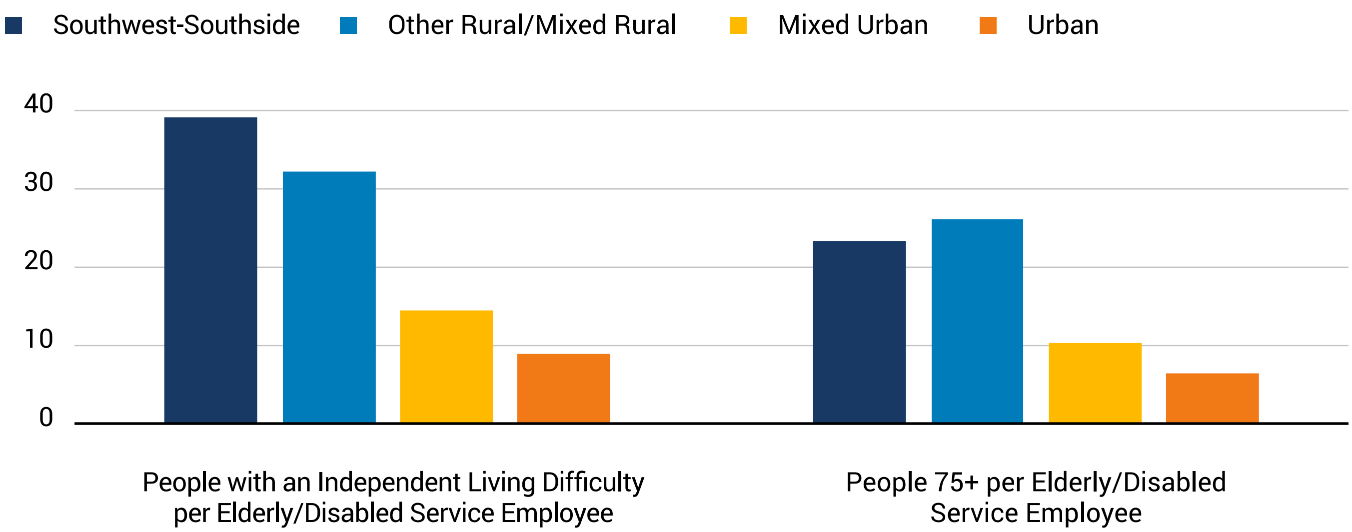
Source: Child Care Aware of Virginia[79]; U.S. Census[80]; VEDP analysis

Southwest and Southside face a more complex set of healthcare challenges than the rest of the state. In addition to the opioid crisis and its devastating impact on communities across the region, other fundamental measures of healthcare needs are much higher for Southwest and Southside Virginia than the rest of the state. Nine percent of the population is over 75 years old, compared to 8% in Other Rural-Mixed Rural areas, 7% in Mixed Urban areas, and 5% in Urban areas. According to the U.S. Census, the percentage of people with an independent living difficulty is 8%, nearly double the rate in the rest of the state (Figure 26).

While the need exists, the market for providing care is constrained by geographic and economic factors. There are nearly three times as many patients for each elderly/disabled service worker in Southwest, Southside, and other rural areas compared to more urbanized areas. As with childcare, the lack of health services and people to care for patients forces difficult tradeoffs for healthy, working-age people with family members that require assistance and care.

Figure 26

Number of potential patients per elderly/disabled service employee in Southwest and Southside Virginia, 2019



Source: U.S. Census[81]

Childcare and Healthcare – Recommendations and Models for Success

Recommendation H: Modify existing program parameters and/or develop a new program that funds community partnerships with private and nonprofit sector investments in childcare and healthcare capacity in rural Virginia. The program(s) should:

- Provide grants and/or matching funding to localities working with nonprofit and for-profit service entities and private sector employers to address childcare, healthcare, and other community-identified workforce-inhibiting challenges
- Enable localities and their nonprofit, for-profit, or private sector partners to invest in the construction of facilities, hiring of staff, development of resources, provision of transportation, and other needs that would facilitate the use of childcare, healthcare, and other services

Several regional efforts demonstrate how places are already innovating in these areas to meet the needs of working families. For example, Smart Beginnings Danville Pittsylvania (SBDP) used a substantial investment and partnered with Head Start to identify, test, and solve early childhood literacy issues. Using local resources and community partnerships, SBDP created a sustainable system and closed the early childhood literacy gap with family and community participation.[82] The United Way of Southwest Virginia has also created an initiative to expand access to affordable childcare and provide more professional early childhood educators.[83] On the healthcare front, the nonprofit Health Wagon provides mobile care and telehealth services for Southwest Virginia, filling the void left behind by the closing of many brick-and-mortar medical care facilities.[84] Expanding funding to encourage these public-private partnerships would help reduce childcare and healthcare shortages in the region, enabling more individuals to join the region's workforce.

For childcare, Kentucky has implemented a state model that encourages employer-employee collaboration to enable childcare access. State policymakers have partnered with the Kentucky Chamber of Commerce to set up a family childcare home network, which small businesses leverage to help their employees find childcare. The program allows employers to assist with an employee's childcare costs with matching payments. This program has been effective at making childcare more affordable and successfully leveraged the private sector to address the issue.[85]

North Carolina has begun to invest heavily in expanding healthcare services to rural areas. In their FY22 state budget, they provided $4 million to the Health Loan Assistance Repayment program to incentivize providers to practice in rural regions.[86] The state's Office of Rural Health has a $9 million Rural Health Centers Capital Grant to fund rural health infrastructure projects.[87]

Talent Attraction Amenities

Talent Attraction Amenities – Barriers

Vibrant main streets, cultural and natural resources, broadband, and other amenities are critical for attracting and retaining talent in rural areas. Virginia Main Street, Virginia Telecommunications Initiative, small business financing programs, Virginia Tourism's Festivals Program and Drive Outdoor Grant Program, and many others contribute to developing attractive communities in Southwest, Southside, and the rest of Virginia.

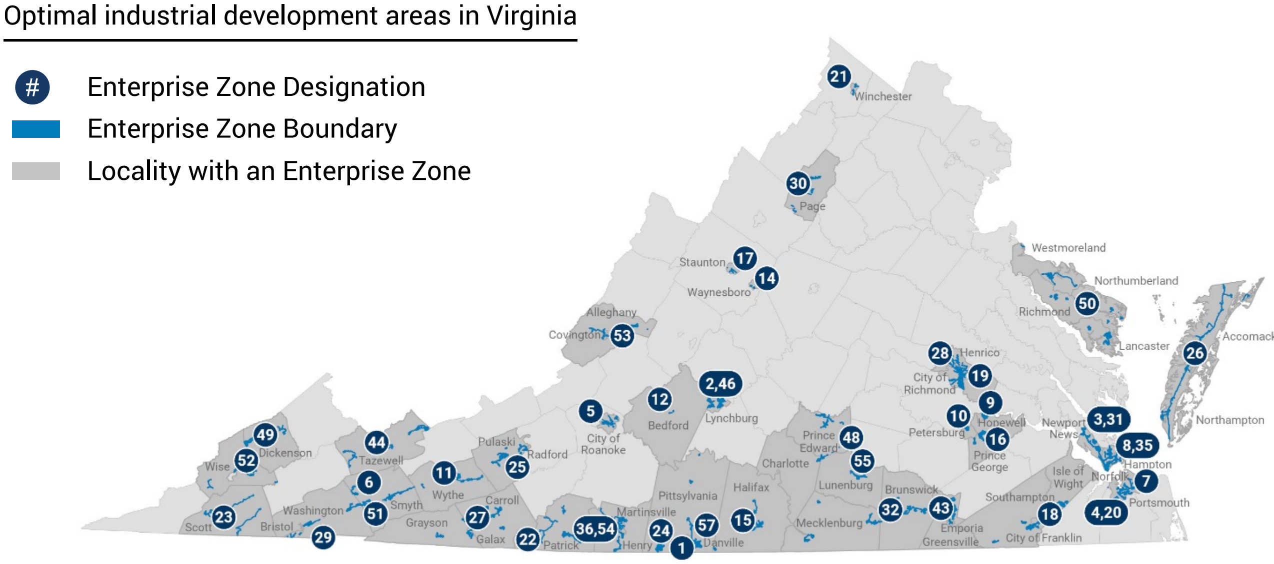
The state's support for these programs should be maintained as communities take steps to revitalize assets to attract and retain talent. However, in many areas of Southwest and Southside, the programs are underutilized because many rural areas do not have economic development capacity to seek out those resources. Instead of an additional recommendation, this section echoes the challenges described earlier in the report's Capacity in Economic Development section and acknowledges that Recommendation A will be the key avenue for unlocking additional resources for communities.

Talent Attraction Amenities – Recommendations and Models for Success

Recommendation I: Maintain existing enterprise zones in Southwest and Southside Virginia

Enterprise zones incentivize investors to develop industrial, commercial, or residential property in a designated area determined by the state. This program has spurred mixed-use developments, commercial districts, and other structures contributing to the quality-of-life assets essential for talent attraction and retention. Most of these zones are located in Southwest and Southside (Figure 27), and some have seen limited or no investments to date. Similar to the challenges seen with housing in the region, developers are less inclined to build in areas that have smaller profit margins. While the areas may have yet to attract development, eliminating the incentives from economically depressed areas will only discourage future development. The current areas designated for this incentive should be maintained for when the opportunity is right for development to occur.

Figure 27
Optimal industrial development areas in Virginia



Source: DHCD; VEDP, July 2019[88]

Site and Building Development

Site and Building Development – Barriers

When seeking to locate new facilities or to expand existing ones, firms look to reduce risk and be operational as quickly as possible. This is determined by the availability of ready sites and buildings. Long lead times for rezoning, planning, right-of-way acquisition, utility construction, and access constraints affect a firm's speed-to-market and increase the risk. Without prepared sites or buildings, localities and regions will not be competitive for these investments.

Communities in Southwest and Southside Virginia have target industries such as advanced manufacturing, food and beverage manufacturing, and distribution/logistics are site and building intensive. Both regions have developed sites or shell buildings and successfully turned those into project wins. For example, Blue Star, a nitrile glove manufacturer, announced the creation of 2,500 jobs in Wythe's Progress Park, and SCHOCK chose to locate its 355-job facility in a shell building in Henry County's Patriot Centre Industrial Park.[89]

Southwest and especially Southside have supplies of available, project-ready sites comparable to other regions of the state (see Table 8). However, both have fewer sites in their site preparation pipelines, limiting their ability to backfill as project-ready sites are taken off the market by prospects. Additionally, with few project-ready sites over 50 contiguous acres available, Southwest and Southside may lack sufficiently diverse portfolios to attract the full range of industries they target. Nevertheless, both regions have overcome substantial fiscal and physical constraints to create competitive site portfolios.

Table 8
Sites listed in VEDP's marketing database by region and largest contiguous acreage

	Available Sites (acres)			Project-Ready Sites (acres)		
GOVA Region	**50–99**	**100–249**	**250+**	**50–99**	**100–249**	**250+**
1. Southwest	11	6	2	1	2	
2. Roanoke/Lynchburg/NRV	17	13	1	2	1	
3. Southside	11	12	3	2	2	1
4. Greater Richmond	31	33	17	1	5	3
5. Hampton Roads	23	13	5	2	1	1
6. Greater Fredericksburg	17	23	10	1		
7. Northern VA	3		1	1	1	
8. Shenandoah Valley	18	13	1	1	1	
9. Greater Charlottesville	19	6	4	2	2	1
Total	**150**	**119**	**44**	**12**	**14**	**6**

Source: VirginiaScan[90]
Note: Project-ready sites are Tier 4 and 5 sites using the VBRSP Tiering system; these sites can accommodate a medium industrial user within 12–18 months.

