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INCREASING ACCESS TO DEVELOPMENT WITHIN HENRICO COUNTY

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Henrico County
VIRGINIA

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Sincerely,

Kristen Lafayette



FRANK BATTEN SCHOOL
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DISCLAIMER

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

HONOR PLEDGE

On my honor, as a student at the University of Virginia, I have neither given nor received aid on this assignment.

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EXECUTIVE SUMMARY

As the world begins to re-open after the Covid-19 pandemic, institutions will have a unique opportunity in deciding their future. The pandemic has cast a large amount of spotlight on underlying problems within our systems. Low-income individuals, as well as racial and ethnic minorities have been disproportionately affected by the pandemic, further exposing healthcare and social inequities that exist (Centers for Disease Control and Prevention, 2021). Local governments should center their focus on reducing health and economic inequities in localities to improve outcomes for low-income households and communities (Environmental Protection Agency, 2021). This focus should confront differences in access to developed areas.

Henrico County has the opportunity to expand access to economically developed areas to its residents regardless of their geographic location within the County. Specifically within communities where individuals already have limited economic resources, live in rural areas, have disabilities, or work multiple jobs, tradeoffs such as cost and time affect accessibility (Arena & Salerno, 2020). After careful research, this policy analysis proposes three alternatives for consideration to create more access to services such as healthcare, job openings, public transportation, nutritious food, and education in economically developed communities in Henrico County. The policy alternatives are:

1. Status Quo
2. Implementing an Affordable Housing Mandate
3. Increasing Modes of Transportation

The policy alternatives were then evaluated using criteria of costs, political feasibility, and effectiveness. After analyzing the alternatives using an outcomes matrix, this policy analysis recommends that Henrico County implement policy alternative three: increasing modes of transportation. Increasing modes of transportation for residents in Henrico County will allow residents to overcome barriers of access in order to benefit from the goods and services offered in Henrico.

INTRODUCTION

PROBLEM DEFINITION

Counties are responsible for providing essential services to their citizens. In order to provide these essential services, counties must invest in economic development activities. However, because local governments are often more accountable to their citizens than the federal government, one drawback is a potential for greater inequality between localities. As a local government entity, counties should seek to ensure that all residents, independent of geographic location within the county, reap the same benefits of economic development.

Henrico County is tasked with building the strength of the local economy and participating in activities that reflect the need of the physical, social, and economic conditions of the County and its residents. The West End of Henrico has vast amounts of economic development and therefore, greater access to opportunities and services, such as healthcare providers, job openings, public transportation, nutritious food, and education, that stem from economic development activity. The access to these opportunities is less in the East End of Henrico County, where there are far fewer economic development activities. The discrepancy in access to developed areas between the individuals living in the West End and East End of Henrico County reinforces other inequities that are present between these two regions.

CLIENT OVERVIEW

As shown in the map on the next page, Henrico County is located to the northern and eastern boundaries of the City of Richmond, spans almost 245 square miles, and is home to approximately 339,000 residents (Henrico County, 2020)*. Henrico was established in 1611 and has since grown into residential communities, office buildings, retail areas, farmland, and industrial sites. Henrico County's goal as a local government is clear in its mission statement: enhancing the lives of its residents by supporting its schools, businesses, diversity, inclusion, and creativity. The County values the changing needs of its residents in regards to changing social, physical, and economic conditions and realizes its responsibility as a local government entity to effectively to strengthening the community.

**The statistics and information in this paragraph are from Henrico County. (2020). Proposed Budget 2020-2021 - Henrico County, Virginia. Retrieved September 16, 2020, from <https://henrico.us/budget/proposed-budgets/>*

Henrico County has a County Manager form of Government. The Board of Supervisors consists of five representatives; each of the County's five magisterial districts elects one board member every four years. Together the board members appoint the County Manager who enforces all administrative tasks, handles business affairs, coordinates all operations, and carries out all the policies and procedures determined by the Board of Supervisors.

Map of the Physical Location of Henrico County

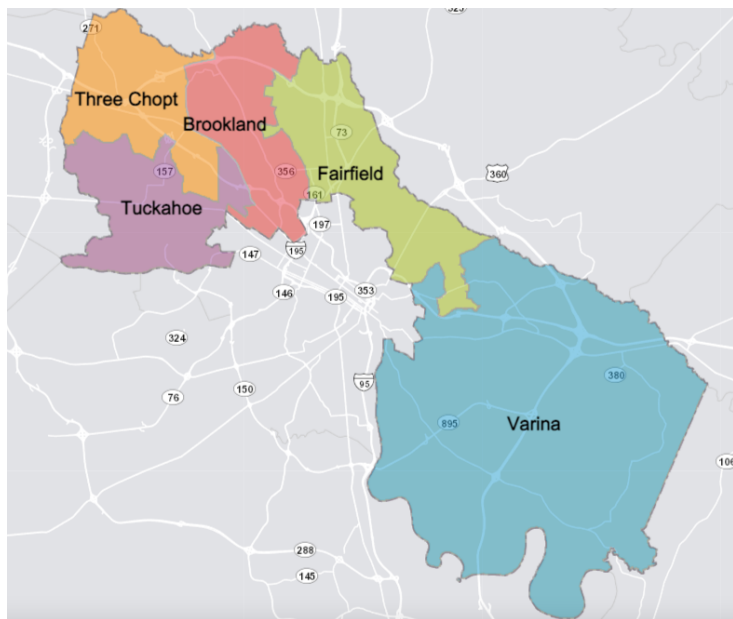


Map Provided by Henrico County Economic Development Authority

Henrico County consists of five magisterial districts: Brookland, Fairfield, Three Chopt, Tuckahoe, and Varina. Because of the almost horseshoe-like shape of Henrico around the City of Richmond, residents often refer to Henrico by two directional regions, the "West End" and the "East End". The easternmost magisterial district is Varina. The demographics of Varina are composed of race and ethnicities that are majority black, the median household income is about \$55,000, and about 14% of residents are below the poverty line (U.S. Census Bureau, 2018). Currently, Varina is composed of mostly farmland and industrial sites (See Appendix A, B, C, D E for "heat maps" of concentration of Henrico).

A stark contrast to the Varina District, the Three Chopt District is located in the northwestern-most part of Henrico. Three Chopt is composed of race and ethnicities that are majority white, the median household income is about \$93,000, and about 4% of residents are below the poverty line (U.S. Census Bureau, 2018). Three Chopt is significantly more developed in all areas -- office, residential, restaurant, shopping, and entertainment. Consequently, the majority of the county's development and wealth flows through this district. The map below depicts the five magisterial districts in Henrico County, including Three Chopt and Varina which were discussed previously.

