I-81/I-64 Inter-Regional Public Transportation Feasibility Study

Final Report

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Prepared for

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

Harrisonburg Rockingham Metropolitan Planning Organization

Staunton Augusta Waynesboro Metropolitan Planning Organization

Under the direction of:

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Chapter 1
Public Transit Need and Estimated Demand

INTRODUCTION

The need to evaluate the feasibility of implementing public transportation service in the Interstate 81 and 64 corridors, connecting the Cities of Harrisonburg, Staunton, Waynesboro, and Charlottesville, and the Counties of Rockingham, Augusta, and Albemarle, has been identified through a variety of transportation and transit studies as well as by localities and major employers within these regions. The Virginia Intercity Bus Plan, completed in 2013, included these corridors as part of the recommended network. The need for transit services through these corridors was most recently identified in the 2015 Transit Development Plan (TDP) prepared for the Central Shenandoah Planning District Commission (CSPDC).

With support from DRPT and consultant assistance, the three metropolitan planning organizations (MPOs) in the region (Charlottesville/ Albemarle MPO; Harrisonburg - Rockingham MPO; Staunton – Augusta - Waynesboro MPO) have undertaken a full feasibility and implementation study of the potential for regional public transit services. This first chapter prepared for the study documents the need for public transportation in the corridor, using a variety of approaches, and provides an estimate of the demand for service. These data are used to develop the service and organizational alternatives that are presented in Chapter 2. Chapter 3 provides the recommended service plan.

Study Oversight and Guidance

The CSPDC provides staffing for both the Harrisonburg-Rockingham and Staunton-Augusta-Waynesboro MPOs. As such, the CSPDC has taken the lead in the oversight of development of the feasibility study, with guidance from a steering committee comprised of regional stakeholders. The steering committee is comprised of members from each jurisdiction in the corridor, including the two major anchor institutions (James Madison University (JMU) in Harrisonburg and the University of Virginia (UVA) in Charlottesville), and the public transportation providers in the corridor (BRITE bus, Charlottesville Area Transit (CAT), Harrisonburg Department of Public Transportation (HDPT), and JAUNT). A list of members of the steering committee is provided as Appendix A.

One of the first tasks for the study was to meet with the steering committee and discuss the concept of public transportation in the corridor, including soliciting opinions regarding the transportation challenges, needs, and opportunities for service that may exist. The consultant team also solicited advice concerning survey methods so that the commuter survey could take

place prior to the end of the spring semester for JMU and UVA. The first steering committee meeting was held on February 25, 2016.

The first section of the chapter documents the stakeholder discussion, and is supplemented by outreach to additional stakeholders who were either not serving on the committee or were unable to attend the first meeting.

TRANSPORTATION CHALLENGES, NEEDS AND OPPORTUNITIES

Steering Committee Discussion

Steering committee members from several stakeholder institutions/jurisdictions discussed the following transportation challenges, needs, and opportunities related to the I-81/I-64 corridor. The committee discussion regarding the need for public transportation in the corridor is summarized below.

James Madison University/ City of Harrisonburg

- Employee Transportation Link to Staunton/Waynesboro/Charlottesville - There are faculty and staff members who commute from each of these cities and the surrounding areas to JMU. For some employees, particularly those who work on the housekeeping staff, the cost of public transportation needs to be relatively low. There are no current vanpools that the staff knows of.

- JMU Link to Airport- The representative from JMU indicated there is a need for students to get to an airport- Dulles or perhaps Charlottesville.

- The Harrisonburg Department of Public Transportation (HDPT) fields a lot of questions from the public concerning the availability of public transportation in the corridor.

- Parking on the JMU campus is an issue for some students. JMU is building a new convocation center and it will have a parking deck. The new center may increase the demand for public transportation in the corridor.

Waynesboro

- There are a significant number of people who commute from Waynesboro to Charlottesville. There has been interest in developing a commuter connection for many years. A public transportation option between Waynesboro and Charlottesville could serve as an economic development tool.

- There is a busy park and ride in Waynesboro where people meet to carpool.

JAUNT- Charlottesville Albemarle MPO- Charlottesville Area Transit

- JAUNT operates some commuter routes into Charlottesville from other areas. They have had requests for service from the Central Shenandoah Valley area.

- The Charlottesville/Albemarle MPO is interested in transit options in the corridor, particularly as a way to assist with traffic congestion on I-64. There is a need to increase capacity on I-64.

- CAT sees the need for transit service across Afton Mountain. It is a significant travel barrier for some drivers.

University of Virginia

- UVA currently pays a fee in lieu of fares for students, faculty, and staff to ride CAT. This is about 16% of CAT's ridership. About 30% of UVA employees live within a five minute walk of a CAT bus stop.

- UVA has not been successful in developing vanpools. There is one known vanpool that operates from the Richmond area.

- UVA will subsidize the cost of transit for employees.

- Parking at UVA facilities- There are 16,000 spaces among all the facilities; however, there can be scarcities at some locations. About 3,000 people currently park remotely and ride a shuttle to campus.

- There are about 1,300 employees (including both the university and the hospital) that live in the Shenandoah Valley.

- Concerns expressed by faculty and staff members are:
    - Will the bus stop be near my final destination, or will I need to use a shuttle? The campus is large and potential riders will want to know if the proposed service will have a pick-up location near their destinations.
    - Mid-day mobility – What if I need to go out at lunch time?