One driver of this development success has been the Southwest and Southside communities' ability to leverage federal, state, and regional-specific funding pools. Sites in Norton, Prince Edward, Pittsylvania, and Henry have been awarded Virginia Business Ready Sites Program site development funding. The Southwest communities of Russell, Dickenson, Wise, and Norton have secured federal funding from the Abandoned Mine Land Economic Revitalization (AMLER) program to transform legacy mining assets into industrial sites. All Southwest and two Southside localities are also eligible for Appalachian Regional Commission (ARC) grants, which have funded improvements on sites such as Project Intersection in Norton and Red Onion Industrial Park in Dickenson County.[91] Additionally, TRRC has been an active funder of site improvements and shell building construction throughout both regions. VCEDA has made similar investments in locality sites and shell buildings in the Southwest.[92]

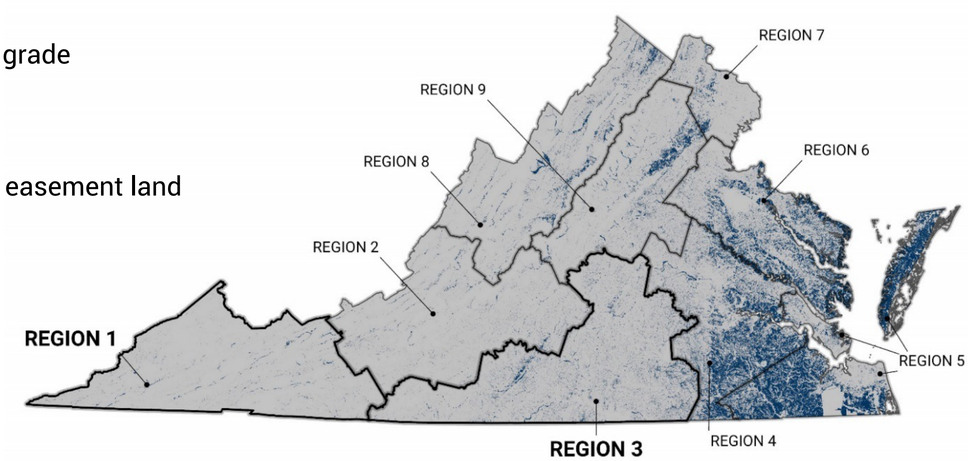
Comparatively, low land prices provide an additional regional advantage.[93] Localities can establish site control relatively inexpensively and have reduced costs when establishing easements and conservation areas. Despite these cost and funding advantages, Southside and Southwest also face structural challenges to site development that increase costs and risks. The regions face diverse environmental, geological, and topographic obstacles and conditions that can impede utility extensions and site access. Widespread economic distress, constraints on economic development organization capacity, and limited private investment additionally inhibit site development funding.

Physical barriers exist to site development in both regions. In 2019, VEDP worked with engineers, site selectors, local and regional economic developers, and utility partners to survey 466 sites over 25 acres across the Commonwealth. The study found that challenging topography — especially steep grades — existed on approximately one-quarter of all sites located in the Southwest and Southside regions. While this factor can be partially mitigated by local construction companies with experience addressing steep grades, significant slopes can reduce firms' ability to visualize their project on-site and can require expensive grading prior to securing a facility. Geology and floodplains also increase development risk in Southwest and Southside, respectively. Thirty-five percent of Southside sites surveyed in 2019 had segments impacted by 100-year floods, and 48% of Southwest sites surveyed had bedrock or sinkhole coverage on over a tenth of their area. Extensive due diligence is required to minimize the costs and risks associated with these issues.[94]

Figure 28

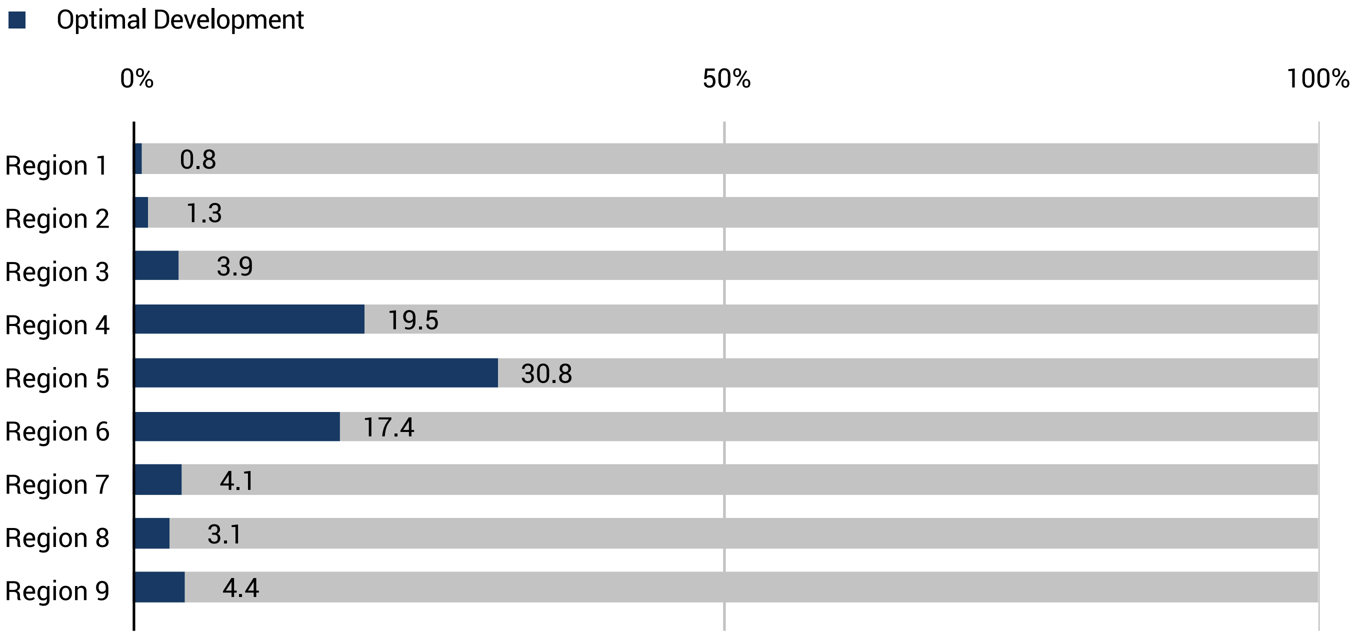
Optimal industrial development areas in Virginia

- Optimal Development Areas
  - Less than or equal to 2% grade
  - Not already developed
  - Not a wetland
  - Not conservation land or easement land



Source: Slope, developed land, wetlands, conservation, and easement lands – Virginia DCR[95]; VEDP Analysis 2022

Figure 29
Optimal Industrial Development Area as a Portion of Total GOVA Area



Source: Slope, developed land, wetlands, conservation, and easement lands – Virginia DCR[96]; VEDP Analysis 2022

Providing sufficient utility access and capacities can also be challenging for some Southwest and Southside sites. Lack of natural gas is a particular concern for many Southside sites, with only 37% of those surveyed in 2019 able to provide gas within 24 months. Access to sufficient power for a medium industrial user is likewise a challenge for many Southwest sites. Fewer than half the sites surveyed in 2019 could provide enough capacity within 12–18 months.[97] While both regions had broadly competitive wet utility (water and sewer) connectiveness, several Southside sites required major systems upgrades or would rely on on-site well and septic systems, sharply limiting their attractiveness to most industrial users. Since water, sewage, and power access is usually provided along major transportation routes, the distance from transportation arteries of many sites in the study area is often a fundamentally linked development problem (see Infrastructure section).

Lastly, a lack of staff capacity, local funds, and limited private investment activity can restrict Southwest and Southside communities' ability to pursue site development. Based on the 2022 Commonwealth's Development Opportunity Fund (COF) categorization, all but one locality in Southwest and Southside are distressed, with 75% of Southwest localities and 73% of Southside localities classified as double-distressed.[98] This distress, as measured by elevated levels of poverty and unemployment, can strain local finances, reducing the resources communities can put toward site development or as a match for federal or state grants.

State programs such as the Virginia Business Ready Sites Program (VBRSP), the Economic Development Access Program (EDAP), and GO Virginia have worked to ensure that distressed localities can access development funding. VBRSP match requirements and EDAP capital investment requirements are reduced based on a locality's distress level. Both VBRSP and GO Virginia allow recent past investments and in-kind contributions to count towards match, providing additional flexibility for applicants.

Communities across the Southwest and Southside have also taken steps to maximize the benefit of limited site development resources. Many sites across the regions are jointly developed by multiple localities using Regional Industrial Facilities Authorities (RIFAs), which share revenue created on a site in proportion to localities' investments. Communities increasingly view their neighbors as partners in site development rather than competitors, as jobs and economic activity generated at one site create regional growth and opportunities. Southwest and Southside communities should be applauded for this collaboration and encouraged to further develop regional portfolios of complementary sites.

Another potential method to circumvent constrained local budgets is to drive additional private investment into sites. However, in comparison to other regions of Virginia, private site investment has had limited impact in Southwest and Southside. As of Nov. 31, 2022, 62% of Southwest sites and 72% of Southside sites listed in VEDP's marketing database were publicly owned, while no other region had over 33% public ownership. No Southwest or Southside privately-owned sites were project-ready (VBRSP Tiers 4 or 5) or had completed due diligence and were zoned for industrial or commercial use (Tier 3). In recent years, private industrial developers have concentrated on preparing sites and speculative buildings for distribution/logistics projects in proximity to major metropolitan statistical areas (MSAs), interstates, and port infrastructure due to high demand from e-commerce and low development costs relative to manufacturing. As much of Southwest and Southside is distant from major urban areas and transportation corridors, site development in the regions will likely remain public investment-driven, though communities should seize opportunities for public-private partnership.[99]

Site and Building Development – Recommendations and Models for Success

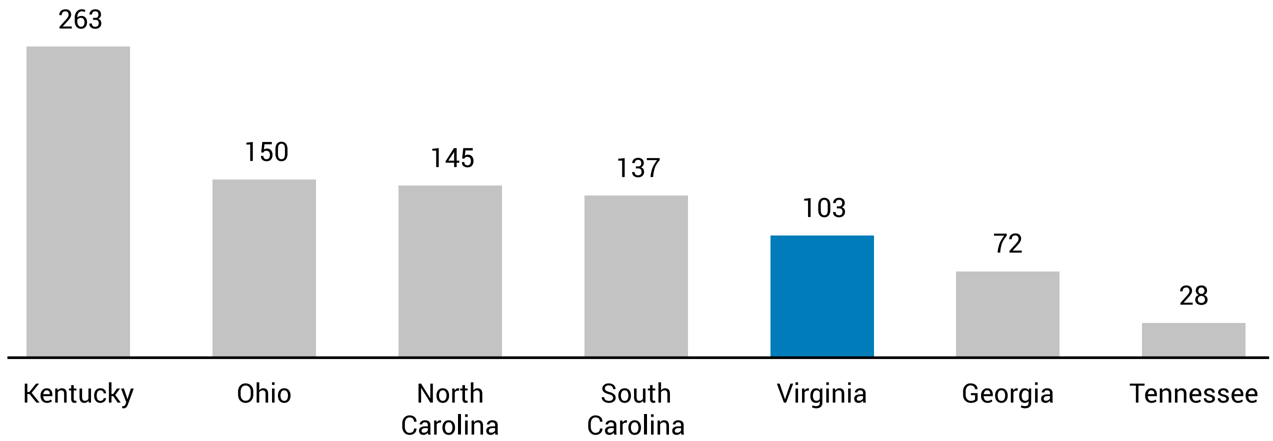
Recommendation J: Increase funding for site development in the Commonwealth

Site development, particularly targeting transformational manufacturing projects, is a long-term investment in local, regional, and state economic health and finances. Without prepared sites, Southwest and Southside Virginia will not secure growth in their target industries, and Virginia will forgo revenue and opportunities for its citizens.

The Commonwealth created valuable tools like the Virginia Business Ready Sites Program and GO Virginia to fund site development, but a legacy of underinvestment resulted in a smaller ready portfolio than many competitor states. This leaves Virginia at a significant disadvantage when competing for industrial projects compared to our peer states and other key competitors like Kentucky and Ohio (Figure 30).

Figure 30

Comparison of peer state site development funding ($M)[1]



[1]Three-year, pre-prospect site development investment totals (19–21 for most states) by state, based on most recent available data; Georgia does not fully disclose funding amounts; Georgia Power provides significant site funding; acquired $61M Bryan County sit
Source: Various annual reports, state budget documents, and grant reporting systems from state agencies in Georgia, North Carolina, South Carolina, Tennessee, and Virginia[100]

Recent activity has begun to help close the gap between Virginia and its peers. Since 2019, Virginia possess best-in-class information on sites across the state, which has concentrated local, regional, and state investments on the most impactful sites. In 2022, the General Assembly formally established the Virginia Business Ready Sites Program Fund and appropriated $150 million over the biennium, an order of magnitude greater than previous funding. Continued state investment into sites will both directly prepare additional property in Southwest and Southside and spur local and regional activity as the Commonwealth becomes increasingly viewed as an impactful partner.