Henrico County's Five Magisterial Districts



Map Provided by Henrico County

The County of Henrico has a responsibility to provide essential services to its residents; enhancement of these services and other services allows Henrico County to contribute to raising the quality of life each resident experiences. The goal of creating greater access to developed areas in Henrico County, is so residents in all geographic areas can experience the same opportunities and access to healthcare providers, job openings, public transportation, nutritious food, and education. This is a priority in Henrico County as they look to provide effective change in social, physical, and economic conditions. It is important that Henrico County address this problem now as the worldwide Covid-19 pandemic has left low-income individuals worse off than they were before. As the spread of Coronavirus comes to a halt, Henrico has an opportunity to expand access to economic development to citizens that were most affected. Henrico's role in addressing this is clear: provide support and administration to fix access issues within the County. As mentioned in their mission statement, Henrico County Government and its citizens can reach and fulfill common goals and responsibilities by working together and learning from each other (Henrico County, 2021).

BACKGROUND

It is important to consider the historical trends and projections when analyzing the problem of disparity in access to economic development in Henrico County. Recent trends in economic development in Henrico County have been centered in the West End. The East End, however, has not benefited from this large-scale economic development. The most recent master plan for Henrico County was adopted in 2009, replacing the comprehensive plan from 1995 (Henrico County, 2009). This 2009 master plan lays out plans for land use for Henrico County through 2026 (Henrico County, 2009). It is interesting to note that the master plan from 1995 projects (See Appendix A) the Varina District to develop into mostly office space and suburban residential, with some urban mixed-use development and some prime agriculture (Henrico County, 2009). The 2009 master plan, however, shows a very different projection (See Appendix B) of this land: mostly prime agriculture and rural residential, with some suburban residential (Henrico County, 2009). Although earlier master plans project the East End to have greater development in the future, the more recent master plan maintains the land as mostly undeveloped or for agriculture. The master plan for the West End continues to have an abundance of neighborhoods, office space, mixed use, and recreational facilities. If these trends continue, the West End will continue to have enhanced development and continue to benefit more from the services that development offers than individuals living in the East End.

Counties in the United States, including Henrico, are responsible for providing essential services to their residents regardless of whether they live in the West End or East End. In order to provide these essential services, counties must invest in economic development activities. Over \$193 billion (Istrate, 2014) is invested by counties in the United States annually for economic development initiatives. In fiscal year 2019-2020, Henrico County spent almost \$18 million on economic development (Henrico County, 2021).

When analyzing the problem of equity of access to economic development, it is important to consider the groups of people who are most affected. As previously stated, there are more access points to economic development and the services stemming from economic development in the West End of Henrico County than there are in the East End. As mentioned above, the East End is more impoverished than the West End of Henrico. Because this area is more impoverished, the County needs to consider what resources, what uses of the land, and what access points of economic development are needed and will be most helpful to the surrounding residents.

The County should consider how greater access to economic development will improve the quality of life of residents. The County must consider the interests of current and potential residents alike. Henrico County should position itself to make greater access points to economic development and opportunities to access healthcare providers, job openings, public transportation, nutritious food, and education for all residents to benefit from equally.

LITERATURE REVIEW

This literature review explores the income inequality that is currently facing the United States, specifically at the county level. Approaches to equitable development and access to developed areas are discussed in terms of funding, transportation, and affordable housing. Finally, potential solutions are explored.

INCOME INEQUALITY

In many parts of the United States, the rich and poor live side by side within the boundaries of their counties. Research was conducted to measure the distribution of wealth in over 3,000 counties, or county equivalents in the United States. Using the Gini Coefficient as the standard measure for wealth distribution, the top 25 counties with the widest income gaps were analyzed (Stebbins, 2019). Both urban and rural counties made the list, but the most determinant factor of wealth distribution within counties was income inequality (Stebbins, 2019). The majority of the counties that were in the top 25 were located in the South; 3 counties in Virginia made the list. The City of Richmond, considered a county equivalent in this research study, was ranked twentieth (Stebbins, 2019) for the widest income gap in the United States. In Richmond, about 12 percent of households earn less than \$10,000, but 5 percent of households earn more than \$200,000 annually (Stebbins, 2019). The number of households earning less than \$10,000 is almost double the national average of about 6.5 percent.

In a similar study conducted by the Economic Policy Institute, Henrico County was ranked 683 of 3,061 in the United States in terms of income inequality (Sommeiller & Price, 2018). The average income of the top 1 percent of households in Henrico County earns just over \$1,050,000 (Sommeiller & Price, 2018). The average income of the bottom 99 percent of households in Henrico County is about \$60,000 (Sommeiller & Price, 2018).

Meaning the top 1 percent of households in Henrico make about 17 times more than the bottom 99 percent. Income inequality is just one factor that affects economic growth. Raising living standards and reducing the income gap can help create economic development and fuel economic growth. One way Henrico can raise living standards and foster economic growth is through equitable development.

EQUITABLE DEVELOPMENT

County-level approaches to economic development include use of past strategies, decentralized governance, funding, and investment opportunities. Surveys conducted by NACo suggest that when considering future development, counties often look to past use of strategies (Lobao & Kraybill, 2009). These past strategies consist of the trend to shift to decentralized governments (Lobao & Kraybill, 2009); meaning, in the past two decades, responsibility for economic development and public services has shifted from federal to local governments. One consequence of decentralized government is the effect on poorer localities. Governments, that must provide greater services to its citizens, experience a greater burden when development and services are shifted to them. There are conflicts in the relationship between poverty and local government activity. The benefit is that local governments are more accountable to citizens, but the drawback is there is a potential for greater inequality between places. Localities tend to engage in economic development in high-income areas, but tend to focus on service activities in low-income areas (Lobao & Kraybill, 2009). This may be one explanation as to why greater economic development has been centered in higher income areas in Henrico County.

Another approach to equitable development is through funding. Funding is the primary contribution to economic development by county governments (Istrate, 2014). Counties in the United States spend more than \$106 billion annually (Istrate, 2014) on building infrastructure in order to further invest in economic development activities. A majority of counties rely on their general fund for revenue sources for economic development, but also use state grants and contracts for funding. Economic development gives counties the opportunity to create jobs and services for its residents in order to increase revenue to maintain other services within the county.

