

RICHMOND'S TRANSIT REVOLUTION: GRTC RIDERSHIP AND ACCESSIBILITY ANALYSIS



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Acknowledgement: The Greater Washington Partnership appreciates the thoughtful insights and strong commitment from the Capital Region's partners in leaning in to transform our transportation system. The Partnership would like to thank Jacob Johnson of WSP and Sarah Kline of SK Solutions for their research, counsel, and support of this case study.

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EXECUTIVE SUMMARY



Transit improvements have been successful in attracting riders and in providing greater access for the residents.

Ridership across the GRTC system increased 17 percent from July 2018–April 2019, compared to the same period the year before—**while transit ridership nationally declined by nearly two percent.**

The Richmond metro area in Virginia is on its way to becoming a national transit leader. After many years of trailing its peers in transit service, Richmond has soared to the front of the pack—turning around its declining ridership with new services to meet the mobility needs of its residents. Home to over a million people in the city and surrounding counties, Richmond has increased ridership on its transit system—a feat that few metro areas in the United States have been able to accomplish in recent years.

Like other metro areas, Richmond has faced a growing population, decentralization of jobs, and limited transportation options. However, the City of Richmond, adjacent Henrico County, Greater Richmond Transit Company (GRTC; the metro area's transit agency), and the Commonwealth of Virginia decided to take bold action. With support from a federal Transportation Investment Generating Economic Recovery (TIGER) grant, the Richmond metro area opened its first Bus Rapid Transit (BRT) line, launched a redesigned bus network in the city, and expanded bus service in Henrico County, all within a three-month period in 2018.

These were historic changes for Richmond's transit system intended to provide better access to jobs, education,

healthcare, and other services for the area's residents, including disadvantaged groups and low-income households. How well the new network achieves this goal not only has implications for Richmond's ability to create a dynamic, inclusive, and prosperous metro, but also provides important lessons for other metro areas working to provide modern mobility options for residents.

This case study analyzes Richmond's recent transit improvements through an examination of ridership, access to transit, including frequent transit, and access to jobs via transit, before and after the historic expansion of GRTC's system in 2018. Based on these metrics, the transit improvements have been successful in attracting riders and in providing greater access for the Richmond area residents. Ridership across the GRTC system increased 17 percent from July 2018–April 2019, compared to the same period the year before—while transit ridership nationally declined by nearly two percent. The analysis makes clear, however, that the benefits of these changes do not extend throughout the region. Though Richmond now has a head start compared to many of its peer metro areas, there is more work to do to advance an inclusive, comprehensive transportation system for the metro area.

KEY FINDINGS

1. The Richmond metro area's bold action on transit in 2018—the launch of the Pulse Bus Rapid Transit (BRT) system, the Great Richmond Reroute, and service expansion in Henrico County—has led to **significant improvements for the area's residents.**
2. **Ridership on the GRTC system increased 17 percent** from July 2018–April 2019, compared to the same period the year before. Ridership in January, February, March, and April 2019 were all at least 24 percent higher than the same months in 2018.
3. Before the 2018 changes, **no one** in the Richmond area lived near a frequent, all-day transit route with service every 15 minutes or fewer. Today, **nearly 40,000 households** in the metro area (12 percent), including 27,000 households in poverty (25 percent), **have access to frequent transit** that they did not have before. In the City of Richmond, nearly 50 percent of households in poverty now have access to frequent transit.
4. The 2018 changes **improved access to transit and jobs** in both Henrico County and the City of Richmond. Households in poverty in Henrico County now have access to 15 percent more transit service on weekday evenings and weekend days. The average City of Richmond resident can now access nearly 2,000 more jobs by transit within an hour.
5. Still, many parts of the metro area lack access to transit, particularly areas outside the City of Richmond. The metro area's **leaders should continue to build out the comprehensive transit network** called for in the Greater RVA Transit Vision Plan in order to ensure that all residents of the region have access to economic opportunity.

RICHMOND TRANSIT HISTORY



The history of transit in Richmond follows a familiar pattern. After the first successful electric streetcar in the United States began operating in Richmond in 1888, streetcars ran throughout the city during the first half of the 20th century. As gasoline-powered vehicles became prevalent, buses replaced streetcars; the last streetcars in Richmond ended service in 1949.¹ Private bus companies struggled to stay afloat as personal vehicles became more common, and in 1973, the City of Richmond established a public company—the Greater Richmond Transit Company (GRTC)—to keep buses running. Chesterfield County—Richmond’s neighboring jurisdiction to the south—purchased half of the shares of GRTC in 1989, while Henrico County—Richmond’s neighboring jurisdiction to the north—has declined to join, opting to pay by the route for the service it desires.²

From 1973 to 2018, transit in Richmond saw modest changes. Paratransit and welfare-to-work services launched, electronic fareboxes were added to the bus fleet, and various routes and stops were added or removed. As the first decade of the 21st century ended, Richmond’s transportation leaders considered more dramatic steps. The area’s population has been projected to grow by 42 percent between 2012 and 2040, with the largest gains in people and jobs not in the city itself,

where bus service is concentrated, but in adjacent Henrico and Chesterfield Counties where nearly 60 percent of the area’s jobs are located and transit service is limited.³ The total number of cars in the metro area has been projected to grow by nearly 50 percent by 2040, raising the specter of growing traffic congestion and delay.⁴

At the same time, a groundbreaking report by the Brookings Institution cast an unflattering light on the ability of the area’s residents to access jobs by transit. That 2011 study examined access to jobs via transit in the 100 largest metro areas across the United States. Richmond ranked 92 out of 100 regions when it came to providing access to jobs via transit.⁵ In the Richmond metro area, only one in four jobs could be reached within a 90-minute, one-way commute by transit; that figure fell to fewer than one in ten jobs if the commute time was reduced to 45 minutes.⁶ The transit system was not meeting the area’s needs, as evidenced by the fact that between 2010 and 2017, bus ridership declined by 20 percent.⁷

RECENT CHANGES



2018 was a year of unprecedented change for transit in the Richmond metro area.

In 2016, the “Greater RVA Transit Vision Plan” was approved. This new vision for the metro’s transit was developed with input from an advisory group that included representatives of state and local government agencies, large and small businesses, educational institutions, nonprofit organizations, the faith community, and other stakeholders.⁸ The plan outlines a comprehensive network of transit services ranging from bus rapid transit to local bus service, complemented by transit-supportive land uses. The Vision Plan seeks to move Richmond’s transit network away from its historic focus on a single downtown hub by adding a Bus Rapid Transit (BRT) line to serve as the spine of the new system, allowing for more direct travel through the metro’s core. Once fully built out, the plan will increase transit ridership by approximately 107 percent. With the Vision Plan and a broad network of stakeholder support, work began immediately to transform the existing system. As a result, 2018 was a year of unprecedented change for transit in the Richmond metro area.