Recommendation K: Develop a program(s) that funds community efforts to develop shell buildings and source new sites

Shell buildings can serve as an attractive asset for localities seeking manufacturing facilities by reducing speed-to-market. The Strategic Plan for Economic Development of the Commonwealth of Virginia notes that an estimated 75% of economic development prospects begin their search by examining existing facilities but that rural, economically distressed areas like Southwest and Southside have not been able to meet that demand.[101]

While Southwest and Southside have a portfolio of 38 industrial buildings as of December 2022, less than half align well with current market demand. A February 2022 VEDP analysis classified industrial buildings as marketable if they were single-tenant and had over 40,000 sq. ft. of available space. Sixteen buildings in Southwest and Southside meet those criteria, and only 10 buildings also have ceiling heights above the commonly requested 24-foot threshold. Of those, only the Cane Creek Center in Pittsylvania is a dedicated shell building.[102]

Since 2007, Virginia has lacked a program to support the development of shell buildings and has seen its available stock of prepared facilities diminish as industrial users have moved in. Creating a targeted program or modifying existing programs to finance shell building construction would begin the process of re-establishing a competitive industrial building portfolio statewide, with concentrated impacts on rural regions such as Southwest and Southside.

A separate programmatic need is state support for the identification of new sites. While sites are being prepared for prospective companies, communities and regions must proactively identify future candidates for development to avoid periods in which they are unable to compete due to lack of property. The Commonwealth's regions have unique targets, assets, and portfolios and should actively pursue their own site identification strategies.

Providing matching funds to help localities and regions source new sites will strengthen Virginia's site portfolio for decades to come. Resourced, data-driven site identification efforts can minimize future costs and maximize site attractiveness by prioritizing proximity to utilities and transportation assets and reducing the risk of environmental impacts. As Southwest and Southside have limited available and marketed sites to backfill their current project-ready sites, such identification efforts will prove particularly impactful in unlocking future industrial growth.

Infrastructure

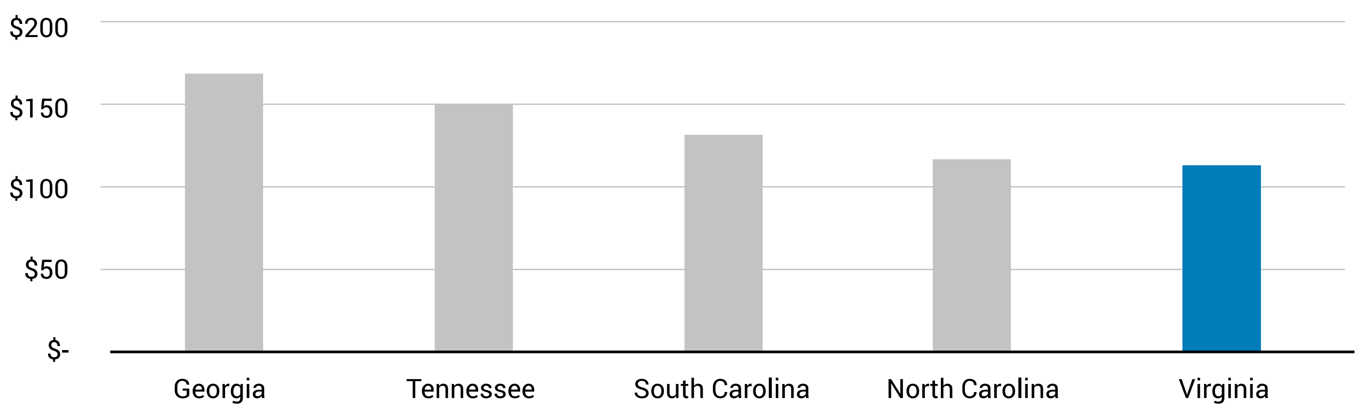
Infrastructure – Barriers

Companies prioritize infrastructure assets to decrease transport costs, improve access for workers and executives, and facilitate their operations. Access to major highways, interstates, railroads, airports, and non-transportation infrastructure like utilities and broadband are key factors companies consider when making location decisions.[103] Improving that infrastructure and locating sites and buildings strategically near infrastructure access points is imperative when considering the competitive landscape for supply chain investments.

Planning for and developing transportation infrastructure is a complex process that requires input at the local, regional, state, and sometimes federal levels. Again, having the capacity and resources to conduct studies, engage the community and stakeholders, apply for and manage grants, and coordinate with state and federal entities all require staff and financial resources (especially for grant program match requirements) that are limited in many Southwest and Southside communities. Virginia lags behind competitor states in capturing competitive federal infrastructure grants (Figure 31). Over the last six years, Georgia and North Carolina outpaced Virginia by $100 million in infrastructure grant awards; Tennessee saw nearly $75 million more in grants. Solving the challenge of constrained staff and financial resources that can develop applications for these programs is critical to unlocking further infrastructure investments.

Figure 31

Per capita funding received from competitive U.S. Department of Transportation rural-focused programs, FY17–FY22 (rural and mixed-rural populations)

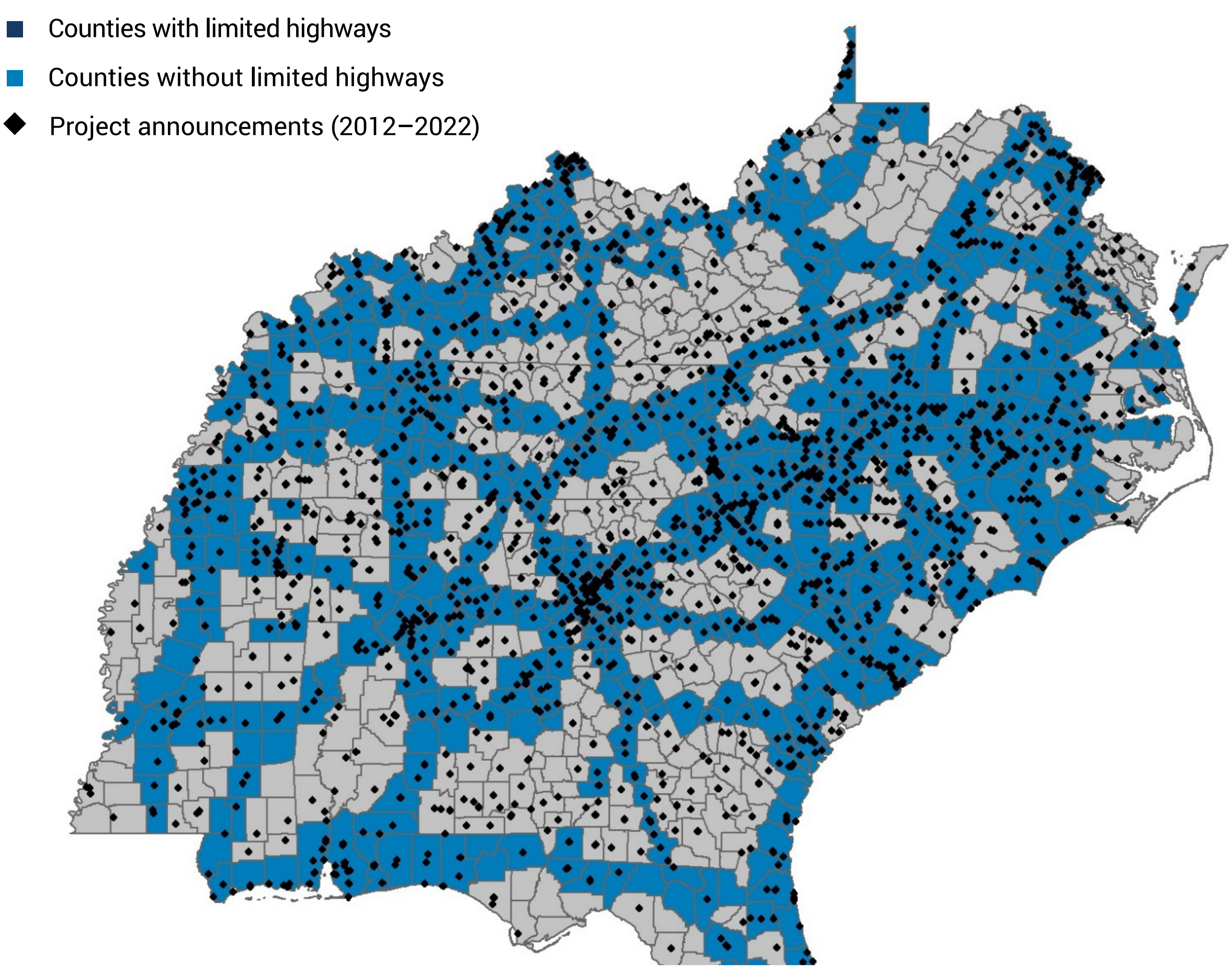


Source: Brookings Institution[104]; U.S. Department of the Treasury[105]; VEDP analysis

In addition to overcoming this barrier, state transportation infrastructure priorities should be considered for immediate and long-term funding. According to publications that interview site selectors and CEOs, interstate and highway infrastructure is a major factor for most companies when making location decisions. *Site Selection* magazine ranks infrastructure accessibility as the fourth most important factor for company location decisions, and *Area Development* ranks highway accessibility third. Having access to interstates and highways with interchanges increases the workforce pool a company can draw from and reduces the financial and time cost of transporting products by truck. This importance is demonstrated noticeably by the number of projects that locate in counties with limited access to highway infrastructure versus those that locate in counties without limited access highways (interstates or highways with bypass ramps).

Since 2012, rural counties in the Southeastern U.S. without access to a limited access highway saw an average of three projects; rural counties with a limited access highway saw an average of seven projects. The contrast is seen in Figure 32, with project announcements following the line of interstates and primary highways across the Southeastern U.S.

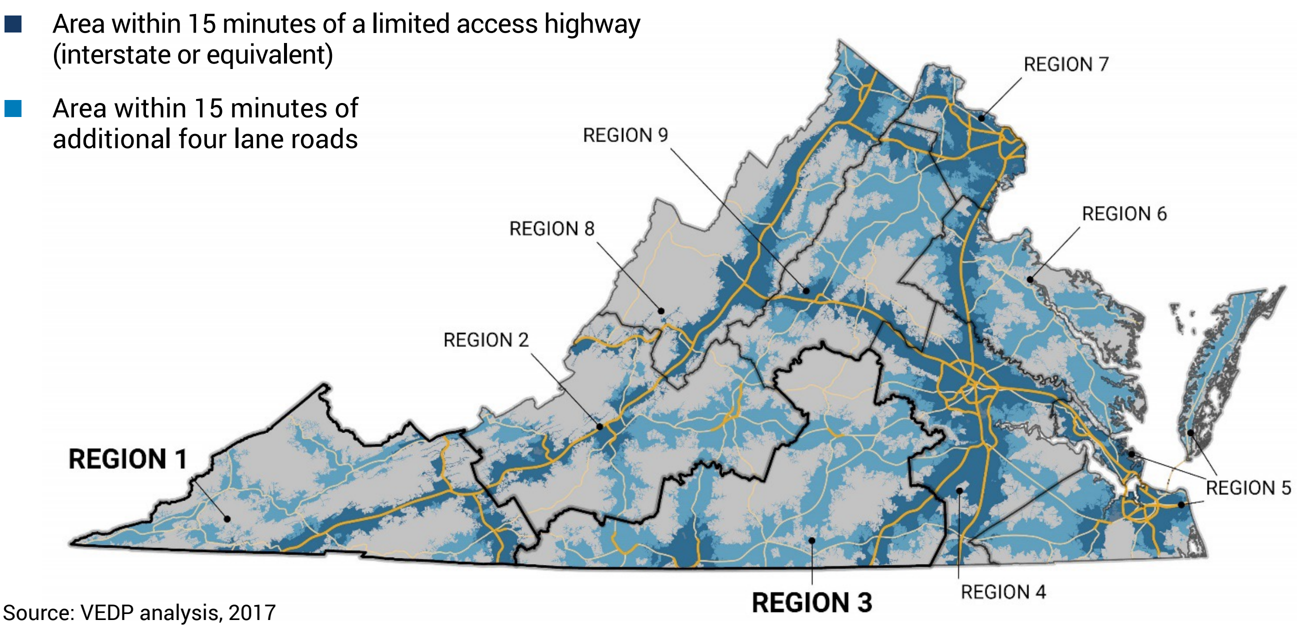
Figure 32
Project announcements (new and expansions) since 2012