According to the United States Environmental Protection Agency, equitable development places emphasis on access to environmental, health, economic, and social opportunities (Environmental Protection Agency, 2021). Approaches include adequate infrastructure and efforts to strengthen and improve neighborhoods.

Counties should center their focus on reducing health and economic inequities in localities to improve outcomes for low-income households and communities while also maintaining and building upon existing regions (Environmental Protection Agency, 2021). Improving outcomes for low-income households and communities should be addressed through confronting differences in access to developed areas.

Equitable development is important because it draws on a range of approaches in order to create communities where residents of all income levels and races are able to benefit from their residency. This research can be used by Henrico in order to address the discrepancy in access to developed areas between the individuals living in the West End and East End of Henrico County.

ACCESS TO DEVELOPED AREAS

The ability to access areas that have greater economic development increases access to necessities such as health care facilities, grocery stores, public transportation, education, safe housing, and job opportunities. Research conducted by the Urban Institute states that despite differences in geographic location, residents in communities identify high transportation costs and limited transportation options as two of the largest barriers to accessing opportunities such as food, jobs, health care, and education (Arena & Salerno, 2020). Specifically within communities where individuals already have limited economic resources, live in rural areas, have disabilities, or work multiple jobs, tradeoffs such as cost and time affect accessibility (Arena & Salerno, 2020). For residents in rural areas without a car or the funds for gas and insurance, costs of transportation methods and additional time spent in transit may outweigh the benefits of fresher food, better healthcare, more education, and greater job opportunities. Residents in more urban areas may benefit from ride-sharing services, but residents in rural areas may not. Often these services are not available in rural areas. Similarly, low-income individuals may not be able to access ride-sharing services even if they are available if they do not have a mobile device, WiFi or LTE, or access to an online bank account. Another possibility to consider is that for families with cars, car and housing expenses may take priority over healthy foods, education, and health care.

Where families live is a key concern when discussing access to economic development. Families that are low-income or experiencing financial hardship often have little money remaining after paying the mortgage to pay for food, transportation, and education (Fedorowicz, 2019). A report by Feeding America shows that of the 46 million clients that Feeding America serves, over half of them have to make the choice between paying for housing or paying for food (Fedorowicz, 2019).

This becomes even more apparent when there are job changes, job loss, or disability which results in a decrease in income. Families must decide to meet immediate needs such as food, transportation, and child care, or stay up to date on payments for their homes.

Additionally, many low-income families live in neighborhoods that have been underinvested in and are in need of revitalization (Fedorowicz, 2019). These neighborhoods often experience high amounts of vacancy. A lack of mobility within a community can lead to families living farther from good schools, job opportunities, fresh food, and health care providers. Providing affordable housing to low-income families means that families will have the opportunity to have greater access to other resources and necessities. A study by the Urban Institute found that families that lived in subsidized housing had smaller odds of food insecurity than families that were still on waitlists for subsidized housing (Fedorowicz, 2019).

The study also found that families who received permanent housing subsidies had greater improvements in their overall well-being than families whose housing subsidies were not permanent (Fedorowicz, 2019). Therefore, it is important to consider not only transportation, but also housing affordability, when discussing access to economic development and the access to necessities such as health care facilities, grocery stores, public transportation, education, safe housing, and job opportunities that comes with it. As Henrico considers potential solutions to equitable development, they should look to these studies and concerns regarding access to developed areas.

POTENTIAL SOLUTIONS

Research suggests many different potential solutions to decreasing the income gap and increasing access to equitable development. Localities should adopt strategies that can meet the needs of suburban and rural communities. Rural areas are often spread out which poses challenges to transportation, poverty, and unemployment rates as jobs in rural areas tend to be in low-wage industries (Ratcliffe et. al, 2020). Suburban areas have faced a significant rise in concentrated poverty in recent years. Solutions to these challenges include building resilient local food systems that enable access to nutritious food and affordable food for all neighborhoods. Many communities are utilizing food policy councils to bring together stakeholders such as farmers, processors, retailers, government officials, and residents, in order to increase the capacity of local food economies (Ratcliffe et. al, 2020). Another solution is to combine access to a basic necessity like healthcare with food interventions. Providing healthcare at food pantry sites can provide low-income or rural areas with greater access to health providers.

It is also important to expand strategies of affordable housing. Specific solutions include creating housing trust funds, allocating tax credits, encouraging the production of new affordable housing units, and expansion of housing opportunities through inclusionary zoning. According to research conducted by the Urban Institute, housing subsidies for low income individuals have significantly affected housing and food insecurity, creating better outcomes for these individuals (Ratcliffe et. al, 2020). Other solutions offered from research suggests localities should experiment with innovative transportation solutions (Ratcliffe et. al, 2020). Access and affordability of transportation can affect an individual's ability to access services, seek health care, receive an education, buy basic goods, and maintain employment. One solution would be to create incentives for transportation options to be located near affordable housing (Ratcliffe et. al, 2020). Other options include transportation subsidies or affordable ride-sharing options.

EVALUATIVE CRITERIA

Henrico County's goal as a local government is to enhance the lives of its residents by supporting its schools, businesses, diversity, inclusion, and creativity (Henrico County, 2020). When evaluating the problem of access to development, Henrico County should evaluate policy alternatives using three criteria: costs, political feasibility, and effectiveness. Because the overall goal for Henrico is to promote equity in access, the greatest emphasis will be placed on alternatives that are the most effective at solving the access challenge. Therefore, effectiveness will be weighted greater than costs and political feasibility when evaluating the policy alternatives. Each policy alternative will be evaluated on a scale from 1 to 5 by each criterion. A score of 1 represents least beneficial to the County and a score of 5 represents most beneficial to the County.

COSTS



Any alternative chosen to address this issue will need to make best use of the resources available, which will aid in both the alternative's political feasibility and effectiveness. This criterion will be measured through rankings of costs for the County; lower costs are more beneficial than high costs and will be reflected through the rankings. After consideration of all prices and amounts paid, costs will be reflected on an ordinal scale from 1 to 5 with 1 representing the highest amount of additional cost to the County and 5 representing the lowest amount of additional costs to the County. Cost is an important consideration when considering implementation of a policy alternative, it will be weighted at 30%.