On June 24, 2018, the area’s first BRT line opened. The Pulse BRT is a 7.6-mile route from Rocketts Landing in the City of Richmond to Willow Lawn in Henrico County. The Pulse features limited stops, off-board fare collection, traffic signal priority, low-floor boarding,

distinctive stations, and several miles of dedicated lanes, dramatically reducing travel time through the corridor. The Pulse runs every 10 minutes during peak hours and every 15 minutes during off-peak, from 5:00 a.m.–11:30 p.m. on weekdays and 6:00 a.m.–11:30 p.m. on weekends. Funding for the project came from a U.S. Department of Transportation TIGER grant, the Commonwealth of Virginia, the City of Richmond, and Henrico County.⁹

On the same day the Pulse began service, GRTC, the City of Richmond, and the Commonwealth of Virginia launched the Great Richmond Reroute—a comprehensive redesign of bus routes within the city. The Reroute was intended to help the bus system more efficiently serve riders’ needs by adding six new high-frequency routes and re-configuring other routes to deliver more reliable service. The new network uses national best practices such as re-spacing bus stops, consolidating routes to create greater frequency, adding more weeknight and weekend service, and simplifying schedules so that buses arrive every 15, 30, or 60 minutes.¹⁰ The redesign incorporates comments received at 14 public meetings as well as other outreach over a year-long period.



Bus improvements in 2018 were not limited to the City of Richmond. Henrico County made a historic investment in bus service when it approved funding to expand routes and operating hours within the county. The new service creates a direct bus connection between the east and west ends of the county, extends bus service to Short Pump, a major job center, and adds evening, late-night and weekend service to the airport and other job hubs in the eastern portion of the county. Launched on September 16, 2018, these changes represent the largest transit expansion in Henrico County in the past 25 years.¹¹

The new transit network has received the backing of some of Richmond's largest employers. In 2018, Virginia Commonwealth University (VCU), located along the Pulse line, purchased free transit passes on both the Pulse and its regular bus routes for VCU students, staff, and faculty, including VCU Health System employees, for \$1.2 million.¹² VCU Health and Bon Secours Richmond Health System are also providing \$425,000 annually to GRTC as sponsors of the Pulse, recognizing the importance of transit in connecting the community with healthcare.¹³

PURPOSE OF CASE STUDY

Richmond has witnessed a 17 percent ridership increase since July 2018.

After decades of incremental adjustments, the bold changes in 2018 have the potential to transform the role of transit in the Richmond metro area. Using ridership and census data, this case study compares the transit system for the Richmond Metropolitan Statistical Area, City of Richmond and Henrico County geographies that existed prior to June 24, 2018, with the transit system as it existed following September 16, 2018, when Henrico County's historic expansion took effect. The data in this case study show how the changes in the system have affected ridership, access to transit, and access to jobs and other key destinations in the Richmond metro area. This case study did not analyze changes to transit service in Chesterfield County—a jurisdiction with a large share of the metro's population and jobs and very limited fixed route transit offerings—because its transit service was not meaningfully changed over the 10-month period of this case study.

While there are many ways to assess the performance of a transit system, this case study focuses on four metrics: ridership, access to transit, access to frequent transit, and access to jobs via transit. These metrics all relate to accessibility, one of the key requirements for a transit system to be both equitable and successful. Comparing the transit system prior to June 24, 2018 and after September 16, 2018 reveals that the changes have successfully attracted more people to ride transit, and access to transit and access to jobs via transit increased under most conditions where service was expanded, though accessibility remains a challenge in some parts of the region.



RIDERSHIP

Unlike the transit systems of nearly all other metro areas of the country, Richmond's transit system has reversed declining ridership trends. From July 2018 through April 2019, GRTC witnessed a 17 percent increase in ridership systemwide compared to the same period the year before. This increase is even more remarkable considering that the system experienced a 9 percent ridership decline during the July-April period from 2017 to 2018.¹⁴ From October 2018 to April 2019, following Henrico County's expansion, monthly ridership exceeded not only the ridership totals for those months in fiscal year 2018, but also the higher ridership totals of fiscal year 2017.

Prior to the Pulse BRT launch, GRTC projected 24,500 weekly trips on the line. Every week since its launch in June, the Pulse has exceeded projections with an average weekly ridership of more than 36,850 trips, and a high of 43,791 trips taken the week of February 3, 2019.¹⁵

The historic expansion of service in Henrico County that took effect the week of September 16, 2018 boosted ridership for the entire system, including a 37 percent increase within Henrico. The lines that received expanded service within the County have witnessed a greater than 55 percent increase in ridership. One stand-out route is Line 19, which connects the terminus of the Pulse BRT at Willow Lawn with the employment hub of Short Pump. Ridership on that line increased by more than 200 percent following the expansion. Riders of Line 19 (as well as others on GRTC routes that connect to the Pulse) benefit from GRTC's bus network that enables them to efficiently connect between the Pulse BRT and the local bus using the same fare media, opening faster access to many destinations in both Richmond and Henrico County.

GRTC RIDERSHIP FOR JULY THROUGH APRIL IN 2017, 2018, AND 2019

MONTH	FISCAL YEAR 2017 ¹⁶	FISCAL YEAR 2018	FISCAL YEAR 2019	% CHANGE 2018-2019
July	733,963	641,316	641,421	0%
August	711,460	675,734	718,693	6%
September	689,778	642,455	666,351	4%
October	699,294	647,438	784,569	21%
November	661,684	596,306	708,693	19%
December	622,117	562,301	652,369	16%
January	620,235	559,548	706,619	26%
February	623,225	556,125	688,236	24%
March	657,111	591,696	736,536	24%
April	615,225	574,313	772,979	35%
Total July-April	6,634,092	6,047,232	7,076,466	17%

SYSTEMWIDE, PULSE, AND HENRICO GRTC RIDERSHIP LEVELS FOR JULY 2018 THROUGH APRIL 2019

	AVERAGE WEEKLY RIDERSHIP 7-1-2018 THROUGH 9-15-2018	AVERAGE WEEKLY RIDERSHIP 9-16-2018 THROUGH 4-21-2019	PERCENT CHANGE
Systemwide	151,196	165,808	10%
Pulse BRT	31,112	38,832	25%
All Henrico County routes	16,202	22,218	37%
Henrico County routes with expanded service*	10,755	16,771	56%

*These include lines 18, 19, 7A, 7B, and 91



ACCESS TO TRANSIT

Two key determinants of the attractiveness of transit as a trip option is whether potential riders have access to a transit stop (coverage), and how useful the service is (access to frequent transit). Coverage and frequency goals are both important, but, if not appropriately balanced, limit the ability to achieve both desired outcomes.