Source: Conway[106]; VEDP analysis

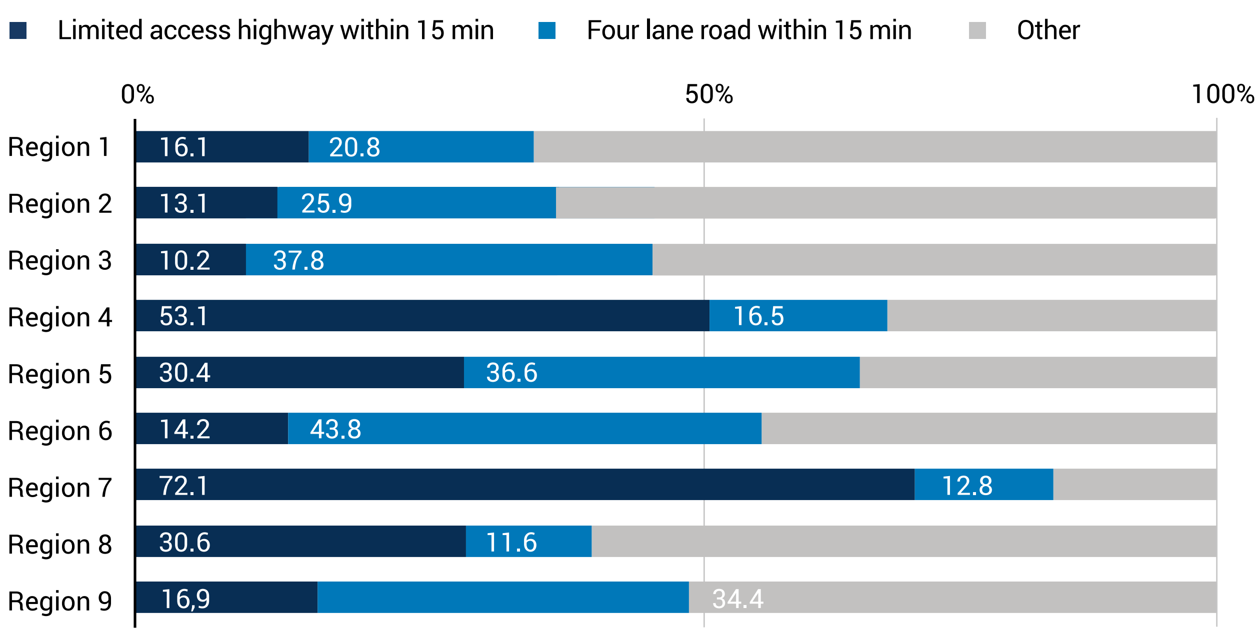
Southwest and Southside, along with other rural areas of the state, are at a disadvantage when it comes to major road access. Southwest has the least amount of land accessible by major roadways (interstates and four lanes), and Southside has the least amount of land accessible by limited access highways like interstates (Figures 33 and 34).

Figure 33
Areas of the state within 15 minutes of major roadways



Source: VEDP analysis, 2017

Figure 34
Areas of GO Virginia regions proximate to a commercial airport



Source: VEDP analysis, 2022

Virginia has two major road projects in the early stages that would provide a competitive advantage for Southwest and Southern Virginia. The first is the planned Interstate 73 corridor connecting Greensboro in North Carolina (where the interstate is partially built already) to Roanoke through Martinsville. This project would put the megasite at Berry Hill and the outer edges of Danville within 20 minutes of a major interstate. I-73 received federal approval and passed environmental impact assessments in 2006 and again in 2012 but has not seen committed funding for the project.[107]

The second road project is the Coalfields Expressway, which would connect the counties of Buchanan, Dickenson, and Wise Counties to the crossroads of I-77 and I-64 in West Virginia. The project's estimated cost is $3.1 billion, but the four-lane road is expected to yield long-term dividends in tourism and economic activity to communities in the region. Planning dollars are still being allocated from federal and state sources to study piecemeal segments of the project, but no transformational investment has been made to date.[108]

The regions also lack a streamlined link to The Port of Virginia. The fastest route from major cities in the Southwest requires trucks to drive up I-81 to I-64 and then take I-64 down to Hampton Roads, a route fraught with traffic challenges. US-58, the most direct route, has lower speeds than other highways in many areas and passes directly through communities, creating a transport disadvantage for companies prioritizing product-to-market speed. The lack of limited access highway infrastructure across the bottom of the state makes the Port of Wilmington competitive with The Port of Virginia for Southside cities like Danville and Martinsville, and the Ports of Wilmington and Charleston competitive with The Port of Virginia for Southwest communities (Table 9).

Table 9
Drive times from major Southwest-Southside cities to select Southeastern Ports

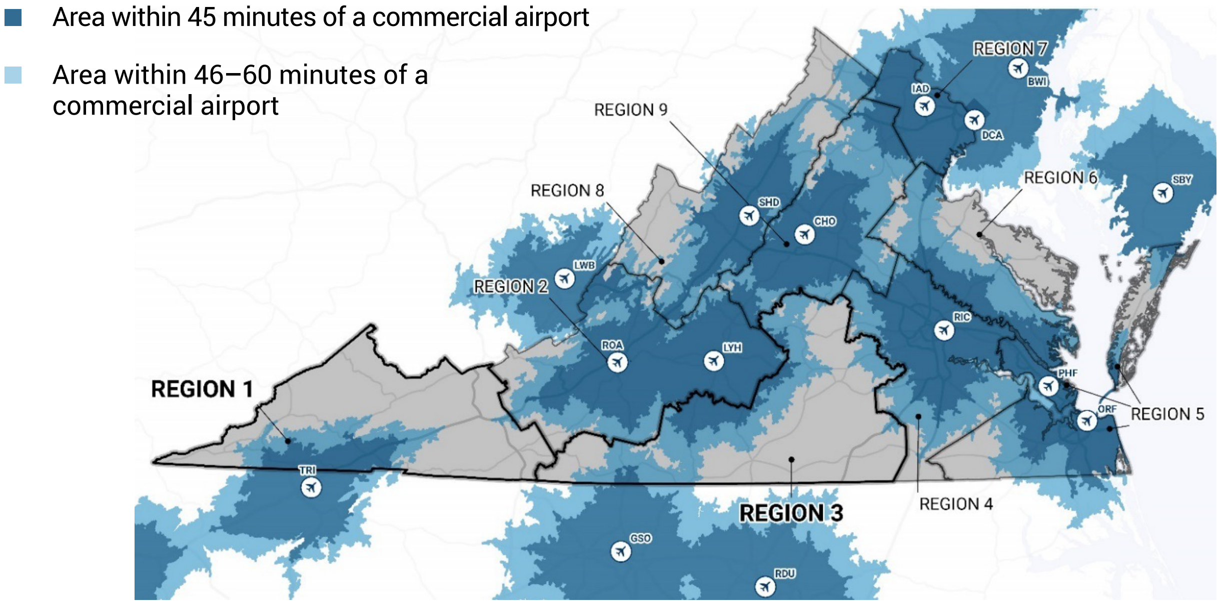
Locality	Destination	Route	Distance (mi)	Time
Bristol	Port of Virginia	I-81 & I-64	418	6h 11m
Bristol	Port of Virginia	I-81, I-77, & US-58	387	6h 41m
Bristol	Port of Wilmington	I-81, I-77, & I-74	392	6h
Bristol	Port of Charleston	I-26	350	5h 30m
Wytheville	Port of Virginia	I-81 & I-64	347	5h 10m
Wytheville	Port of Virginia	I-77 & US-58	317	5h 40m
Wytheville	Port of Wilmington	I-77 & I-74	321	4h 57m
Wytheville	Port of Charleston	I-77 & I-26	345	5h
Danville	Port of Virginia	US-58	193	3h 27m
Danville	Port of Wilmington	US-86 & I-40	218	3h 39m
Danville	Port of Charleston	US-29, I-74, I-95, I-26	320	5h 9m
Martinsville	Port of Virginia	US-58	225	4h
Martinsville	Port of Wilmington	US-220, I-73, & I-74	268	4h 12m
Martinsville	Port of Charleston	US-220, I-74, I-95, I-26	326	5h 20m

Source: Google Maps[109]

The development of major roadways also improves connectivity to airports. Commercial airports provide company executives with easier access to their facilities and can give communities a competitive edge for location decisions. Southwest and Southside, shown in Figure 35 as GO Virginia Regions 1 and 3, are the only regions in Virginia where less than 50% of the area can reach a commercial airport within 60 minutes, and less than a quarter of the area can reach one within 45 minutes. Adding more limited access highways and improved four lanes will improve access to these economic assets.

Figure 35

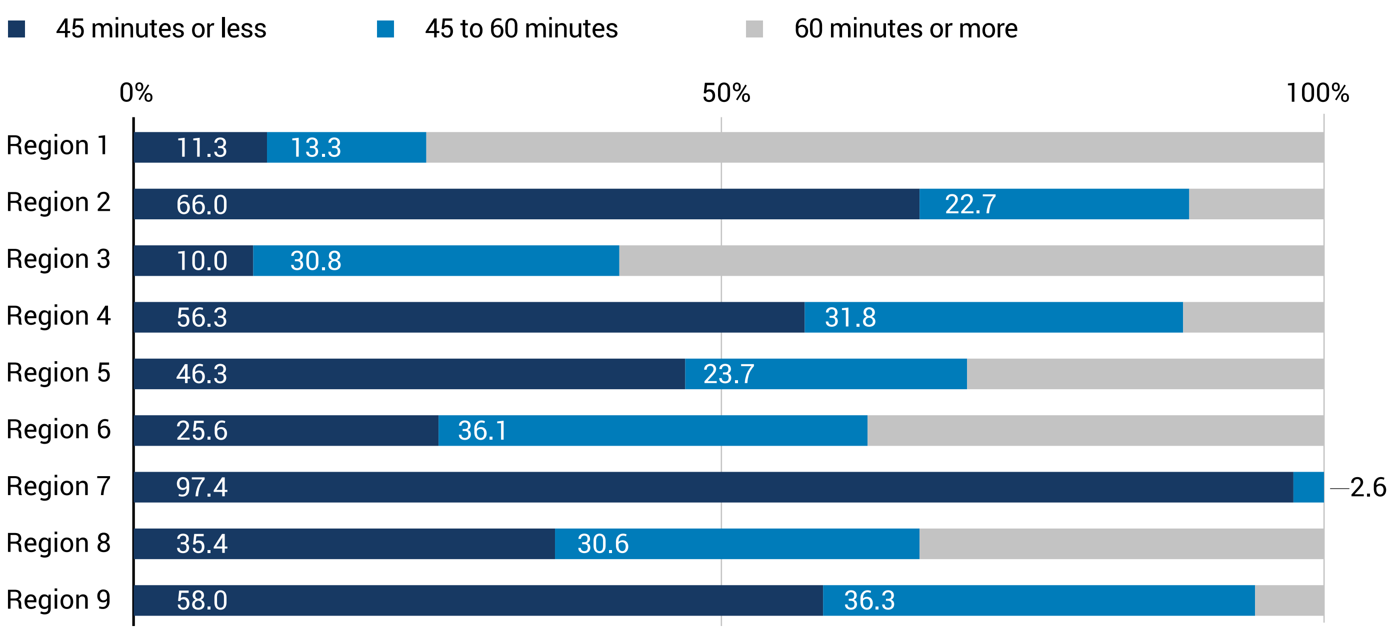
Areas of the state within a 45- and 60-minute drive time to a commercial airport



Source: VEDP analysis, 2022

Figure 36

Areas of GO Virginia regions proximate to a commercial airport



Source: VEDP analysis, 2022

Infrastructure – Passenger Rail

An extension of passenger rail service to Bristol is another project that could yield additional economic investment in the region. Presently, the Southwest region of Virginia is similar to other areas of the Southeastern U.S. that lack passenger rail, including central Georgia, central Tennessee, and blue-ridge North Carolina. Many of these regions are already successful economically without passenger rail. However, extending passenger rail to Bristol could set the region apart from other areas in the Southeastern U.S. without significant service, especially in terms of quality of life and accessibility for tourism.

In 2021, the Virginia Department of Rail and Public Transportation (DRPT) released a study exploring the extension of the Amtrak Washington, D.C. to Roanoke service to Bristol down the I-81 corridor. This extension would be a significant expansion of the passenger rail network in the study region, bringing up to four new rail stations in GO Virginia Region 1, at Wytheville, Marion, Abingdon, and Bristol, totaling up to $1.5 billion. The report recommended the railroad for further study, citing its potential impacts on Southwest and the potential to work with Tennessee authorities to increase ridership by extending the railroad to Knoxville.[110]

Missing from the 2021 DRPT report on the Bristol Amtrak extension is an economic impact analysis for Southwest or a holistic cost-benefit analysis of the proposal. Such analyses should be carried out, ideally comparing the investment necessary for the railroad with several other investment scenarios.