POLITICAL FEASIBILITY



Political feasibility refers to how likely the alternative will be accepted by Henrico County Government, the Board of Supervisors, and the residents of Henrico. To ensure that the policy selected has the support necessary to be implemented correctly, each option will be evaluated on how likely it is to be supported by politicians across the political spectrum. This criterion will be measured on an ordinal scale from 1 to 5 with 1 representing infeasibility and 5 representing complete feasibility for likelihood that the alternative would be passed and implemented by policymakers. Politically feasible alternatives must have enough support to be passed, therefore, will be weighted at 30%.

EFFECTIVENESS



Adequately addressing the goal of making Henrico more equitable in terms of access to developed areas and development opportunities will be a large determination for if an alternative is recommended. An alternative must actively seek to reduce the disparity within Henrico County. Disparities that will be considered when evaluating the effectiveness of alternatives include access to high-quality education, nutritious foods, decent and safe housing, health care providers, and reliable transportation. This criterion will be measured on an ordinal scale from 1 to 5 with 1 representing ineffective and 5 representing completely effective on how the policy alternative will be at addressing equity in Henrico County. This alternative will be weighted 40%.

POLICY ALTERNATIVES

Based on the research that was conducted for the literature review and the capacity of Henrico County, three policy alternatives were developed for consideration. The alternatives are: maintaining the status quo, implementing an affordable housing mandate, and increasing modes of transportation. This section will provide an overview of each policy alternative and will be followed by an evaluation of the alternative using the three criteria outlined previously: costs, political feasibility, and effectiveness.

ALTERNATIVE 1: STATUS QUO

This policy alternative allows Henrico County to continue to operate as is. The function of this alternative is to allow Henrico County to continue to follow the master plan and current zoning practices. The operation and administration of services and opportunities within the County would remain the same. This alternative maintains the standard business procedures and recognizes the work that Henrico County currently accomplishes. Additionally, this alternative would keep the current budget of Henrico at the same levels as it was previous to this policy analysis.

In FY18-FY19, Henrico County spent almost \$26 million on Community Development; this comprised of 2.8% of the General Fund (Henrico County, 2020). More specifically, \$18 million was spent on Economic Development, \$4 million was spent on the Planning Department (Henrico County, 2020). Within the Planning Department, almost \$4 million was spent on administration and the remaining \$170,000 was spent on the Board of Zoning Appeals (Henrico County, 2020). Remaining expenditures in Community Development consisted of about \$3 million used for Community Revitalization, Agriculture and Home Extension, and the Permit Center. In 2019, Henrico County spent a little over \$92 million from the Water and Sewer Enterprise Fund in order to provide safe drinking water and sewer services to the County (Henrico County, 2020).

Proceeding as status quo maintains relationships among residents, the County Manager, the Board of Supervisors, and other relevant stakeholders. Henrico County would not need to develop an implementation strategy and would continue as status quo.

EVALUATION OF ALTERNATIVE 1

COSTS



Maintaining the status quo of residents' access to economic development and developed areas within Henrico County would mean no deviation or added costs to the current budget related to zoning practices, planning decisions, public utilities, etc. Sticking to the status quo imposes no additional cost burden to the County and will therefore be given a score of 5 during evaluation for costs.

POLITICAL FEASIBILITY



This alternative is considered highly politically feasible because it maintains the current operations of Henrico County. This alternative is likely to be approved by Henrico County Government, the Board of Supervisors, and residents because it is the current accepted way of governance. Maintaining the status quo is the most politically feasible alternative because it does not require any change in policy. Whereas, the other alternatives would require implementation and change in policy. Therefore, this criterion is very feasible and will be given a score of 5.

EFFECTIVENESS



The status quo policy alternative maintains the current practices within Henrico County; meaning that there would be continued disparity in access to economically developed areas between the West End and East End of the County. This alternative does not address the goal of trying to make Henrico more equitable in terms of development and development opportunities because it does not actively seek to reduce disparity in access. The Henrico County Public School system has been recognized nationally, is currently a majority minority school system, and has just completely rebuilt two new high schools (Henrico County, 2021). Although the status quo maintains access to high-quality education, it does little to address access to healthcare providers, grocery stores, and affordable transportation. As shown previously, there is still much greater access to these services in the West End of Henrico than the East End. Therefore, this criterion is inefficient in terms of making Henrico County more equitable in terms of access to development and the benefits that stem from having greater economic development; it will be given a score of 1.

ALTERNATIVE 2: IMPLEMENTING AN AFFORDABLE HOUSING MANDATE

Inclusionary zoning is the practice of creating greater housing opportunities for individuals of low- and moderate-income levels. Specifically, this policy alternative would serve as an option for creating inclusionary zoning in Henrico County and would provide greater housing opportunities for low- and moderate-income levels through an affordable housing mandate. The mandate would require new housing developments of more than 25 units to include 10% of housing at affordable rates for low- and middle-income individuals; increasing the number of individuals of low and middle income that are able to afford to live in the more developed areas of Henrico County.

In 2018, the mean household income for Henrico County was about \$68,000, with the largest share of households having an annual income of \$75,000 to \$100,000 (Henrico County, Va, 2018). For this alternative, low- and middle- income will be defined as household income that is less than \$45,000 annually; this consists of about 30 percent of households in Henrico County (Henrico County, Va, 2018). Since 2015, the average amount of new single-family subdivisions per year is 12.8 or 336.8 average total of lots in Henrico County (County of Henrico Planning Department, 2020). If the mandate was applied here, about 38 affordable housing units would have been created, positively affecting almost 130 households of low and middle income (County of Henrico Planning Department, 2020). Using these statistics, it is estimated that this mandate would create about 34 new single-family affordable housing units if implemented in 2021.

For FY19-20, Henrico spent about \$250,000 of the Community Development Block Grant funds in order to fund 86 new housing units (Henrico County, 2020). Increasing the amount of affordable housing in Henrico County will increase the amount of funding that will be needed to be allocated to the Department of Community Revitalization to support the new initiative to mandate affordable housing.

EVALUATION OF ALTERNATIVE 2

COSTS



The Henrico Department of Community Revitalization currently oversees affordable housing in the County. In FY 2019-2020, the Department of Community Revitalization spent about \$1.6 million in order to accomplish their goals of providing clean and safe neighborhoods (Henrico County, 2021). Because the County already has a department that oversees affordable housing, implementing an affordable housing mandate would ease the implementation process and have a relatively low cost burden imposed on the County. Implementation of this policy alternative would provide additional work for the Department of Community Revitalization and may generate need for additional personnel, but overall the cost would be low. The Henrico County Planning Department would need to oversee the development of subdivisions and ensure that any subdivisions that are over 25 units are registered with the Department of Community Revitalization in order to ensure that 10% of the units are filled by households who currently qualify for affordable housing in Henrico. Therefore, this will add some additional work for the Planning Department that may require additional personnel. Overall, the costs for potentially needing to hire additional personnel is very small and therefore only a small cost burden for Henrico County. This alternative is a 4 in terms of costs.