Measuring access to transit assesses the coverage of a region's transit service. Put another way, it measures how many residents can access a transit stop with service, regardless of the number of buses that may run per hour.

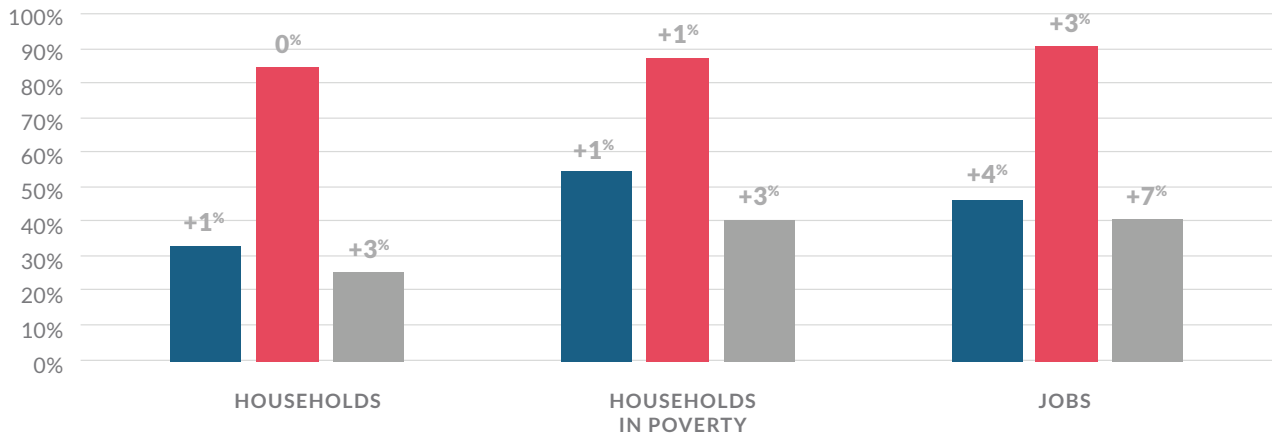
The access to transit analysis examined the number of households, households in poverty and jobs within a 10-minute walk—typically a half-mile for an average citizen—of bus stops prior to June 2018 and after the Pulse, the Reroute, and Henrico's expansion took effect in September. Because not all bus routes run in the evenings and weekends, this analysis also examines access to bus stops with operating service during weekday evenings and midday on Sundays to determine how access to

transit changes at the peak period when all stops are in use compared to the smaller footprint of service provided at non-peak periods. The analysis found Henrico County witnessed the greatest rate of increase in access to bus stops for both households and job sites, especially during weekday evenings and midday weekends. Jobs within a 10-minute walk of a bus stop in the county jumped by 15 percent during the weekday evening and 19 percent during middays on Sundays. Access to transit stops increased in the City of Richmond on the weekend as well, but households saw a reduction in access to bus service by 10 percent in the weekday evenings (see Appendix A for full results). The City of Richmond, as part of its fiscal year 2020 budget, moved to address the drop in access to evening transit service by including nearly \$800,000 that will extend operating hours to 11:30 p.m. for three bus routes serving the Southside and establish a new bus route that connects downtown to a new East End grocery store that serves an area formerly without ready access to healthy foods.