There is one existing passenger rail service in the Southwest-Southside region. In GO Virginia Region 3, Danville is served by Amtrak's Crescent service, running from New York to New Orleans via the Northeast Corridor, Washington, D.C., Charlotte (NC), Atlanta, and Birmingham (AL). In 2020, the Southeast Corridor Commission, a federally designated commission tasked with studying rail traffic in the Southeast, produced a planning study. In this study, the main train route from Washington, D.C., to Greensboro (NC) and further to Atlanta (GA) would be rerouted from its current Danville alignment to a new alignment through Richmond and Raleigh-Durham (NC). This realignment may lead regional rail planners to decrease or no longer provide service to Danville in the future.[111]

Stakeholders in GO Virginia Region 3 should proactively pursue a study, in collaboration with DRPT, to understand passenger rail's economic impact, including an exploration of service alternatives. Any further studies of rail services should include an analysis of the economic impact of more frequent and deliberately timed services, as all current or proposed services run infrequently and at odd hours of the day, limiting their use.

Infrastructure – Broadband

Broadband infrastructure is critical for businesses to operate competitively in the economy and utilize the newest technologies for their operations. It is also vital for attracting the next generation of talent to an area. Virginia has taken great steps to ensure broadband access across Southwest, Southside, and other rural areas of the state. Several key programs and organizations that have contributed to the expansion of broadband include:

- Virginia Telecommunication Initiative (VATI) – the program has extended broadband service to unserved areas by building, utilizing, and capitalizing on telecommunications infrastructure, with the intent to develop strong, competitive communities.[112]
- Tobacco Commission Last Mile Broadband Program – TRRC addresses the digital divide between telecommunications infrastructure and service created by the lack of "last-mile" services in the region.[113]

- VCEDA Education and Telehealth Access Fund – Partnering with the Appalachian Council for Innovation (ACI), the $500,000 fund is intended for the development of space-based broadband service in the VECDA e-Region. The funds leverage local, state, federal, and private grants and awards that ACI also plans to pursue for the initiative.[114]
- GO Virginia – Funds have contributed to broadband projects across the Commonwealth, expanding middle-mile broadband service to many localities. $5 million in 2022 was awarded to extend middle-mile fiber to business and industrial parks in GO Virginia Regions 3 and 4.[115]

Even with these investments, more than 210,000 locations have deficient or no broadband and lack funded broadband infrastructure plans. The state is targeting full coverage by 2024 and is a major focus of the Youngkin Administration. Worker shortages and supply issues with the deployment of broadband infrastructure pose challenges, but the funding and energy remain in place to ensure this achievement will be met.[116]

Infrastructure – Recommendations and Models for Success

Recommendation L: Expand staff capacity in local, regional, or state organizations to pursue federal and state infrastructure funds for roads, rail, and broadband (see Recommendation A)

Several states, including North Carolina and Tennessee, provide funding resources for communities to plan for infrastructure improvements. Additional capacity and funding for studies help local governments gain a deeper understanding of their unique strengths and challenges so they can better target their efforts to leverage state and federal infrastructure grants. As part of North Carolina's new Rural Community Capacity initiative, local governments can apply for up to $950,000 for a variety of purposes, including studying and planning for infrastructure improvements.[117] Tennessee's program is smaller in scale and is limited to $50,000 and must be targeted to the study of local water utility infrastructure challenges.[118]

The 2021 federal infrastructure bill has several programs for funding large grant projects in addition to block grants administered through VDOT that the regions should consider for major infrastructure investments. The Rural Surface Transportation Grant, Infrastructure for Rebuilding America (INFRA) Grant, and Mega grants are all competitive programs focused on improving the safety, connectivity, and movement of freight. The combined programs will fund up to $15 billion in projects over the next four years. $1.5 billion in INFRA awards were announced for this funding round, with nearly half of the awards going toward rural projects. This round of awards ranged from $20–127 million.[119] Competing for these grants requires significant staff time and expert support to develop the grant application and administer the funding. Without additional staff capacity support, Virginia will remain disadvantaged in accessing this funding to support rural infrastructure development.

Recommendation M: Leverage federal infrastructure funding to accelerate the development of planned interstates, highways, and expressways in Southwest, Southside, and other rural areas of Virginia

Stakeholders have taken steps to move I-73 and the Coalfield Expressway forward. I-73 passed environmental impact assessments in 2006 and 2012, and officials have successfully pursued related projects such as the Martinsville Southern Connector Study. VCEDA and the Coalfields Expressway Authority funded a report to confirm the cost of the Coalfields Expressway project and demonstrate the potential economic impact that would justify the investment. The $3.1 billion expressway is expected to generate $12.8 billion over the course of 50 years. The Authority worked with Virginia's Congressional delegation to secure $1.9 million in FY22 for additional planning and design work for a portion of the project. The economic benefits of these projects should be considered as policymakers contemplate funding for each development's next stages.[120]

Recommendation N: Continue exploring the feasibility of additional inland ports in the Commonwealth

The General Assembly commissioned a study on the feasibility of developing an inland port facility in Southwest or Central Virginia.[121] An inland port in Southwest would provide a competitive advantage for freight movement to the Port of Virginia and could potentially spur additional manufacturing and logistics/distribution sector investments in the region. If the study proves an inland port is feasible, regional stakeholders should work with the Port on the next steps for assessing the development of a facility.

Incentives

Incentives – Barriers

The tax environment is a major factor for companies when making location decisions. Compared to peer states, Virginia is generally less favorable, with higher overall taxes across personal, corporate income tax, and state sales tax rates. This challenge is especially important for communities in Southwest and Southside that are near the border because many of the same assets and workforce are accessible for companies that locate in Virginia or a competitor state. With those factors less of a differentiator, the cost of doing business becomes one of the primary location decision factors and drives company locations towards the side of the border with lower costs.

North Carolina has lower personal, corporate, and sales taxes than Virginia, and Tennessee phased out its income tax in 2021. Georgia and South Carolina, other primary competitor states for Virginia, have lower corporate income tax but equal or higher personal income tax. Additionally, Virginia has slightly lower corporate and sales tax compared to Tennessee.

Table 10
Top state tax rates for 2022

State	Personal Income Tax (%)	Corporate Income Tax (%)	State Sales Tax (%)
Virginia	5.75	6	5.3
North Carolina	5	2.5	4.75
Tennessee	0	6.5	7
Georgia	5.75	5.75	4
South Carolina	7	5	6

Source: Tax Foundation[122]

Energy availability and cost are significant location factors for companies, particularly industrial projects. Comparatively, Virginia's cost of electricity per kilowatt hour for industrial use exceeds that of North Carolina, Tennessee, and South Carolina and is much less than Georgia's. Virginia's commercial cost is much lower than Tennessee, Georgia, and South Carolina but still slightly higher than North Carolina (Table 11).

Table 11
Average price of electricity (cents per kilowatt hour) to ultimate customers by end-use sector, July 2021 to July 2022

	Rate, Rank				
State	**Residential**	**Commercial**	**Industrial**	**Transportation**	**All Sectors**
Virginia	2.93, #18	9.05, #6	7.7, #26	10.42, #16	10.3, #19
North Carolina	11.74, #10	8.85, #3	6.58, #8	7.33, #3	9.7, #14
Tennessee	11.92, #12	11.76, #32	6.53, #5	-	10.66, #24
Georgia	13.82, #29	12.57, #37	8.91, #37	9.18, #10	12.26
South Carolina	13.73, #27	11.47, #29	6.96, #14	-	10.81, #25

Source: U.S. Energy Information Administration[123]

Environmental permitting can also be a hurdle for new or expanding companies and can take a significant amount of administrative work and time. Companies engaged in major projects must apply for upwards of 15 permits across local, state, and federal permitting, and approval can take between 35 days to upwards of 12 months.[124] States that can expedite or ease the permitting process have greater success attracting projects due to the importance of speed-to-market for companies. *Site Selection* places "ease of permitting and regulatory procedures" in their top five key location factors for 2022. According to *Area Development*, Virginia ranks 10th for speed of project permitting, falling behind Tennessee, which ranks fourth, and other key peer states, such as Georgia and South Carolina, who both tied for second.[125]

Incentives – Recommendations and Models for Success

Recommendation O: Establish a manufacturing job creation tax credit that further incentivizes economic development in rural communities

Much of the cost differences between Virginia and neighboring states could be mitigated through additional incentives. One incentive that is offered by Virginia's competitor states is a job creation tax credit. These tax credits are often tiered by levels of distress for the locality. Georgia's program, for example, has four tier levels, with companies locating in rural counties at the highest levels of distress receiving triple the incentive as those locating in non-distressed metro counties (Table 12). Establishing a targeted manufacturing job creation tax credit would give rural counties in Virginia a level playing field when competing for projects.

Table 12
Job creation tax credit programs in competitor states

Program	Annual Expenditure ($M)	Award Structure	Award Structure
North Carolina	Job Development Investment Grant	11.7 (CY21); total liability capped at $35M per year	12-year annual credit, with extensions stipulated for transformational projects; companies are reimbursed a percentage of withholding taxes paid by new employees, up to 75% (80% for Tier 1 counties that represent the highest distress level)
Tennessee	FastTrack Incentives	9 (FY22)	1 to 5-year $4.5K per job tax credit, depending on the county tier level; job creation requirements range from a minimum of 10 to 25 jobs, with lower thresholds for more distressed localities
Georgia	Job Tax Credits	31.2 (FY21)	$1.25K–$4K per job up to five years based on county tier level; credits have a 10-year carry forward; localities with a joint IDA receive $500 additional incentives per job; job creation requirements range from a minimum of 2 to 25 jobs, with lower thresholds for more distressed localities; limited to manufacturing, distribution, data processing, or HQ
South Carolina	Job Development Credit	10 (FY22)	$3.25k per job; 10-year annual credit; limited to specific manufacturing, warehousing, and service sectors

Source: VEDP Analysis; State Budgets and Annual Reports[126]

Recommendation P. Develop opportunities to expand and fund transparency and speed in permitting programs

Expedited permitting would enable Virginia to compete with peer states more effectively on speed-to-market factors. Direct competitors, such as North Carolina and Tennessee, surpass Virginia in key permitting measures, such as permitting speed and are supported by larger annual budgets and staff resources responsible for environmental permitting. Additionally, DEQ's staff levels have fallen in recent years, reducing the ability for the agency to process permits efficiently. These factors have led Virginia to lose projects to peer states with expedited permitting programs backed by adequate funding and staff. Virgina has begun efforts to increase permitting speed and transparency with the rollout of the Permitting Enhancement and Evaluation Platform (PEEP).

Table 13
Virginia Department of Environmental Quality (DEQ) permitting staff and budget

Virginia DEQ	FY15	FY17	FY19	FY21
Permitting Staff	399	380	375	359
Permitting Budget ($M)	$98M	$103M	$109M	$113M

Source: Virginia Department of Environmental Quality[128]

In addition to state permitting requirements, local permitting can also create delays. A lack of staff capacity at the local level is often the source of these delays, and should be the main focus of any local or state effort to increase local permitting speed (See Recommendation A).

Conclusion

Conclusion

Due to the concerted effort of many dedicated people and supportive partners, Southwest and Southside Virginia have made great strides in overcoming the economic challenges that have affected the region. The regions are still facing many long-term and structural barriers which will require additional time, focus, energy, and support to overcome.

This report identified five key categories of barriers to the regions' goal of securing additional infrastructure and supply chain investment. The first and most important of those barriers is a lack of dedicated capacity for economic development. Building strong partnerships, planning for good asset investments, and leveraging state and federal funding all require staff capacity. Economic developers provide these critical services and are necessary to enable the region to unlock additional resources.

Three categories cover important economic development assets – workforce, sites and buildings, and transportation infrastructure. Each requires additional funding and new or modified programs to ensure these assets are developed to their full potential. Barriers in these areas will require long-term investments that will lead to a ready supply of skilled workers, a robust site portfolio, and a connected infrastructure network that maximizes economic development potential.

The final key category, incentives, addresses the competitive challenge posed by Virginia's neighboring states. Chief competitor states — North Carolina, Tennessee, Georgia, and South Carolina out-compete Virginia on tax rates and key incentives, and permitting speed. Addressing the cost-of-doing business challenge will be an important component to ensure investment is brought within Virginia's borders.