POLITICAL FEASIBILITY



This alternative is only moderately politically feasible because although Henrico County Government could likely mandate affordable housing in cases of new development, there is likely to be push back from some residents who view affordable housing negatively. In recent years, Henrico County has attracted many developers who have vastly expanded the housing and development market within the County. Imposing an affordable housing mandate may lead to some opposition and compliance issues among developers; specifically, it may be harder to attract developers that are willing to build affordable housing in their planned subdivisions. Additionally, residents that live in more expensive areas, may oppose inclusion of affordable housing. Affordable housing may make the planning and zoning decisions less politically feasible if there is little support from Henrico residents and developers.

As mentioned previously, all new policy must be voted on by the Board of Supervisors who are elected by residents in their magisterial districts. If there is significant push back by residents, then the Board of Supervisors may vote against it. In order to ease into implementation to gather greater support, Henrico should announce this decision in June 2021 and impose the mandate to go in place in January 2022. Only a majority vote is needed for a policy to pass through the Board of Supervisors, therefore this alternative is assessed to have moderate to good levels of political feasibility; it is more than likely to be implemented, but there would likely be slight resistance. Implementing an affordable housing mandate will be given a score of 2.5 for political feasibility.

EFFECTIVENESS



Requirement of affordable housing for new developments is likely to be efficient in terms of creating access to developed areas in Henrico County more equitable among its residents. The proposal to require new housing developments of more than 25 units to include 10% of housing at affordable rates for low- and middle-income individuals will increase the number of individuals of low and middle income that are able to afford to live in the more developed areas of Henrico County. These areas are more likely to include easier access to grocery stores, public transportation, healthcare providers, and schools with the highest achievement levels in the County. However, this mandate supports a narrative that residents of Henrico would need to move in order to access and benefit from economically developed areas. Instead, Henrico should focus on creating access to these developments and the services they provide for its residents regardless of their geographic location within the County.

The alternative of implementing an affordable housing mandate on new subdivisions is likely to increase affordable housing in magisterial districts that are in or closer to the West End where there has been more construction of subdivisions in recent years. This means residents would still need to live in specific areas in order to benefit from easier access to economic development. Because this alternative does establish a way for low- and middle- income individuals to access services easier, but does not effectively create equity across all geographic locations in Henrico County, this policy alternative is assessed to be a 2.5 in terms of effectiveness.

ALTERNATIVE 3: INCREASING MODES OF TRANSPORTATION

The function of this policy alternative is to expand access to development that is already in Henrico through greater access points in public transportation. Expansion of the Greater Richmond Transit Company (GRTC) that serves the City of Richmond and sections of Henrico should be expanded to offer even greater accessibility to previously developed areas in and around the County.

This alternative would increase the number of routes currently offered by the GRTC in the hopes of creating more mobility within and around Henrico County. Another opportunity Henrico should consider for increasing mobility is to bring an electric scooter and bike sharing company into the County. This would supplement the plans that are already in the works to expand bicycle lanes and routes in the Henrico.

The alternative establishes new routes and stops reaching locations at Innsbrook, Virginia Center Commons, and Henrico Government centers, creating over 15 new miles of public transition. Because the GRTC bus system is already in use, efforts to expand the current route is likely to cost the County less than establishing its own mass transit system. However, costs of new buses would likely be upwards of \$200,000, and the costs of new drivers would be about \$35,000 annually (Henrico County, 2019). The increased cost will be paid for by allowing an electric scooter and bike sharing company into the County. In Santa Monica, mobility startups are charged \$20,000 annually for the right to operate in the city and an additional \$130 for each device on the street (Marshall, 2018). In Seattle, the companies pay the city \$50 per device on the street; the revenue generated is directed to administration of the mobility startups and the rest goes to building infrastructure like bike lanes (Marshall, 2018). The intention would be to increase mobility within the County, all while gaining revenue in order to subsidize the GRTC Pulse.

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EVALUATION OF ALTERNATIVE 3

COSTS



This policy alternative is likely to make Henrico bear a greater burden in terms of cost than the other alternatives because generating new bus routes requires additional personnel as well as additional buses. Henrico pays drivers an annual salary of about \$35,000 (Henrico County, 2020) and new buses would cost upwards of \$200,000. This alternative proposes two new buses and four new drivers to be added; costing Henrico a one-time payment of about \$200,000 for the new buses and \$140,000 annually for the new bus drivers. This policy alternative also includes another method of increasing modes of transportation that could serve as additional revenue to offset some of the costs of establishing new GRTC bus routes. Henrico could bring in an electric scooter and bike company to operate in the County. As mentioned above, companies pay cities about \$20,000 annually for the rights to allow their bikes and scooters in certain locations of the city. Additionally, the companies pay cities per device that is on the street.

If Henrico allowed for a company to operate in the County, they could generate revenue of at least \$32,000 annually if 250 devices were on the street and the company paid \$50 per device; revenue could increase to \$45,000 annually if the company paid \$100 per device on the street. Because this alternative has the option to generate some revenue in order to pay for the added costs of new bus routes, it is assessed to have moderate costs borne by the County and will receive a score of 3.5.

POLITICAL FEASIBILITY



This alternative involves consideration from both Henrico County and the City of Richmond, as the GRTC bus system serves both areas and other methods of transportation are likely to affect both areas as well. Henrico County Government, the Board of Supervisors, and residents of Henrico County are likely to be in favor of expansion of public transit because it may generate more tourism in the region and allows greater access to County businesses, parks, restaurants, etc. There is likely to be some push back from residents who wish to limit even more traffic in already congested areas, and it could take some time to work out the planning, routes, and subsidies for the GRTC Pulse with the City of Richmond. However, because this policy alternative also has the potential to generate revenue for the County through the establishment of a bike and scooter company and through additional GRTC bus routes, a wide variety of stakeholders such as residents, business owners, and government officials are likely to be in support of this policy alternative. Overall, it seems that with current projections of new bike paths and lanes in Henrico County and previous expansion of the GRTC bus system in the County, there is likely to be a large amount of support for this policy alternative and therefore would likely be supported by the Board of Supervisors. The increasing support for public transportation options in the County results in this alternative being assessed as a score of 4 for political feasibility.