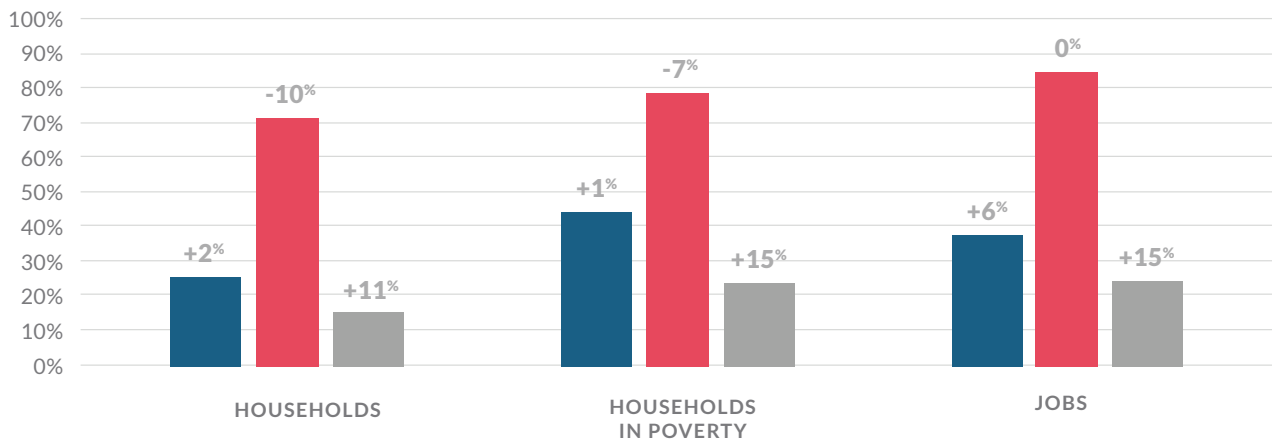
ACCESS TO TRANSIT STOPS WITHIN A 10-MINUTE WALK FROM HOUSEHOLDS AND JOBS

POST-SEPTEMBER 2018 EXPANSION FOR ALL TRANSIT STOPS, WEEKDAY EVENING, AND MIDDAY SUNDAY

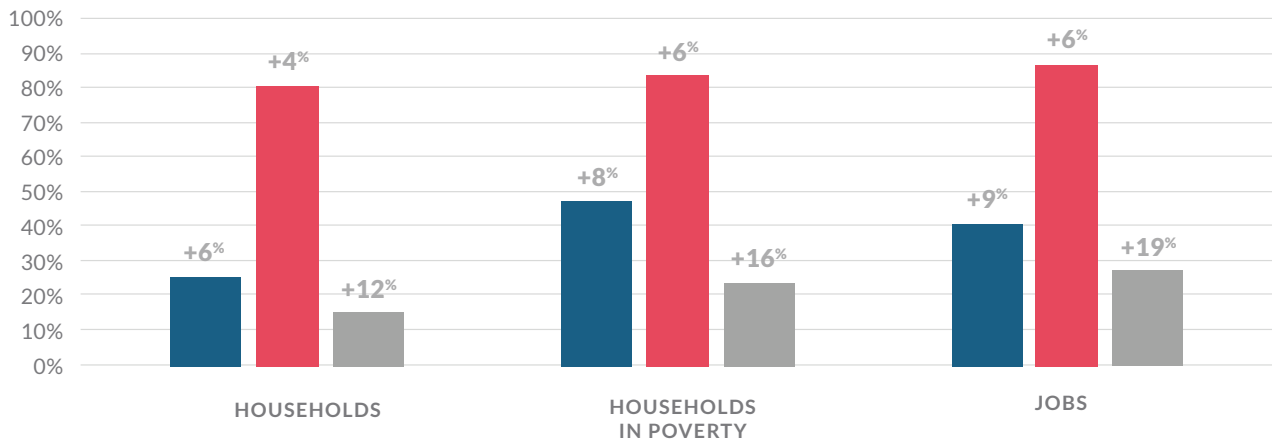
ALL STOPS



WEEKDAY EVENING

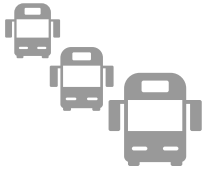


SUNDAY MIDDAY



■ RICHMOND MSA ■ CITY OF RICHMOND ■ HENRICO COUNTY

Percent change represents the difference between Pre-June 2018 and Post-September 2018.



ACCESS TO FREQUENT TRANSIT

A key determinant in the level of transit use (ridership) is whether potential riders have access to frequent, dependable, all-day transit service. Many metro areas measure this by assessing the number of households within a 10-minute walk to a transit stop with service every 10 or 15 minutes, for at least 12 hours a day. This level of service is attractive to riders because they know that a bus will come within a short window of time regardless of when they arrive at the transit stop, so there is no need to memorize complicated bus schedules. Moreover, having frequent service throughout the day makes transit a viable trip option for thousands of people in the metro who are not 9-to-5 commuters, but instead must get to school, work, healthcare facilities, or other destinations outside of peak commuting hours.

The access to frequent transit analysis examined the number of households within a 10-minute walk of bus stops with 15 minutes all-day (6:00 a.m.–7:00 p.m.) or better transit service during the workday, weekday evenings and midday on weekends. Prior to June, no one in the Richmond area had access to frequent, all-day transit service. The opening of the Pulse and the reroute created five lines with frequent, all-day service.¹⁷ As a result, 12 percent of the area's households and 25 percent of the households in poverty now have access to frequent

transit service during the workday (this was unchanged by the expanded service in Henrico County in September).

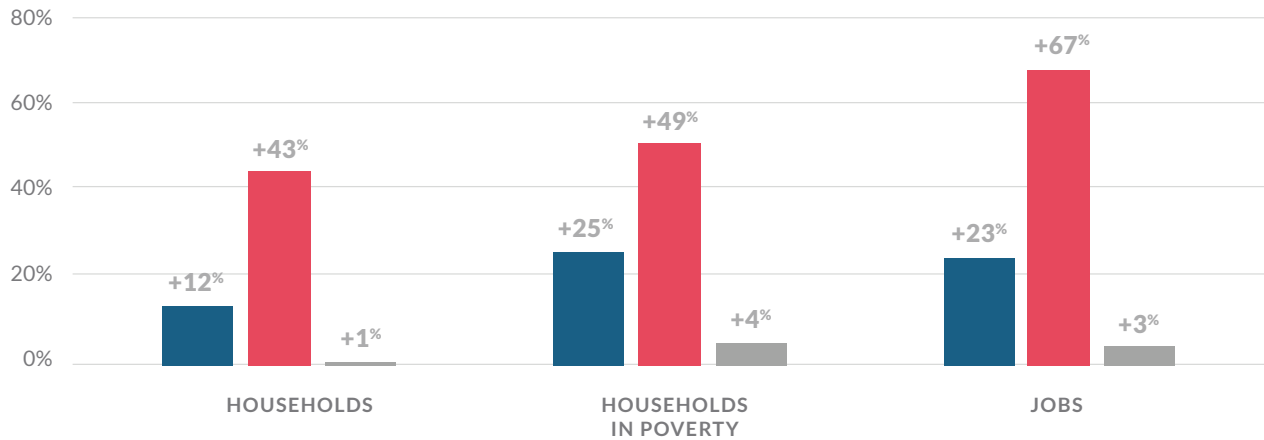
Most of the frequent service exists inside the City of Richmond, with a small portion of frequent service in Henrico County. As a result, the majority of the metro area's households with access to frequent transit are within the city, where more than 40 percent of the households and nearly 50 percent of the households in poverty have access to frequent transit service. However, only the Pulse provides frequent service during weekday evenings or midday on Sunday, which reduces access to frequent transit for households in the city during these periods by 3/4 and jobs by nearly 1/2 compared to weekdays.

Expanding the network of frequent transit service was a major goal of the Greater RVA Transit Vision Plan. While the Pulse and Reroute are an important step in representing the first frequent services in the Richmond area, much of the Greater RVA Transit Vision Plan's frequent transit network remains unfinished. A build-out of that system would bring the benefits of frequent transit to many more residents, particularly those outside the city of Richmond.

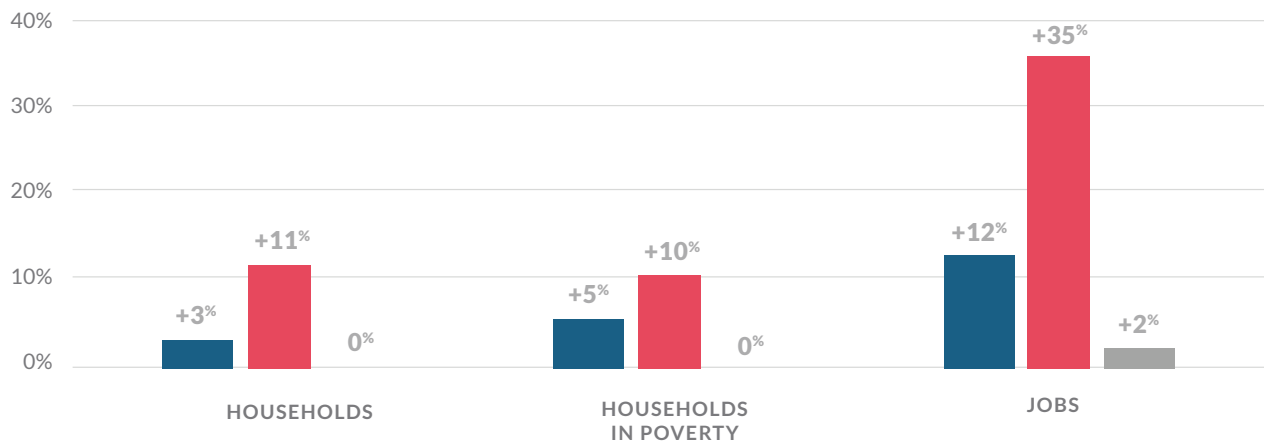
ACCESS TO FREQUENT TRANSIT STOPS WITHIN A 10-MINUTE WALK FROM HOUSEHOLDS AND JOBS