In highlighting these barriers and looking into best practice models in Virginia and other states, this report developed recommendations to meet the needs of rural Virginia communities like Southwest and Southside. These recommendations represent a multi-pronged approach that combines efforts to address each of the underlying challenges. Implementing all of the recommendations fully is essential to maximizing economic growth.

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GO Virginia Region 1 | Program Director of Economic Development & GO Virginia Region 1

GO Virginia Region 3 | Program Manager

Greensville County | Director of Economic Development

Halifax County Industrial Development Authority | Executive Director

Institute of Advanced Learning and Research | Chairman of the Board

InvestSWVA | Director

Joint Industrial Development Authority of Wythe County | Executive Director

Lee County | Community and Economic Development Director

LENOWISCO Planning District Commission | Executive Director

Mecklenburg County | Economic Development Director

Mount Rogers Regional Partnership | Interim Director/Economic Development Manager

Mountain Empire Community College | Vice President for Instructional Advancement

Patrick County | Economic Development Director

Patrick Henry Community College | Vice President, Workforce, Economic & Community Development

Pittsylvania County | Director of Economic Development; Director of Utilities

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Richmond Federal Reserve Bank | Vice President and Regional Executive

Scott County | Executive Director

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Senator Mark Peake

Senator Todd Pillion

Senator Travis Hackworth

Smyth County | County Administrator

Southern Virginia Regional Alliance | Executive Director

Tobacco Region Revitalization Commission | Acting Director

UVA Wise | Chancellor; Vice Chancellor for Administration, Government Relations, and Strategic Initiatives

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Virginia Community College System

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Virginia's Growth Alliance | Executive Director

Washington County | Director of Community Development

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Wise County | County Administrator/Economic Development Director; Assistant Economic Development Director

Wythe County | County Administrator

Endnotes

Endnotes

[1] U.S. Census Bureau (2010). 2010 *Census Urban and Rural Classification and Urban Area Criteria*. Retrieved from https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html

[2] U.S. Census Bureau (2011). *Land Area, USA Counties: 2011*. Retrieved from https://www.census.gov/library/publications/2011/compendia/usa-counties-2011.html#LND; U.S. Census Bureau (2020). *Employment Status, 2016-2020 American Community Survey 5-year estimates*. Retrieved from https://api.census.gov/data/2020/acs/acs5/subject

[3] Moody's Analytics. *Seasonally-adjusted Locality Employment and GDP Data by Industry* [Data Set]. Retrieved November 21, 2022.

[4] Arend, Mark. *The 2022 Business Climate Rankings*. Site Selection magazine. 2022. https://siteselection.com/issues/2022/nov/the-2022-business-climate-rankings-cover.cfm

[5] Gambale, Geraldine. *18th Annual Consultants Survey*. Area Development magazine. 2022. https://www.areadevelopment.com/Corporate-Consultants-Survey-Results/q1-2022/18th-annual-consultants-survey.shtml

[6] Moody's Analytics. *Seasonally-adjusted Locality Employment and GDP Data by Industry* [Data Set]. Retrieved November 21, 2022.

[7] Ibid.

[8] Ibid.

[9] Ibid.

[10] Ibid.

[11] Ibid.

[12] Ibid.

[13] Virginia Economic Development Partnership. *Commonwealth's Development Opportunity Fund (COF)*. 2022. https://www.vedp.org/incentive/commonwealths-development-opportunity-fund-cof

[14] U.S. Census Bureau (2020, 2021). *Geographic Mobility by Selected Characteristics in the United States, 2017-2021 American Community Survey 5-Year Estimates*.

[15] Bureau of Labor Statistics (2020, 2021, 2022). *Local Area Employment Statistics*. Retrieved from https://www.bls.gov/lau/

16 GO Virginia 1. *GO Virginia Region 1 Growth and Diversification Plan*. Virginia Department of Housing and Community Development. 2021. https://wixlabs-pdf-dev.appspot.com/; GO Virginia 3. *GO Virginia Region 3 Growth and Diversification Plan*. Virginia Department of Housing and Community Development. 2021. https://govirginia3.org/wp-content/uploads/2022/01/R3GD2021-Full-Report.pdf; Mount Rogers Regional Partnership. *Mount Rogers Target Industries*. 2022. http://viaalliance.org/site-selection-data/target-sectors/; Southern Virginia Regional Alliance. *SVRA Target Industries*. 2022. https://www.gosouthernvirginia.com/about-svra/target-sectors#high-performance-manufacturing; Virginia's Growth Alliance. *VGA Target Industries*. 2022. https://www.vagrowth.com/; Virginia Coalfield Economic Development Authority. *VCEDA Target Industries*. 2022. https://cardinalnews.org/2022/10/11/virginia-tech-study-confirms-targets-for-job-growth-in-coal-counties/; Virginia Energy. *Reenergize Southwest*. 2021. https://energy.virginia.gov/environmental/reenergize-southwest.shtml

17 Moody's Analytics. *Seasonally-adjusted Locality Employment and GDP Data by Industry* [Data Set]. Retrieved November 21, 2022.

18 Virginia Economic Development Partnership. *Morgan Olson Announces 703 New Jobs in Danville-Pittsylvania County*. Press Release. 2019. https://www.vedp.org/press-release/2019-10/morganolson; Virginia Economic Development Partnership. *Virginia Announcements & Closings Database* [Data Set]. 2022. https://announcements.vedp.org/

19 Virginia Economic Development Partnership, *Virginia Announcements & Closings Database* [Data Set].

20 Still, Mike. *Project Intersection demonstrates impact of regional cooperation in Southwest Virginia.* TimesNews. 2021. https://www.timesnews.net/project-intersection-demonstrates-impact-of-regional-cooperation-in-southwest-virginia/article_5206ec6c-7a3c-11eb-a2be-9f7a923fd428.html

21 Boothe, Charles. *Investment in Wythe County: Major manufacturing plant will bring up to 2,500 jobs to area.* Bluefield Daily Telegraph. 2021. https://www.bdtonline.com/news/investment-in-wythe-county-major-manufacturing-plant-will-bring-up-to-2-500-jobs-to/article_263fc502-257e-11ec-bd38-f3e80e482e72.html

22 Tobacco Region Revitalization Commission. *Tobacco Region Revitalization Commission 2019 Annual Report*. 2019. https://www.revitalizeva.org/wp-content/uploads/2020/01/TRRC_FY-2019-Annual-Report-FINAL.pdf; Tobacco Region Revitalization Commission. Tobacco Region Revitalization Commission 2021 Annual Report. 2022. https://www.revitalizeva.org/wp-content/uploads/2022/01/TRRC_Report_2021_FINAL.pdf; Virginia Coalfield Economic Development Authority. VCEDA Overview. 2022. https://www.vceda.us/vceda-overview/

23 Arik, Hulya. *Investment & Impacts 2021*. Tennessee Housing Development Agency. 2021. https://thda.org/pdf/2021-Investments-and-Impacts.pdf; Department of Housing and Community Development. *GO Virginia Annual Reports (Various)*. Commonwealth of Virginia. 2019, 2020, 2021. https://www.dhcd.virginia.gov/virginia-growth-and-opportunity-go-virginia-board; Department of Housing and Community Development. *Virginia Main Street Annual Report*. Commonwealth of Virginia. 2021. https://www.dhcd.virginia.gov/sites/default/files/Docx/vms/vms-2021-annual-report.pdf; Golden Leaf Foundation. *Site Program*. State of North Carolina. 2022. https://www.goldenleaf.org/site/; Georgia Department of Community Affairs. G*eorgia Department of Community Affairs Awards $28 Million in Housing Tax Credits*. State of Georgia. 2022. https://www.dca.ga.gov/newsroom/blog/georgia-department-community-affairs-awards-28-million-housing-tax-credits; Georgia Department of Community Affairs. *Rural Downtown Redevelopment Grant Program*. State of Georgia. 2022. https://www.dca.ga.gov/sites/ default/files/rural_downtown_redevelopment_grant_overview_presentation_0.pdf; North Carolina Office of State Budget and Management. O*ffice of State Budget and Management Certified Budget*. State of North Carolina. 2019. https://www.osbm.nc.gov/media/1063/download; *North Carolina Office of State Budget and Management*. State of North Carolina. 2021. https://www.osbm.nc.gov/media/2311/download?attachment; OneGeorgia Authority. *OneGeorgia Authority Annual*

Report (Various). State of Georgia. 2019, 2020, 2021. https://www.dca.ga.gov/node/1975/documents/2086; Rural Economic Development Division. *2022 Annual Report*. North Carolina Department of Commerce. 2022. https://www.commerce.nc.gov/media/4172/open; Rural Economic Development Division. Rural Transformation Grants. North Carolina Department of Commerce. 2022. https://www.commerce.nc.gov/grants-incentives/rural-transformation-grants; South Carolina Coordinating Council for Economic Development. *2019 Annual Report of Economic Development Set-Aside Fund, Closing Fund and Rural Infrastructure Fund Activity*. South Carolina Department of Commerce. 2020. https://www.sccommerce.com/sites/default/files/2020-03/CCED%20Annual%20Report%202020%20-%20Final.pdf; South Carolina Coordinating Council for Economic Development. *2020 Annual Report of Economic Development Set-Aside Fund, Closing Fund and Rural Infrastructure Fund Activity*. South Carolina Department of Commerce. 2021. https://dc.statelibrary.sc.gov/bitstream/handle/10827/38396/DOC_CCED_Annual_Report_Fund_Activity_2021-05.pdf?sequence=1&isAllowed=y; South Carolina Coordinating Council for Economic Development. *2021 Annual Report of Economic Development Set-Aside Fund, Closing Fund and Rural Infrastructure Fund Activity*. South Carolina Department of Commerce. 2022. https://www.sccommerce.com/sites/default/files/2022-03/Economic%20Development%202021%20Annual%20Report%20%20%283.2022%29.pdf; South Carolina State Housing Finance and Development Authority. *2021 Low-Income Housing Tax Credit Award List*. State of South Carolina. 2021. https://www.novoco.com/sites/default/files/atoms/files/south-carolina-lihtc-award-list-2021-11172021.pdf; South Carolina State Housing Finance and Development Authority. *SC State Housing Finance and Development Authority 2022 Accountability Report*. State of South Carolina. 2022. https://www.schousing.com/Home/ReportsAndPublications; South Carolina Rural Infrastructure Authority. *RIA awards record funding to support infrastructure improvements across South Carolina.* State of South Carolina. 2022. https://ria.sc.gov/wp-content/uploads/2022/05/RIA-Grants-May-2022_press-release.pdf; Tennessee Economic and Community Development. *OpenECD Dashboard*. State of Tennessee. 2021, 2022. https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/tnecd-performance-metrics/openecd-rural-community-development-quick-stats/rural-and-community-development-investments.html; Tennessee Economic and Community Development. *FastTrack Database*. State of Tennessee. 2022. https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/fasttrack-project-database.html; Virginia Tobacco Region Revitalization Commission. *Awards Report*. Commonwealth of Virginia. 2022. https://www.revitalizeva.org/tools-resources/awards-report/; Virginia Resources Authority, Office of the Governor of Virginia. *Four Virginia Communities to Receive Grants to Support Restoration of Brownfield Sites*. Commonwealth of Virginia. 2022. https://www.governor.virginia.gov/newsroom/news-releases/2022/october/name-940803-en.html; Virginia Department of Transportation. *Fiscal Year 2022, VDOT Annual Budget*. Commonwealth of Virginia. 2022. https://www.virginiadot.org/about/resources/budget/VDOT_Final_FY_2022_Budget.pdf; Virginia Department of Rail and Public Transportation. *DRPT Projects Explorer*, FY22 SYIP. Commonwealth of Virginia. 2022. https://va-drpt.projects.socrata.com/projects/75922-04?categoryId=3.0:16.0&tab=list

24 Daughters, Gary. *Believing Who You Are*. Site Selection Magazine. 2022. https://siteselection.com/issues/2022/july/believing-who-you-are.cfm

25 North Carolina Office of State Budget and Management. *Office of State Budget and Management Certified Budget*. State of North Carolina. 2021. https://www.osbm.nc.gov/media/2311/download?attachment; North Carolina Department of Commerce. *Rural Economic Development Division*. 2022. https://www.commerce.nc.gov/about-us/divisions-programs/rural-economic-development-division

26 North Carolina Office of State Budget and Management, *Office of State Budget and Management Certified Budget*; North Carolina Department of Commerce. *Nineteen Rural Communities Selected for Capacity Building Program*. State of North Carolina. 2022. https://www.commerce.nc.gov/news/press-releases/nineteen-rural-communities-selected-capacity-building-program