EFFECTIVENESS



Increasing options for public transportation in Henrico in order to give individuals of low- and middle-income greater access to developed areas is likely to be moderately efficient in terms of increasing equitability of access. If utilized by residents, increased access points to public transportation could increase access to healthcare providers, grocery stores, and schools. The key is utilization. There are already some public transportation options in place that have access points to developed areas from undeveloped areas, but there are still noticeable inequities in access between the West End and East End of the County. However, investing in and increasing available options for modes of transportation is effective in breaking down barriers to accessing services.

As mentioned previously, research shows that residents in communities identify high transportation costs and limited transportation options as two of the largest barriers to accessing opportunities such as food, jobs, health care, and education (Arena & Salerno, 2020). Therefore, creating methods of transportation that are cost effective for Henrico County residents is likely to increase access for some individuals who find that their largest barrier to access currently is transportation. This policy alternative will receive a score of 3.5 in terms of effectiveness in increasing access to economically developed areas for residents of Henrico regardless of their geographic location.

OUTCOMES MATRIX

The outcomes matrix, on the next page, depicts policy alternatives and evaluative criteria as they were assessed above. The scores given in the outcomes matrix reflect the analysis of the policy alternatives on an ordinal scale from 1 to 5. For costs, a score of 1 reflects a high cost burden to the County and as the scale increases, a score of 5 reflects a low cost burden on the County. For political feasibility, a score of 1 reflects a policy alternative that is infeasible, feasibility increases as the scale increases, a score of 5 reflects a completely feasible alternative in terms of likelihood the alternative would be supported by the political stakeholders. For effectiveness, a score of 1 reflects a policy alternative that is ineffective, effectiveness increases as the scale increases, a score of 5 reflects a completely effective alternative in terms of generating access to economic development in Henrico County. The individual scores were then multiplied by the weights of each alternative; costs were weighted at 30 percent, political feasibility was weighted at 30 percent, and effectiveness was weighted at 40 percent. The weights for each alternative depict the emphasis that Henrico County is giving each criterion. The totals were calculated and are shown below.

	OUTCOMES MATRIX			
	EVALUATIVE CRITERIA			
POLICY ALTERNATIVES	Costs 30%	Political Feasibility 30%	Effectiveness 40%	TOTAL
Status Quo	5	5	1	3.40
Implementing an Affordable Housing Mandate	4	2.5	2.5	2.95
Increasing Modes of Transportation	3.5	4	3.5	3.65

RECOMMENDATION

This policy analysis recommends that Henrico County implement policy alternative three: increasing modes of transportation. After careful analysis of all alternatives using the three criteria costs, political feasibility, and effectiveness, increasing modes of transportation was determined to be the alternative most suited for providing more equitable access to economically developed areas in Henrico County.

Policy alternative one, status quo, was the most beneficial to the County in terms of both costs and political feasibility, but overall was the least effective alternative in terms of creating equitable access regardless of residents' geographic location within the County.

Policy alternative two, implementing an affordable housing mandate, and policy alternative three, increasing modes of transportation, had similar scores for both costs and political feasibility, but policy alternative three was ranked higher in overall effectiveness in creating access to services that stem from economic development such as healthcare providers, job openings, nutritious food, and education. Although sticking to the status quo would have been less costly and more politically feasible for the County, it was important that the recommended alternative be as effective as possible. Because effectiveness was weighted heavier than the other two evaluative criteria, the similar scores for alternative two and three for the first two evaluative criteria meant that the deciding factor would be whichever alternative was the most effective. Even the high scores for alternative one for the first two evaluative criteria were not enough to carry the alternative to recommendation due to the low score in effectiveness. Overall, policy alternative three, increasing modes of transportation, was best supported after analysis of evaluative criteria against all policy alternatives.

Increasing modes of transportation in Henrico County is the alternative most likely to help breakdown barriers of access to economically developed areas for residents of Henrico. This alternative allows Henrico County to build upon the current transportation methods, further increasing mobility for residents to all parts of the County. Increasing mobility will result in increased benefits for all residents, specifically residents of low- and middle- income whose main barrier to access previously, was transportation.

IMPLEMENTATION

This policy alternative would increase modes of transportation throughout Henrico County in order to create greater access to economic development and the benefits that stem from economically developed areas. Henrico County would implement this policy alternative in two parts.

First, Henrico County would need to adopt a policy that allows for E-Scooter and Bicycle companies to purchase permits to bring their devices to the County. The Henrico County Department of Public Works Division of Transportation Development's goal is to work with external stakeholders in order to improve mobility and accessibility throughout Henrico (Transportation Development, 2021). Introducing plans and submitting a permit to Henrico County Government and the Board of Supervisors should be initiated in the Transportation Development Division.

Second, the Transportation Development Division, Department of Public Works, Henrico County Government, and the City of Richmond should work to expand routes of the GRTC Transit System. The recommendation serves to establish new routes and stops reaching locations at Innsbrook, Virginia Center Commons, and Henrico Government centers, creating over 15 new miles of public transition. In fiscal year 2018-2019 the Board of Supervisors in Henrico approved additional funding and improvements for the GRTC system, resulting in the largest improvements in the GRTC system in Henrico in the last 25 years (GRTC Transit System, 2018). Therefore, Henrico County should look to previous implementation strategies when moving forward with this policy recommendation.

Foreseeable issues regarding implementation include opposition by residents who fear increased congestion in already high-trafficked areas and potential safety hazards of e-scooters and bicycles. However, greater bus routes does not cause as increased congestion as individuals driving in their own cars would. Also, many localities in Virginia, such as Charlottesville and Richmond, already have presence of E-scooter and bicycle companies, therefore Henrico County can look to them for best practices for safety.

The relevant stakeholders that are involved in moving this recommendation forward are Henrico County Government, Henrico County Board of Supervisors (BOS), residents of Henrico County, and the City of Richmond. It is likely that a well-framed and positioned permit and organized mapping of E-scooter and bicycle companies as well as additional GRTC routes would likely be passed by the Board of Supervisors if the implementation, costs, enforcement, and safety standards have been considered.

CONCLUSION

Henrico County is tasked with building the strength of the local economy and participating in activities that reflect the need of the physical, social, and economic conditions of the County and its residents. As a local government entity, Henrico should seek to ensure that all residents, independent of geographic location within the county, reap the same benefits of economic development.