POST-SEPTEMBER 2018 EXPANSION FOR ALL TRANSIT STOPS, WEEKDAY EVENING, AND MIDDAY SUNDAY

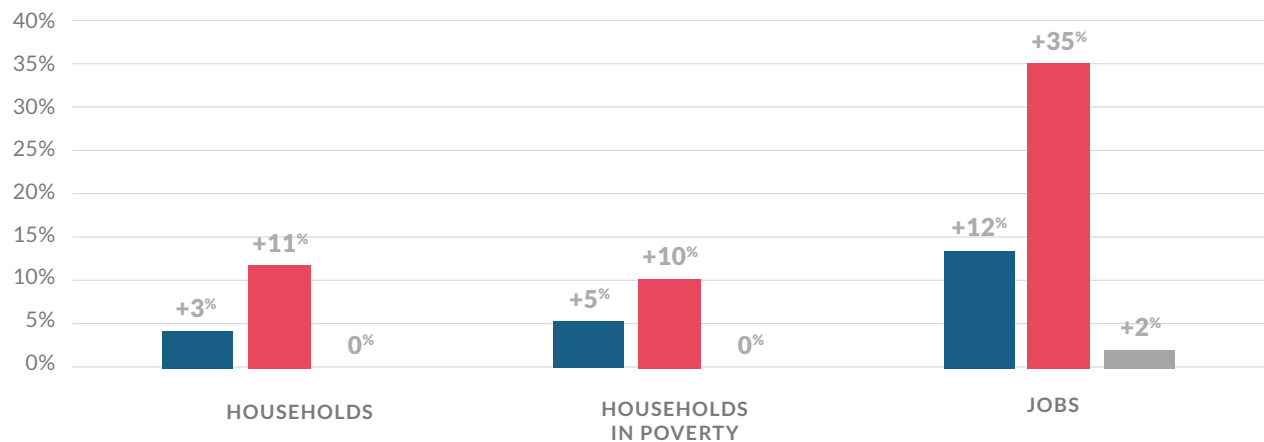
WEEKDAY DAY



WEEKDAY EVENING



SUNDAY MIDDAY



■ RICHMOND MSA
 ■ CITY OF RICHMOND
 ■ HENRICO COUNTY

Percent change represents the difference between Pre-June 2018 and Post-September 2018.



ACCESS TO JOBS VIA TRANSIT

GRTC's expansion of service frequencies and areas served increased the ability of Richmond area residents to access jobs via the bus. The access to jobs analysis modeled the change in access to jobs pre-June 2018 and post-September 2018 for the average household during morning peak periods using two one-way commute times—30 minutes and 60 minutes—to understand the impact of the service changes. Those commute times analyze both access to a transit stop at the origin and destination, including time spent walking, and time spent waiting for the bus (frequencies), riding the bus, and making transfers.

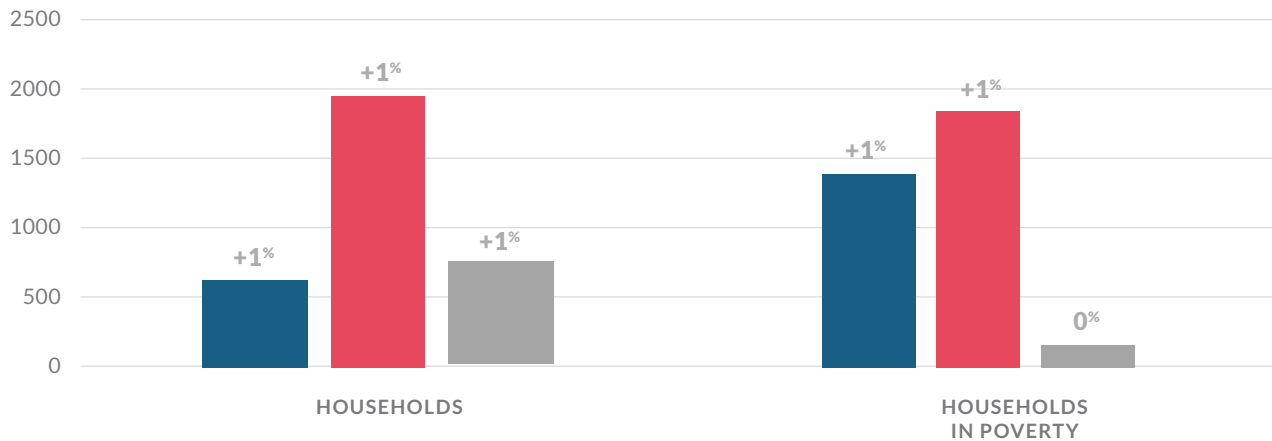
As a result of the changes to GRTC's transit system in 2018, the average resident in the City of Richmond can access nearly 2,000 more jobs and the average Henrico County resident can access almost 800 more jobs, in

a 60-minute time frame during morning peak periods. Households in poverty have also benefited from transit expansion. For households in poverty located in the City of Richmond, the average resident can access over 1,800 more jobs via transit within 60 minutes. In Henrico County, access to jobs for households in poverty has increased by nearly 200 jobs in a 60-minute timeframe.