27 Cause IQ. *North Carolina Rural Center*. 2022. https://www.causeiq.com/organizations/north-carolina-rural-center,561552375/#financials

28 NC Rural Center. *NC Rural Center prepares to deploy $201.8M for small businesses through loans, VC fund investments*. 2022. https://www.ncruralcenter.org/2022/02/prepares-for-small-business-loans/

29 Rural Infrastructure Authority. *Rural Infrastructure Authority Annual Accountability Report*. State of South Carolina. 2022. https://dc.statelibrary.sc.gov/bitstream/handle/10827/46913/RIA_Annual_Accountability_Report_2022.pdf?sequence=1&isAllowed=y

30 *Governor's Rural Task Force*. State of Tennessee. 2016. https://tnecd.com/wp-content/uploads/2018/10/rtf-final-10102016.pdf

31 Hair, Molly. *Governor Lee, Commissioner Rolfe Award Threestar Grants to 54 Tennessee Counties*. Tennessee Department of Economic & Community Development. 2021. https://tnecd.com/news/governor-lee-commissioner-rolfe-award-threestar-grants-to-54-tennessee-counties/; Tennessee Economic and Community Development. *About ThreeStar*. State of Tennessee. 2022. https://www.tn.gov/ecd/rural-development/three-star-tnecd/threestar-about.html

32 See endnote 23.

33 Center for Rural Virginia*. 2019-2020 Center for Rural Virginia Annual Report*. 2020. https://rga.lis.virginia.gov/Published/2021/RD350/PDF#:~:text=The%20Center%20for%20Rural%20Virginia%20is%20a%20non%2Dprofit%20501,the%20General%20Assembly%20in%20200

34 Tobacco Region Revitalization Commission. *Tobacco Region Revitalization Commission 2021 Annual Report*. 2021. https://www.revitalizeva.org/wp-content/uploads/2022/01/TRRC_Report_2021_FINAL.pdf

35 The Golden L.E.A.F. (Long-term Economic Advancement Foundation), Inc. Financial Statements and Other Report. 2022. https://www.goldenleaf.org/wp-content/uploads/2022/10/Golden-LEAF-2022-Financials_FINAL.pdf

36 Tobacco Region Revitalization Commission. *Tobacco Region Revitalization Commission 2021 Annual Report*. 2021. https://www.revitalizeva.org/wp-content/uploads/2022/01/TRRC_Report_2021_FINAL.pdf

37 Virginia Economic Development Partnership. *Local and Regional Capacity Initiative Report*. 2020.

38 Virginia Economic Development Partnership, *Virginia Announcements & Closings Database* [Data Set].

39 Pipa, Anthony F., Geismar, Natalie. *Reimagining rural policy: Organizing federal assistance to maximize rural prosperity*. Brookings Institution, Center for Sustainable Development. 2020. https://www.brookings.edu/wp-content/uploads/2020/11/Rural-Dev-Assistance-Brief.pdf

40 Bureau of the Fiscal Service. USASpending.gov [dataset]. U.S. Department of the Treasury. 2022. https://www.usaspending.gov/

41 North Carolina Office of State Budget and Management, *Office of State Budget and Management Certified Budget*; North Carolina Department of Commerce, *Nineteen Rural Communities Selected for Capacity Building Program*

42 Hair, *Governor Lee, Commissioner Rolfe Award Threestar Grants to 54 Tennessee Counties*; Tennessee Economic and Community Development, *About ThreeStar*

43 NC Rural Center. REDI (*Rural Economic Development Institute*). 2022. https://www.ncruralcenter.org/leadership/redi/

44 Virginia Rural Leadership Institute. *The Virginia Rural Center Announces Virginia Rural Leadership Institute's Inaugural Graduating Class*. Virginia Rural Center. 2022. https://www.cfrv.org/_files/ugd/c50ea4_6c78b063c28440f9bb99f8c1dc62803d.pdf

45 Commonwealth of Virginia. *2022 Special Session I Virginia Acts of Assembly, Item 114*. 2022. https://budget.lis.virginia.gov/item/2022/2/HB29/Enrolled/1/114/

46 North Carolina Office of State Budget and Management, *Office of State Budget and Management Certified Budget*.

[47] Hair, *Governor Lee, Commissioner Rolfe Award Threestar Grants to 54 Tennessee Counties*; Tennessee Economic and Community Development, About ThreeStar; Tennessee Economic and Community Development. *TNECD Marketing Assistance Program*. State of Tennessee. 2022. https://tnecd.com/news/tnecd-launches-round-two-of-marketing-assistance-program/

[48] U.S. Census Bureau (2020). *Employment Status, 2016-2020 American Community Survey 5-year estimates*. Retrieved from https://www.census.gov/newsroom/press-kits/2021/acs-5-year.html

[49] Various stakeholder interviews (see Acknowledgements section). 2022.

[50] Various stakeholder interviews (see Acknowledgements section). 2022.

[51] Virginia Economic Development Partnership. *Virginia Talent Accelerator Program*. 2022. https://www.vedp.org/incentive/virginia-talent-accelerator-program; Virginia Economic Development Partnership. *Virginia Jobs Investment Program (VJIP)*. 2022. https://www.vedp.org/incentive/virginia-jobs-investment-program-vjip

[52] Northern Virginia Community College. *G3 Initiative*. 2022. https://www.nvcc.edu/g3/#panel10

[53] Virginia Community College System. *FastForward's First Five Years*. 2022.

[54] Northern Virginia Community College, *G3 Initiative*.

[55] Lightcast, Industry Data Download: Manufacturing Sector Employment (31-33) and Professional, Scientific, and Technical Services Employment (54) in Study Region (162 Counties) (2022 - QCEW Employees and Self-Employed) [Data Set], 2022, https://lightcast.io/

[56] Ibid.

[57] National Academies of Sciences, Engineering, and Medicine (NASEM). *Building the Skilled Technical Workforce*. Washington, D.C.: National Academies Press. 2017. http://nap.nationalacademies.org/catalog/23472/building-americas-skilled-technical-workforce; National Center for Science and Engineering Statistics (NCSES). *Skilled Technical Workforce Initiative*. Alexandria, VA: National Science Foundation. 2020. https://www.nsf.gov/statistics/stw/skilled-technical-workforce.cfm

[58] Commonwealth of Virginia. *2022 Special Session I Virginia Acts of Assembly, Item 487.50 #1c*. 2022. https://budget.lis.virginia.gov/amendment/2022/2/HB30/Introduced/CR/487.50/1c/

[59] State Council of Higher Education for Virginia. *Degrees awarded* [dataset]. 2022. https://research.schev.edu/info/Reports.Guide-to-the-Degrees-Awarded-Reports

[60] GO TEC. *GO Virginia Region 3 announces successful project award for GO TEC. 2019*. https://www.gotecva.org/go-virginia-region-3-announces-successful-project-award-go-tec/

[61] Virginia TOP. *Virginia Talent + Opportunity Partnership*. 2022. https://virginiatop.org/; *Commonwealth Innovative Internship Fund and Program*. State Council of Higher Education For Virginia. 2022. https://www.schev.edu/institutions/grants/commonwealth-innovative-internship-fund-and-program; Advance CTE. Career Clusters. 2022. https://careertech.org/career-clusters

[62] Mountain Empire Community College. *Center for Workforce and Innovation*. 2022. https://www.mecc.edu/center-for-workforce-innovation-of-appalachia/; Southern Virginia Higher Education Center. 2022. https://www.svhec.org/

[63] Johnson, Quentin R. *Partnering with The Tobacco Commission*. Southside Virginia Community College. 2022. https://southside.edu/article/partnering-tobacco-commission

64 Johnson, Steve. *Virginia Lineworker Training School is a 'Playground of Learning'*. Rural Electric Magazine. 2016. https://www.cooperative.com/remagazine/articles/Pages/Virginia-Lineworker-Training-School-is-a-Playground-of-Learning.aspx

65 U.S. Census Bureau (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020). *Selected Housing Characteristics, American Community Survey 5-year estimates*. Retrieved from https://www.census.gov/newsroom/press-kits/2021/acs-5-year.html

66 Ibid.

67 U.S. Census (2022). *Construction Price Indexes*. Retrieved from https://www.census.gov/construction/cpi/

68 Federal Housing Finance Agency. *House Price Index*. 2022. https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx; Federal Housing Finance Agency. Housing Price Index County Map. 2021. https://www.fhfa.gov/DataTools/Tools/Pages/HPI-County-Map.aspx

69 Virginia Housing. *Economic and Programmatic Impacts of Virginia Housing*. 2020. https://www.virginiahousing.com/about/economic-impact

70 Joint Legislative Audit and Review Commission. *Affordable Housing in Virginia*. Commonwealth of Virginia. 2021. http://jlarc.virginia.gov/pdfs/reports/Rpt559-1.pdf

71 Shelton, Makayla. *Danville Housing Summit encourages residential development in southern Virginia*. WDBJ. 2022. https://www.wdbj7.com/2022/08/18/danville-housing-summit-encourages-residential-development-southern-virginia/

72 Various stakeholder interviews (see Acknowledgements section). 2022.

73 Housing Choice Initiative. *Housing Choice Communities Grant Program.* Commonwealth of Massachusetts. 2021. https://www.mass.gov/doc/fy23-guidelines-for-housing-choice-community-grants/download

74 Nebraska Department of Economic Development. *Rural Workforce Housing Fund (RWHF)*. State of Nebraska. 2022. https://opportunity.nebraska.gov/programs/housing/rwhf/

75 Virginia Association of Counties. *Revitalization of historic school breathes new life into Carroll County*. 2020. https://www.vaco.org/county-connections/revitalization-of-historic-school-breathes-new-life-into-carroll-county/

76 Tupponce, Joan. *White Mill project closer to getting off the ground*. Virginia Business. 2022. https://www.virginiabusiness.com/article/white-mill-project-closer-to-getting-off-the-ground/

77 Bipartisan Policy Center. *Childcare in Rural America - What Have We Learned?*. 2021. https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2021/10/Rural-Child-Care-Event-Slides-min.pdf

78 Smith, Linda, Morris, Suzann, Suenaga, Manami. *Family Child Care: A Critical Resource to Rural Communities during COVID-19*. Bipartisan Policy Center. 2020. https://bipartisanpolicy.org/blog/family-child-care-a-critical-resource-to-rural-communities-during-covid-19/

79 Child Care Aware of Virginia. Child Care Data [dataset]. 2022. https://vachildcare.com/data-2/

80 U.S. Census Bureau (2020). *Selected Economic Characteristics, American Community Survey 5-year estimates*. Retrieved from https://www.census.gov/newsroom/press-kits/2021/acs-5-year.html

81 U.S. Census Bureau (2019). All Sectors: *County Business Patterns, including ZIP Code Business Patterns, by Legal Form of Organization and Employment Size Class for the U.S., States, and Selected Geographies: 2019*. Retrieved from https://www.census.gov/data/developers/data-sets/cbp-nonemp-zbp/cbp-api.html; U.S. Census Bureau (2020). *Disability Characteristics, American Community Survey 5-year estimates.* Retrieved from https://www.census.gov/newsroom/press-kits/2021/acs-5-year.html

82 Haltom, Renee. *Rural Spotlight: Advancing Early Childhood Education in Danville-Pittsylvania*. Federal Reserve Bank of Richmond. 2021. https://www.richmondfed.org/research/regional_economy/regional_matters/2021/rm_10_07_21_early_childhood

83 United Way of Southwest Virginia. *United Way of Southwest Virginia Introduces Ready SWVA Workforce Development Initiative*. United Way. 2021. https://www.unitedwayswva.org/news/2021/12/08/united-way-of-southwest-virginia-introduces-ready-swva-workforce-development-initiative

84 Sisk, Taylor. *100 Days in Appalachia. In Southwest Virginia, Reestablishing a Rural Hospital System Requires Rebuilding Trust*. 2021. https://www.100daysinappalachia.com/2021/07/in-southwest-virginia-establishing-a-rural-hospital-system-requires-rebuilding-trust/

85 Smith et al., *Family Child Care*

86 NC Rural Center. *NC Rural Center commends State Budget; thanks Legislators and Governor for rural wins and highlights continued, critical needs for the future*. 2021. https://www.ncruralcenter.org/2021/11/state-budget/

87 NC Department of Health and Human Services. *Rural Health Centers Capital Grant*. State of North Carolina. 2022. https://www.ncdhhs.gov/about/grant-opportunities/rural-health-grant-opportunities/rural-health-centers-capital-grant

88 Virginia Economic Development Partnership. *Virginia Enterprise Zone – Job Creation Grant*. 2022. https://www.vedp.org/incentive/virginia-enterprise-zone-job-creation-grant

89 Boothe, *Investment in Wythe County*.

90 Virginia Scan. 2022. https://sites.vedp.org/

91 Appalachian Regional Commission. *ARC Projects Approved in Fiscal Year 2020*. 2021. https://www.arc.gov/wp-content/uploads/2021/04/FY20-Approved-Projects.pdf; Virginia Energy. *Abandoned Mine Land Economic Revitalization Projects*. Commonwealth of Virginia. 2022. https://energy.virginia.gov/coal/mined-land-repurposing/AMLERProjects.shtml; Virginia Energy. *Completed Abandoned Mine Land Economic Revitalization Projects*. Commonwealth of Virginia. 2022. https://energy.virginia.gov/coal/mined-land-repurposing/AMLERComplete.shtml

92 Tobacco Region Revitalization Commission. *Tobacco Region Revitalization Commission 2021 Annual Report*. 2021. https://www.revitalizeva.org/wp-content/uploads/2022/01/TRRC_Report_2021_FINAL.pdf; Virginia Coalfield Economic Development Authority, VCEDA Overview.