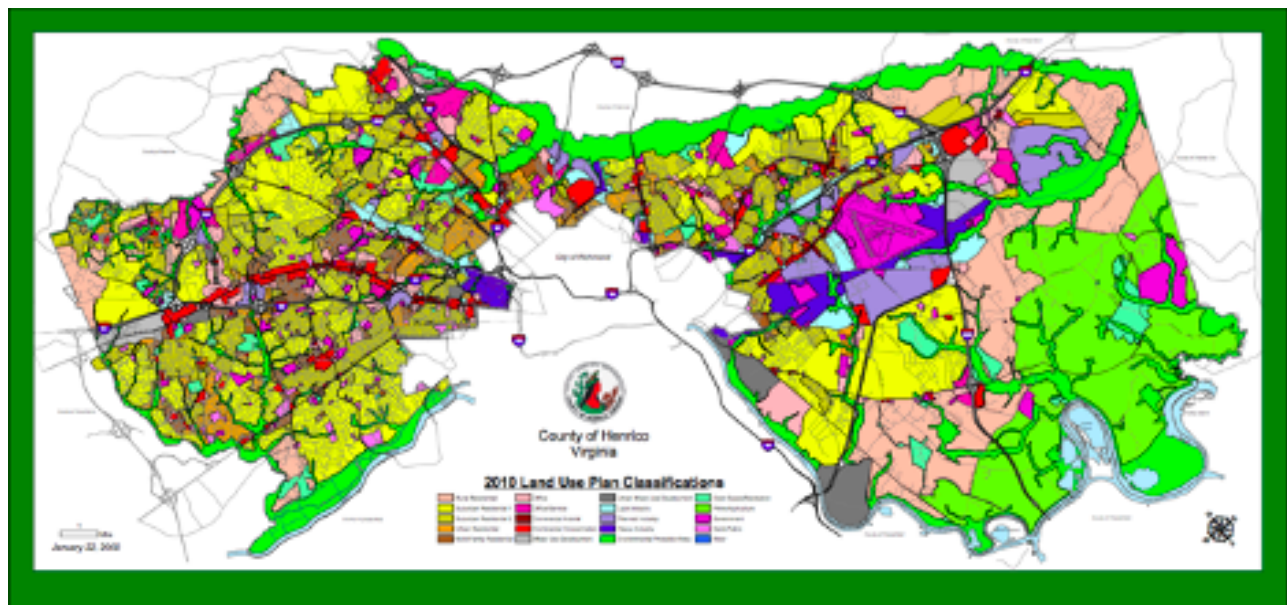
Equitable development is important because it draws on a range of approaches in order to create communities where residents of all income levels and races are able to benefit from their residency. The ability to access areas that have greater economic development increases access to necessities such as health care facilities, grocery stores, public transportation, education, safe housing, and job opportunities. Research conducted by the Urban Institute states that despite differences in geographic location, residents in communities identify high transportation costs and limited transportation options as two of the largest barriers to accessing opportunities such as food, jobs, health care, and education (Arena & Salerno, 2020).

After careful analysis of all alternatives using the three criterion costs, political feasibility, and effectiveness, increasing modes of transportation was determined to be the alternative most suited for providing more equitable access to economically developed areas in Henrico County. This recommendation has the potential to break down barriers of access and increase mobility of residents in Henrico, regardless of geographic location.

APPENDIX

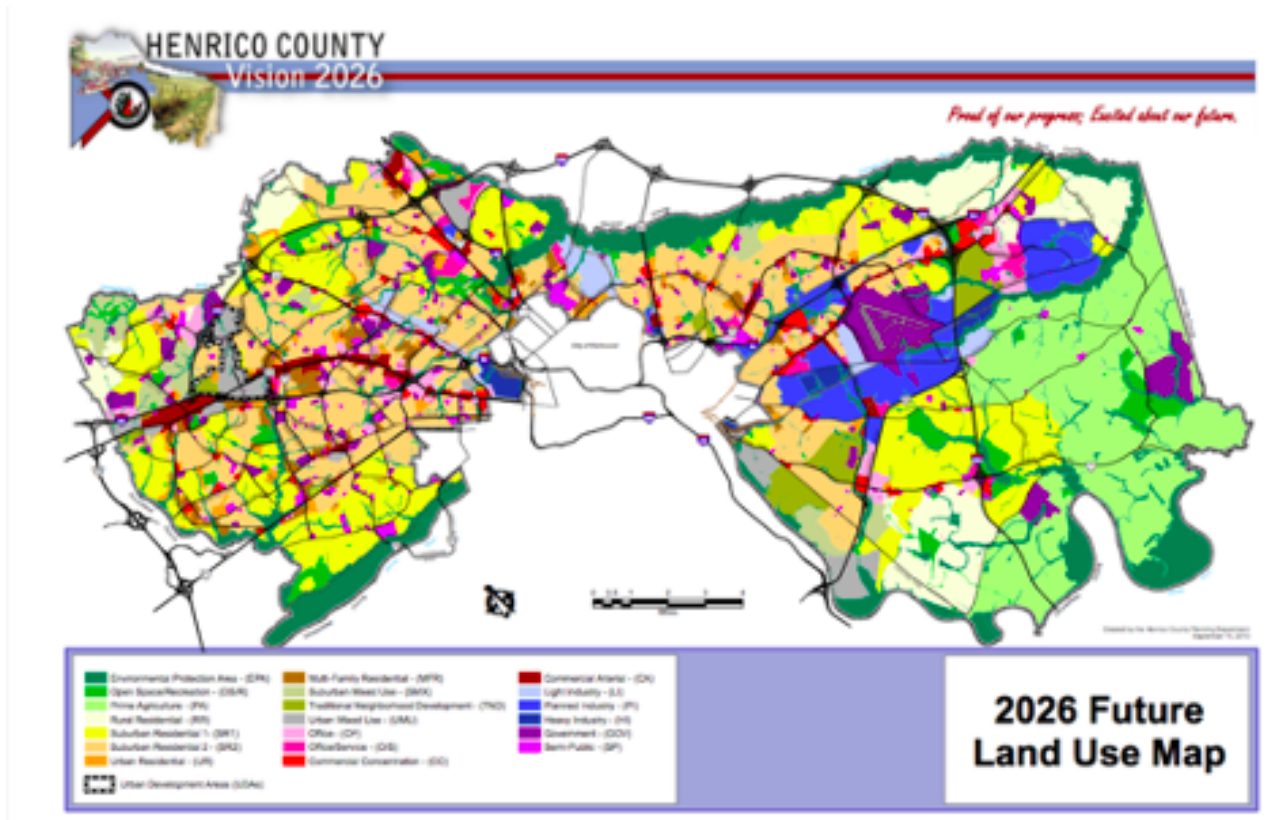
APPENDIX A

Below is a map of the projected land use of Henrico County in 2010; these projections were made in 1995. The yellow and orange areas depicted on the map represent suburban and urban residential; green represents prime agriculture and environmental protection area; light and dark pink represent office; red represents commercial concentration; and grey is urban and mixed use development.