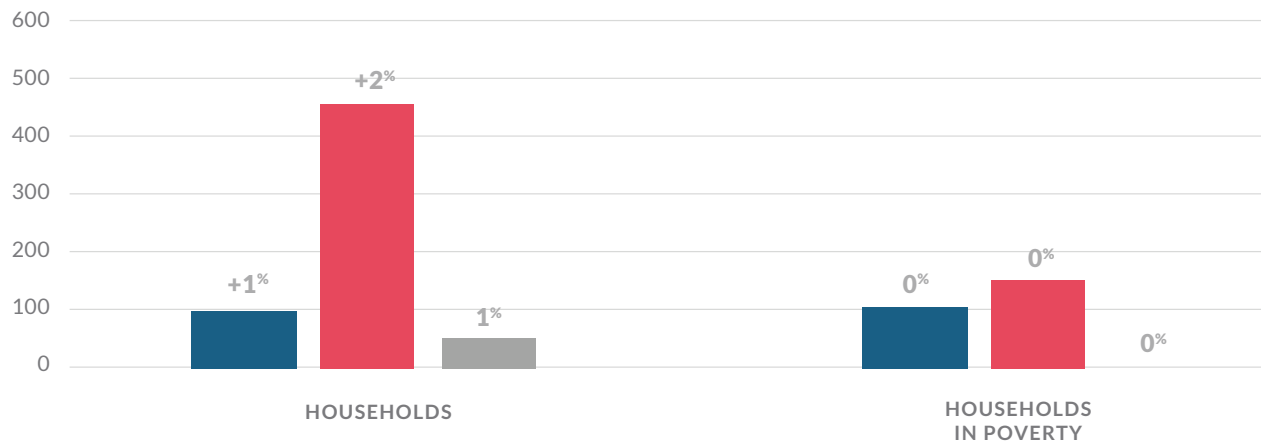
When looking at a 30-minute transit commute—which is similar to the average commute time by car—fewer jobs are accessible, but the overall trends remain the same. The 2018 changes led to modest improvements across the metro area, with the biggest gains in the City of Richmond. This analysis did not model midday, evening or weekends.