93 National Agriculture Statistics Service. *Cash Rents County Estimates - 2022. U.S. Department of Agriculture*. 2022. https://www.nass.usda.gov/Statistics_by_State/Virginia/Publications/County_Estimates/2022/CR2022_VA.pdf

94 Virginia Economic Development Partnership. *Site Characteriziation Initiative*. 2019.

95 Virginia Department of Conservation and Recreation. Conservation Lands Database [Data Set]. 2022. https://www.dcr.virginia.gov/natural-heritage/clinfo

96 Ibid.

97 Virginia Economic Development Partnership. *Site Characteriziation Initiative*. 2019.

[98] Virginia Economic Development Partnership. *Commonwealth's Development Opportunity Fund (COF)*. 2022. https://www.vedp.org/incentive/commonwealths-development-opportunity-fund-cof

[99] Virginia Economic Development Partnership. *VEDP Sites and Buildings Database*. Commonwealth of Virginia. 2022. https://sites.vedp.org/

[100] Commonwealth of Kentucky. *2022-2024 Budget of the Commonwealth*. 2022. https://osbd.ky.gov/Publications/Documents/Budget%20Documents/2022-2024%20Budget%20of%20the%20Commonwealth/2022-2024%20Budget%20of%20the%20Commonwealth%20-%20Volume%20I%20-%20Operating%20Budget.pdf; Commonwealth of Virginia. *2022 Special Session I Virginia Acts of Assembly*. 2022. https://budget.lis.virginia.gov/get/budget/4623/HB30/; Commonwealth of Virginia. *2022 Special Session I*. 2022. https://budget.lis.virginia.gov/get/budget/4631/HB29/; North Carolina Office of State Budget and Management. *Office of State Budget and Management Certified Budget* (2019, 2021); OneGeorgia Authority. *OneGeorgia Authority Annual Report* (2019, 2020, 2021); Jobs Ohio. *Ohio Site Inventory Program*. State of Ohio. 2022. https://www.jobsohio.com/programs-services/sites/ohio-site-inventory-program; Transparent Tennessee. *Site Development Grants*. State of Tennessee. 2022. https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/tnecd-performance-metrics/openecd-rural-community-development-quick-stats/site-development-grants.html

[101] Virginia Economic Development Partnership. *(FY21-FY25) Strategic Plan for Economic Development of The Commonwealth of Virginia*. 2021.

[102] Virginia Economic Development Partnership. VEDP Sites and Buildings Database.

[103] Arend, *The 2022 Business Climate Rankings*; Gamble, *18th Annual Consultants Survey*.

[104] Pipa, Anthony F., Geismar, Natalie, *Reimagining rural policy: Organizing federal assistance to maximize rural prosperity.*

[105] Bureau of the Fiscal Service. USASpending.gov [dataset]. U.S. Department of the Treasury. 2022. https://www.usaspending.gov/

[106] Conway Analytics, US Economic Development Projects (as of 10/05/2022) [Data Set], 2022; U.S. Census Bureau's Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB), TIGER/Line Shapefile, 2019, nation, U.S., Primary Roads National Shapefile [Data Set], 2019, https://catalog.data.gov/dataset/tiger-line-shapefile-2019-nation-u-s-primary-roads-national-shapefile

[107] Chmura Economics & Analytics. *The Economic Impact of Interstate 73 on Virginia, West Virginia, and South Carolina*. Virginia Department of Transportation. 2014. https://www.virginiadot.org/projects/resources/Salem/I-73/I-73_Economic_Impact_Presentation.pdf

[108] Schmidt, Markus. $*7 million for next Coalfields Expressway project moves closer*. Cardinal News. 2022. https://cardinalnews.org/2022/09/13/kaine-warner-secure-7-million-for-next-coalfields-expressway-project/; Virginia Department of Transportation. About - Coalfields Expressway. 2019. https://www.virginiadot.org/projects/bristol/about_coalfields_expressway.asp

[109] Google. (n.d.). [Google Maps driving directions for various locations]. Retrieved 2022 from https://www.google.com/maps

[110] Virginia Department of Rail and Public Transportation. 2021 *Bristol Extension Capital & Operating Cost Analysis*. Commonwealth of Virginia. 2021. https://www.drpt.virginia.gov/media/1scojtqy/bristol-extension-study-final.pdf

[111] Federal Railroad Administration. S*outheast Rail Plan*. 2020. https://www.southeastcorridor-commission.org/_files/ugd/f32a1d_6e2bd26333cc4562b9edd8cf6e42e7ac.pdf

[112] Virginia Department of Housing and Community Development. *Virginia Telecommunications Initiative (VATI)*. Commonwealth of Virginia. 2022. https://www.dhcd.virginia.gov/vati

[113] Tobacco Region Revitalization Commission. *Last-Mile Broadband Call for Proposals & Program Guidelines*. 2018. https://www.revitalizeva.org/wp-content/uploads/2018/11/Last-Mile-Program-Guidelines-Nov2018.pdf

[114] E-Region. *$500,000 VCEDA Grant Approved for Space-Based Broadband Initiativ*e. Virginia Coalfield Economic Development Authority. 2021. https://www.vceda.us/4362-2/

[115] GO Virginia. *FY22Q4 GOVA Project Awards Full Report*. Virginia Department of Housing and Community Development. 2022. https://rga.lis.virginia.gov/Published/2022/RD535/PDF

[116] King, Brendan. *More Virginians need internet access than previously reported*. WTVR News/CBS 6. 2022. https://www.wtvr.com/news/local-news/more-virginians-need-internet

[117] *New Grant Program Launched to Transform Rural Communities*. North Carolina Department of Commerce. 2022. https://www.commerce.nc.gov/news/press-releases/new-grant-program-launched-transform-rural-communities#:~:text=The%20Rural%20Community%20Capacity%20(RC2,University's%20Walker%20College%20of%20Business

[118] Tennessee Department of Economic and Community Development. *Infrastructure Planning Grant*. State of Tennessee. 2022. https://www.tn.gov/ecd/rural-development/infrastructure-planning-grant.html

[119] U.S. Department of Transportation. INFRA Awards FY22. 2022. https://www.transportation.gov/sites/dot.gov/files/2022-09/INFRA%20Fact%20Sheets%20FY%202022.pdf

[120] Schmidt, *$7 million for next Coalfields Expressway project moves closer*; Virginia Department of Transportation. The Future of Transportation in Virginia. 2022. https://www.virginiadot.org/projects/default.asp; Virginia Department of Transportation. U.S. Route 58 Corridor Development Program. 2019. https://virginiadot.org/projects/Rt58-overview.asp

[121] Commonwealth of Virginia. *2022 Special Session I Virginia Acts of Assembly, Item 125*. 2022.. https://budget.lis.virginia.gov/item/2022/2/HB30/Enrolled/1/125/

[122] Tax Foundation. *2023 State Business Tax Climate Index*. 2022. https://taxfoundation.org/2023-state-business-tax-climate-index/

[123] U.S. Energy Information Administration. *Table 5.6.B. Average Price of Electricity to Ultimate Customers by End-Use Sector*. 2022. https://www.eia.gov/

[124] Virginia Department of Planning and Budget. *DEQ Operating plan for FY22. 2022*. http://publicreports.dpb.virginia.gov/rdPage.aspx?rdReport=pOperatingPlan&IdeDisplayStatus=Collapsed&selAgency=440&selBudgetType=1&selYear=2022&iptShowTotal=Show&iptShowGF=DontShow&iptShowNGF=DontShow; Virginia Department of Environmental Quality. About Us. 2022. https://www.deq.virginia.gov/get-involved/about-deq#:~:text=Through%20the%20work%20of%20nearly,inspections%2C%20and%20enforces%20the%20law

[125] Arend, T*he 2022 Business Climate Rankings*; Gamble, *18th Annual Consultants Survey*

[126] South Carolina State House. Appropriations Section 34. 2022. https://www.scstatehouse.gov/sess124_2021-2022/appropriations2021/tap1a.htm#s34; North Carolina Department of Commerce. *Job Development Investment Grant*. 2022. https://www.commerce.nc.gov/media/4091/download?attachment; Tennessee Department of Economic and Community Development. *Incentives and Grants*. 2022. https://tnecd.com/advantages/incentives-grants/; Tennessee Government. *FastTrack Project Database*. 2022. https://www.tn.gov/transparenttn/state-financial-overview/open-ecd/openecd/fasttrack-project-database.html; Georgia Department of Community Affairs. *Job Tax Credits*. 2022. https://www.dca.ga.gov/community-economic-development/incentive-programs/job-tax-credits; Georgia Government. *Tax Credits*. 2022. https://www.georgia.org/competitive-advantages/incentives/tax-credits; South Carolina Department of Commerce. *State Discretionary Incentives*. 2022. https://www.sccommerce.com/why-sc/incentives/state-discretionary-incentives; South Carolina Coordinating Council for Economic Development.

Economic Development Set-Aside Fund, Closing Fund and Rural Infrastructure Fund Activity for 2021. South Carolina Department of Commerce. 2022. https://www.sccommerce.com/sites/default/files/2022-03/Economic%20Development%202021%20Annual%20Report%20%20%283.2022%29.pdf

127 Virginia Department of Planning and Budget, *DEQ Operating plan for FY22;* Virginia Department of Environmental Quality, *About Us*; Georgia Governor's Office of Planning and Budget, *The Governor's Budget Report, Amended Fiscal Year 2022 and Fiscal Year 2023*; Georgia Department of Natural Resources. *Careers with the Georgia Department of Natural Resources*. 2022. https://gadnr.org/careers#:~:text=With%20nearly%202%2C500%20associates%20working,education%20up%20through%20advanced%20degrees; North Carolina Office of State and Budget Management. 2022. https://www.osbm.nc.gov/media/2911/download?attachment; Fain, Travis. *Report shines light on decade of budget cuts for NC environmental regulators*. WRAL News. 2022. https://www.wral.com/report-shines-light-on-decade-of-budget-cuts-for-nc-environmental-regulators/18829088/; State of Tennessee. *The Budget Fiscal Year 2021-2022*. 2022. https://www.tn.gov/content/dam/tn/finance/budget/documents/2022BudgetDocumentVol1.pdf; TN Department of Environment and Conservation. *TDEC 2021 Annual Report*. 2022. https://www.tn.gov/content/dam/tn/environment/documents/annual-reports/tdec-annual-report-2021.pdf; South Carolina Department of Health and Environmental Control. *About Us*. 2022. https://scdhec.gov/about-dhec/about-us#:~:text=DHEC%20is%20charged%20with%20promoting,people%20living%20in%20healthy%20communities

128 Virginia Department of of Environmental Quality. *Permit Fee Program Evaluation*. 2022. https://rga.lis.virginia.gov/Published/2021/RD848/PDF; Virginia Department of Environmental Quality. *Permit Fee Program Evaluation*. 2020. https://rga.lis.virginia.gov/Published/2020/RD7/PDF; Virginia Department of Environmental Quality. *Permit Fee Program Evaluation*. 2018. https://rga.lis.virginia.gov/Published/2017/RD635; Virginia Department of Environmental Quality. *Permit Fee Program Evaluation*. 2016. https://rga.lis.virginia.gov/Published/2015/RD498

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