APPENDIX B

Below is a map of the projected land use of Henrico County in 2026; these projections were made in 2009. The yellow and orange areas depicted on the map represent suburban and urban residential; green represents prime agriculture and environmental protection area; light and dark pink represent office; red represents commercial concentration; blue represents planned industry; and grey is urban and mixed use development.



REFERENCES

- Annual Consolidated Community Development Action Plan (Rep.). (2019). Department of Community Revitalization, from https://henrico.us/assets/HenricoActionPlan_2019-20.pdf
- Arena, O., & Salerno, C. (2020, February 18). Four ways to Address food insecurity Through transportation improvements. Retrieved April 05, 2021, from <https://www.urban.org/urban-wire/four-ways-address-food-insecurity-through-transportation-improvements>
- Centers for Disease Control and Prevention. (2021). Health equity considerations and racial and ethnic minority groups. Retrieved April 08, 2021, from <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>
- Environmental Protection Agency. (2021, January 13). Smart growth and equitable development. Retrieved April 05, 2021, from <https://www.epa.gov/smartgrowth/smart-growth-and-equitable-development#:~:text=Equitable%20development%20emphasizes%20that%20all,adequate%20infrastructure%2C%20and%20job%20opportunities>
- Fedorowicz, M. (2019, October 03). How stable, affordable housing can help tackle food insecurity. Retrieved April 05, 2021, from <https://housingmatters.urban.org/articles/how-stable-affordable-housing-can-help-tackle-food-insecurity>
- GRTC Transit System. (2018). GRTC Service Enhancements in Henrico County. Retrieved April 09, 2021, from <http://ridegrtc.com/grtc-service-enhancements-in-henrico-county#:~:text=Henrico%20is%20enhancing%20public%20transit,during%20the%20past%2025%20years>
- Hardy, B., Logan, T., & Parman, J. (2018). (rep.). The Historical Role of Race and Policy for Regional Inequality. The Hamilton Project.

Henrico County. (1995). 2010 Land Use Plan (for archival purposes only) - Henrico County, Virginia. Retrieved September 16, 2020, from <https://henrico.us/planning/2026-comprehensive-plan/2010-land-use-plan/>

Henrico County. (2009). Chapter 05 - Land Use - Henrico County, Virginia. Retrieved September 16, 2020, from <https://henrico.us/planning/2026-comprehensive-plan/2026plan-2026chp5/>

Henrico County. (2019). GRTC service expansion - Henrico County, Virginia. Retrieved March 18, 2021, from <https://henrico.us/grtc/>

Henrico County. (2020). Proposed Budget 2020-2021 - Henrico County, Virginia. Retrieved September 16, 2020, from <https://henrico.us/budget/proposed-budgets/>

Henrico County. (2020). Mission and Values - Henrico County, Virginia. Retrieved September 16, 2020, from <https://henrico.us/government/mission-and-values/>

Henrico County. (2021). Proposed Budget Fiscal Year 2021-2022 (Rep.), from <https://henrico.us/pdfs/finance/WebProposedFY2022/Proposed%20Budget%20FY22.pdf>

Henrico County Economic Development Authority. (2021). Retrieved April 06, 2021, from <https://www.zoomprospector.com/edos/henrico-county-economic-development-authority/382>

Henrico County, VA. Data USA. (2018). <https://datausa.io/profile/geo/henrico-county-va#housing>.

Istrate, E. (2014). Strong Economies, Resilient Counties: The Role of Counties in Economic Development. Retrieved from https://www.naco.org/sites/default/files/documents/FINAL_web_Econ%20Dvlp.07.02.14.pdf

Lobao, L., & Kraybill, D. (2009). Poverty and Local Governments: Economic Development and Community Service Provision in an Era of Decentralization. *Growth & Change*, 40(3), 418–451. <https://doi.org/10.1111/j.1468-2257.2009.00489.x>

Marshall, A. (2018). Milking scooters for cash helps cities build for the future. Retrieved March 17, 2021, from <https://www.wired.com/story/scooters-cities-fees-mobility/>

Ratcliffe, C., Waxman, E., Lou, C., Hassani, H., & Tran, V. (2020). Disrupting Food Insecurity Steps Communities Can Take (Rep.). Urban Institute.

Rodríguez-Pose, A., von Berlepsch, V. Does Population Diversity Matter for Economic Development in the Very Long Term? Historic Migration, Diversity and County Wealth in the US. *Eur J Population* 35, 873–911 (2019). <https://doi.org/10.1007/s10680-018-9507-z>

Sommeiller, E. (2016). Income inequality in the U.S. by state, metropolitan area, and county. Retrieved October 19, 2020, from <https://www.epi.org/publication/income-inequality-in-the-us/>

Sommeiller, E., & Price, M. (2018). Interactive: The unequal states of america. Retrieved April 05, 2021, from <https://www.epi.org/multimedia/unequal-states-of-america/>

Stebbins, S. (2019, May 26). Wealth gap in the US: These 25 counties have the widest income gaps in the nation. Retrieved April 05, 2021, from <https://www.usatoday.com/story/money/2019/05/26/25-counties-with-the-widest-income-gaps/39505053/>

Transportation Research Board and National Research Council. 1999. Governance and Opportunity in Metropolitan America. Washington, DC: The National Academies Press. <https://doi.org/10.17226/6038>.

Transportation Development. (2021). Transportation development - Henrico County, Virginia. Retrieved April 09, 2021, from <https://henrico.us/works/transportation/>

U.S. Census Bureau (2018). American Community Survey 5-year estimates. Retrieved from Census Reporter Profile page for Three Chopt district, Henrico County, VA <http://censusreporter.org/profiles/06000US5108796079-three-chopt-district-henrico-county-va/>

U.S. Census Bureau (2018). American Community Survey 5-year estimates. Retrieved from Census Reporter Profile page for Varina district, Henrico County, VA <http://censusreporter.org/profiles/06000US5108796175-varina-district-henrico-county-va/>