AVERAGE JOBS ACCESSIBLE BY TRANSIT POST-SEPTEMBER 2018 EXPANSION - 60 AND 30 MINUTES

60 MINUTE



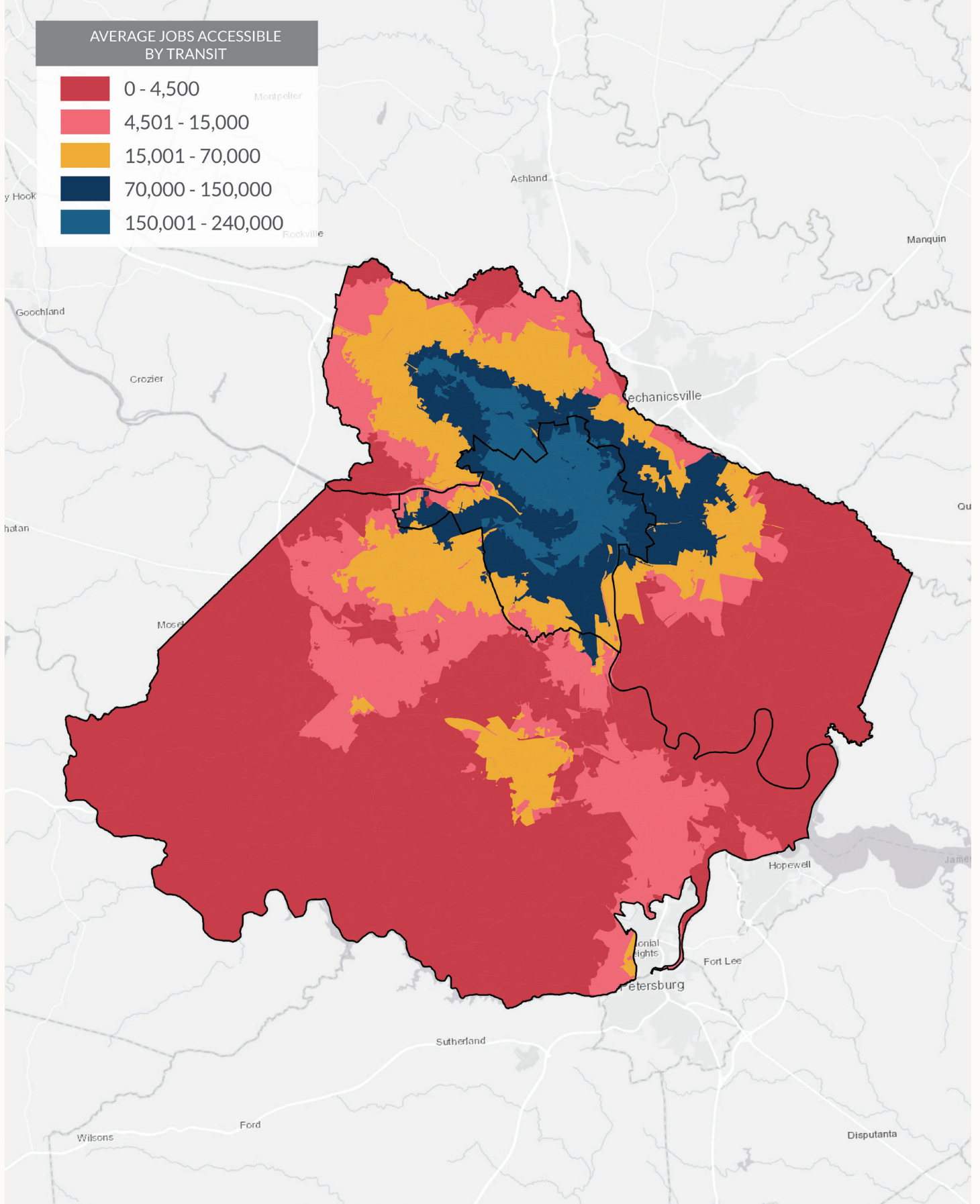
30 MINUTE



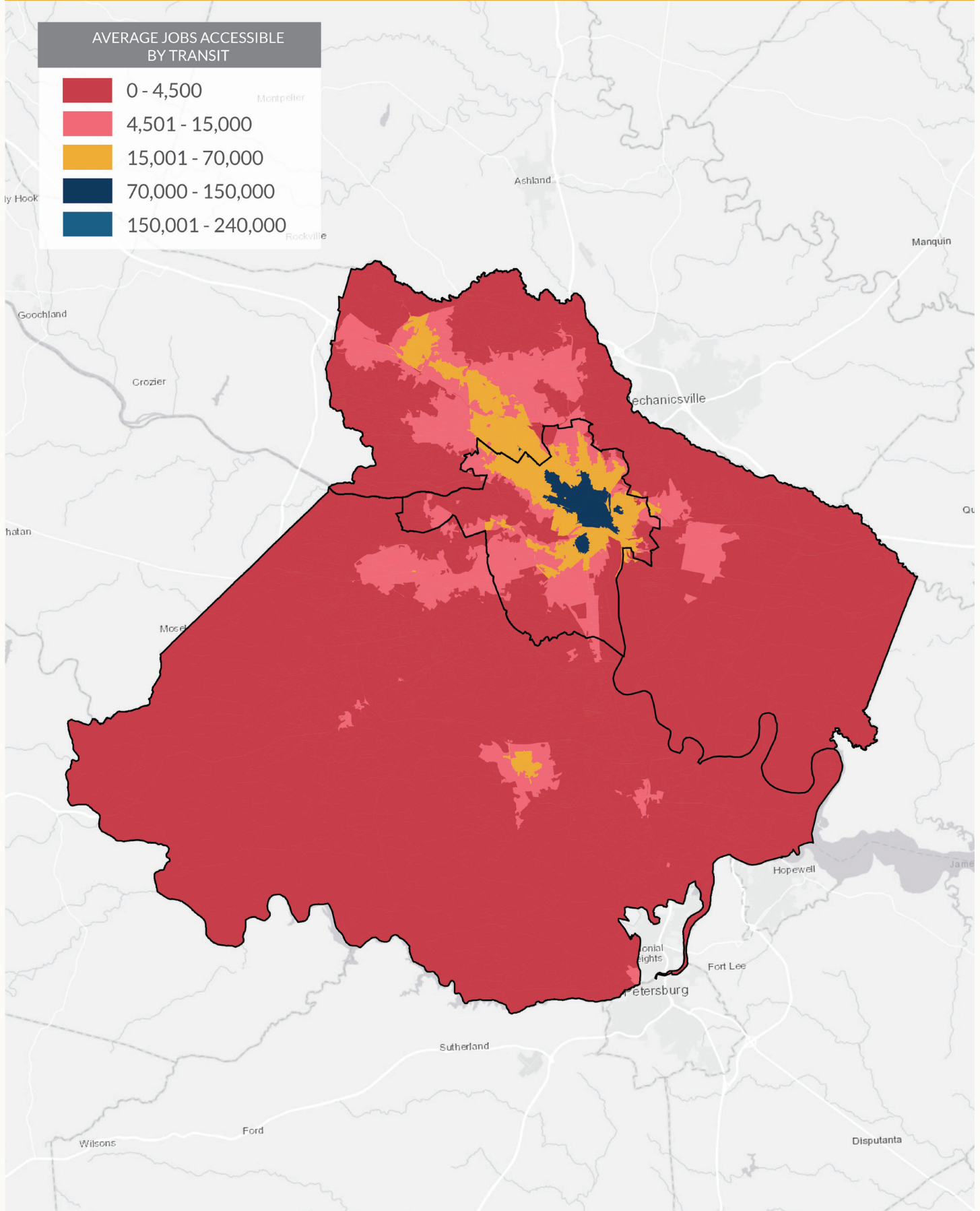
■ RICHMOND MSA
 ■ CITY OF RICHMOND
 ■ HENRICO COUNTY

Percent change represents the difference between Pre-June 2018 and Post-September 2018.

AVERAGE JOBS ACCESSIBLE BY TRANSIT POST-EXPANSION - 60 MINUTES



AVERAGE JOBS ACCESSIBLE BY TRANSIT POST-EXPANSION - 30 MINUTES



CONCLUSION

After many years of trailing its peers in terms of transit service, Richmond has soared to the front of the pack—turning around its declining ridership with new services to meet the mobility needs of its residents.

For the Richmond metro area, 2018 and the first months of 2019 was a period of transformation for transit.

After many years of trailing its peers in transit service, Richmond has soared to the front of the pack—turning around its declining ridership with new mobility services to better meet the needs of its residents. As outlined in the the Greater RVA Transit Vision Plan, the metro area has an action plan to enhance existing service and expand access to the many economic, educational, and cultural opportunities Richmond has to offer. The Greater Washington Partnership congratulates the City of Richmond, Henrico County, GRTC, and the Commonwealth of Virginia for their bold vision and decisive execution in 2018, and is ready to work with the area's leadership to build from recent momentum to further implement the Greater RVA Transit Vision Plan.



Access to Transit and Access to Frequent Transit

The authors used an instance of Open Trip Planner, and calculated a 10-minute walking distance buffer using an August 2017 street network from OpenStreetMap as the walking network for each transit stop that met the following criteria: (1) all stops; (2) stops with service at 8:00 p.m. on weekday evenings; (3) stops with service at midday on Sundays; (4) stops with frequent service (15-minute headways or less) at midday during the weekday; (5) stops with frequent service at 8:00 p.m. on weekday evenings; and stops with frequent service at midday on Sundays. The buffers for each stop were merged with those that met similar criteria to calculate the area that could access the entire transit network. Intersecting the merged buffers against the 2012-2016 American Community Survey (ACS) and 2014 LEHD allowed the authors to calculate the people, households in poverty and jobs that can access transit stops that meet specific criteria within a 10-minute walk. For the MSA, the authors used all Census Block Groups in the three major jurisdictions, which includes nearly all service provided by GRTC (City of Richmond, Henrico County, and Chesterfield County).

Access to Jobs

The authors used the Citilabs' Sugar Access Transportation Network model to measure the average number of jobs accessible to residents of the Richmond Metropolitan Statistical Area by transit within a 30-minute and 60-minute timeframe during the AM peak travel period defined as 6:00 a.m. to 9:00 a.m. on weekdays. The modeled MSA includes all Census Block Groups in the three major jurisdictions, which includes nearly all service provided by GRTC (City of Richmond, Henrico County, and Chesterfield County). The data sources for this analysis consist of 2012-2016 American Community Survey (ACS) and 2014 LEHD Origin-Destination Employment Statistics (LODES) data and travel times for the transit network are based upon GTFS data from GRTC. The transit multi-modal network travel times consist of the following:

1. Walk to Transit Travel Time: Time it takes to walk from origin zone centroid to the transit stop of the best route as defined in the route enumeration process.
2. Transit Wait Time: Calculated relative to transit line's headway with a specified maximum wait time.
3. Transit Run Time: Run time as defined by transit line's attribute between boarding transit stop and alighting transit stop.
4. Transfer Wait Time: Calculated relative to transit line's headway with a specified maximum transfer time.
5. Walk to Destination Travel Time: Time it takes to disembark and walk from transit stop to the destination zone centroid.

APPENDIX B: ACCESS TO TRANSIT ANALYSIS

This analysis examined the number of households, households in poverty and jobs within a 10-minute walk of bus stops prior to June 2018 and after the Pulse, the Reroute, and Henrico's expansion took effect in September 2018 for all bus stops, bus stops with service during weekday evenings (8:00 p.m.), and midday Sunday (12:00 p.m.).

ACCESS TO TRANSIT STOPS WITHIN A 10-MINUTE WALK FROM HOUSEHOLDS AND JOBS PRE- AND POST-EXPANSION FOR ALL TRANSIT STOPS, WEEKDAY EVENING, AND MIDDAY SUNDAY

		ALL STOPS			WEEKDAY EVENING			SUNDAY MIDDAY		
		Post-Sept Total	Post-Sept Percent of Total	Change Pre-June to Post- Sept	Post-Sept Total	Post-Sept Percent of Total	Change Pre-June to Post- Sept	Post-Sept Total	Post-Sept Percent of Total	Change Pre-June to Post- Sept
Richmond MSA	Households	110,603	33%	1%	85,159	26%	2%	92,831	28%	6%
	Households in poverty	60,097	54%	1%	49,681	45%	1%	52,585	48%	8%
	Jobs	226,012	47%	4%	185,775	38%	6%	193,091	40%	9%
City of Richmond	Households	75,931	85%	0%	64,037	72%	-10%	71,169	80%	4%
	Households in Poverty	45,869	87%	1%	41,361	79%	-7%	44,191	84%	6%
	Jobs	143,024	90%	3%	134,854	85%	0%	136,950	87%	6%
Henrico County	Households	32,450	26%	3%	20,077	16%	11%	20,534	16%	12%
	Households in Poverty	13,598	40%	3%	7,959	24%	15%	7,964	24%	16%
	Jobs	77,804	40%	7%	48,022	25%	15%	57,273	28%	19%

APPENDIX C: ACCESS TO FREQUENT TRANSIT

This analysis examined the number of households, households in poverty and jobs within a 10-minute walk of bus stops prior to June 2018 and after the Pulse, the Reroute, and Henrico's expansion took effect in September 2018 for all bus stops, bus stops with service during weekday evenings (8:00 p.m.), and midday Sunday (12:00 p.m.).

ACCESS TO FREQUENT TRANSIT STOPS WITHIN A 10-MINUTE WALK FROM HOUSEHOLDS AND JOBS PRE- AND POST-EXPANSION FOR ALL TRANSIT STOPS, WEEKDAY EVENING, AND MIDDAY SUNDAY

		ALL STOPS			WEEKDAY EVENING			SUNDAY MIDDAY		
		Post-Sept Total	Post-Sept Percent of Total	Change Pre-June to Post- Sept	Post-Sept Total	Post-Sept Percent of Total	Change Pre-June to Post- Sept	Post-Sept Total	Post-Sept Percent of Total	Change Pre- June to Post- Sept
Richmond MSA	Households	39,967	12%	12%	9,724	3%	3%	9,724	3%	3%
	Households in poverty	27,095	25%	25%	5,162	5%	5%	5,162	5%	5%
	Jobs	111,288	23%	23%	58,693	12%	12%	58,693	12%	12%
City of Richmond	Households	38,284	43%	43%	9,383	11%	11%	9,383	11%	11%
	Households in Poverty	25,928	49%	49%	5,064	10%	10%	5,064	10%	10%
	Jobs	105,285	67%	67%	54,966	35%	35%	54,966	35%	35%
Henrico County	Households	1,683	1%	1%	340	0%	0%	340	0%	0%
	Households in Poverty	1,167	4%	4%	99	0%	0%	99	0%	0%
	Jobs	6,003	3%	3%	3,727	2%	2%	3,727	2%	2%

APPENDIX D: ACCESS TO JOBS VIA TRANSIT ANALYSIS

This analysis examined the average number of jobs accessible during the morning peak period for households and households in poverty via transit prior to June 2018 and after the Pulse, the Reroute, and Henrico's expansion took effect in September 2018 using two one-way commute times—30 minutes and 60 minutes. Those commute times analyze both access to a transit stop at the origin and destination, including time spent walking, and time spent waiting for the bus (frequencies), riding the bus, and making transfers.

AVERAGE JOBS ACCESSIBLE BY TRANSIT
PRE- AND POST-EXPANSION - 60-MINUTE WINDOW

		Pre-June	Post-Sept Total	Percent of Total Jobs	Difference in Jobs Accessible	Percent change in Jobs Accessible
Richmond MSA	Households	41,758	42,342	7%	584	1%
	Households in poverty	140,812	142,263	23%	1,452	1%
City of Richmond	Households	141,617	143,596	23%	1,979	1%
	Households in poverty	164,613	166,439	27%	1,826	1%
Henrico County	Households	56,552	57,338	9%	785	1%
	Households in poverty	130,644	130,809	21%	165	0%

(continued)

APPENDIX D: ACCESS TO JOBS VIA TRANSIT ANALYSIS (CONT'D)

AVERAGE JOBS ACCESSIBLE BY TRANSIT PRE- AND POST-EXPANSION - 30-MINUTE WINDOW

		Pre-June	Post-Sept Total	Percent of Total Jobs	Difference in Jobs Accessible	Percent change in Jobs Accessible
Richmond MSA	Households	7,528	7,620	1%	92	1%
	Households in poverty	43,797	43,905	7%	108	0%
City of Richmond	Households	31,602	32,088	5%	486	2%
	Households in poverty	54,925	55,062	9%	137	0%
Henrico County	Households	5,639	5,676	1%	38	1%
	Households in poverty	2,209	2,209	0%	-	0%

ENDNOTES

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14. GRTC press release, January 16, 2019, available at: <http://ridegrtc.com/news-initiatives/press-releases/grtc-reports-11-ridership-increase-in-first-two-quarters-of-fiscal-year-201>.
15. "Ridership Reports." GRTC. <http://ridegrtc.com/statistics-reports/ridership-reports>.
16. GRTC's fiscal years run from July 1 – June 30.
17. Pulse, 5, and trunk lines for 1A/1B/1C, 2A/2B/2C, and 3A/3B/3C

ABOUT



The Greater Washington Partnership is a first-of-its-kind civic alliance of CEOs in the region, drawing from the leading employers and entrepreneurs committed to making the Capital Region—from Baltimore to Richmond—one of the world's best places to live, work and build a business.