Stakeholder Outreach

Outreach was conducted via email and telephone to several additional stakeholders in the region. These stakeholders were asked the following questions:

1. Have (residents/clients/students/employees) expressed a need for a public transportation service through this corridor?

2. If yes, for what trip purposes have people expressed this need- a) commute to work or school; b) connect to intercity travel (bus, rail, air); c) medical d) leisure/other?

3. If yes, are there specific origins/destinations and/or service parameters that have been expressed (days, times, quality, price)?

4. As an employer, has _____ had difficulty attracting (faculty, staff, and employees) due to transportation issues?

5. Are there any sensitivities that you are aware of that we should know about? Such as taking workers/students/shoppers out of the region to work/attend class/shop elsewhere?

Augusta County

The Augusta County Deputy County Administrator was able to ask these questions of the Augusta County Board of Supervisors and reported the following responses:

- The Board has not heard a great outcry for this service.
- There are inquiries related to getting to UVA Medical Center for doctor appointments.
- There is some interest in getting to employment.
- One Board member noted that years ago DuPont (which was a major employer in Waynesboro, now Invista) had their own bus to pick up employees.

Augusta Health (Director of Patient Experience input)

- Patients have expressed the desire for public transportation in the region. This population of patients has no family or friends to rely on for transportation to meet their healthcare demands. Some patients receive healthcare from multiple locations. Also, senior citizens in the region feel more comfortable as passengers, rather than as drivers. This segment of the population includes both patients and volunteers.
- Although Augusta Health offers many healthcare services for the community, there are specialty needs that neighboring healthcare facilities offer, which Augusta Health does not. Public transportation could offer a broader network of healthcare choices for the community, as well as improving the health of the community due to increased access

to healthcare. Patients have missed physician appointments due to limited transportation options, which can cascade into a healthcare crisis.

- In terms of pricing, patients have indicated that they would pay for transportation, but have not discussed a specific threshold. Patients have discussed the challenges of taxi cab expenses within the region, as well as the limited availability of taxi cab services.

- Typical business hours would experience the highest demand from patients, with needs to go to pharmacies, physician offices, and healthcare centers.

- With regard to employment transportation, Augusta Health indicated there have been situations when an employee has limited financial resources and experiences an event that prohibits them from coming to work (e.g., car break down, no family/friends to provide a ride). The need for reliable transportation is imperative for this group of individuals, as they need to continue to work to improve their financial stability. Expanded public transportation could offer a more extensive applicant pool in the ancillary services of Augusta Health.

Mary Baldwin College – Murphy-Deming College of Health Sciences

- There are approximately 200-250 students on campus depending on the semester. Most live in the general vicinity (Augusta County); however some commute from Charlottesville or Harrisonburg (minority of students).

- Students have inquired about public transportation on occasion.

- Student schedules are varied and they often return home after class for a break before returning for labs or other classes. Having a car facilitates this break.

- Students are assigned clinical rotations requiring use of their own vehicles because of varying schedules.

- Some students carpool to school and might be open to public transportation for their daily commute if feasible (morning and evenings). More likely, having dependable transportation to intercity travel (to CHO or rail for example) would be welcomed, not only for current students/faculty/staff when traveling, but also for students visiting from outside the area.

Valley Associates for Independent Living

- The most important public transportation need for people with disabilities in the region is to travel to medical appointments at UVA Medical Center in Charlottesville.

- There are some people with disabilities who travel between Waynesboro and Charlottesville for work, most of whom carpool.

- If a service were to be implemented, it is important that it connect to Greyhound, Amtrak, and CAT. It is also important that it be accessible for people with disabilities and has relatively low fares.

- This service is needed, but there may not be enough of a critical mass of riders to sustain it.

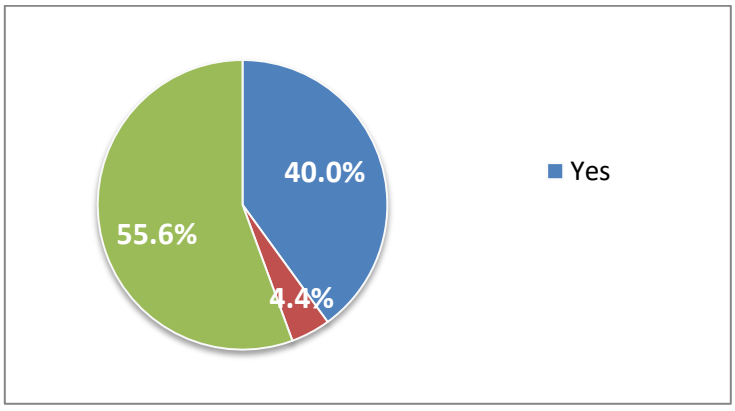
COMMUTER SURVEY

In April 2016, 609 commuter surveys were collected to help measure the feasibility of implementing public transportation in the I-81/I-64 corridor. The 35-question survey was collected online using Survey Monkey. Notice of the survey availability was publicized by the CSPDC through a press release, with a link available on the CSPDC website. Links to the survey were also sent out by UVA and JMU. In addition, post cards with a Quick Response Code linking to the online survey were placed on the windshields of cars parked at the park and ride lots throughout the corridor.

The focus of the survey was to ask commuters specific questions about their work trips, and potential timing, fare rates, and whether or not they would be likely to use a public transportation service in the corridor and under what circumstances. A copy of the commuter survey is provided in Appendix B.

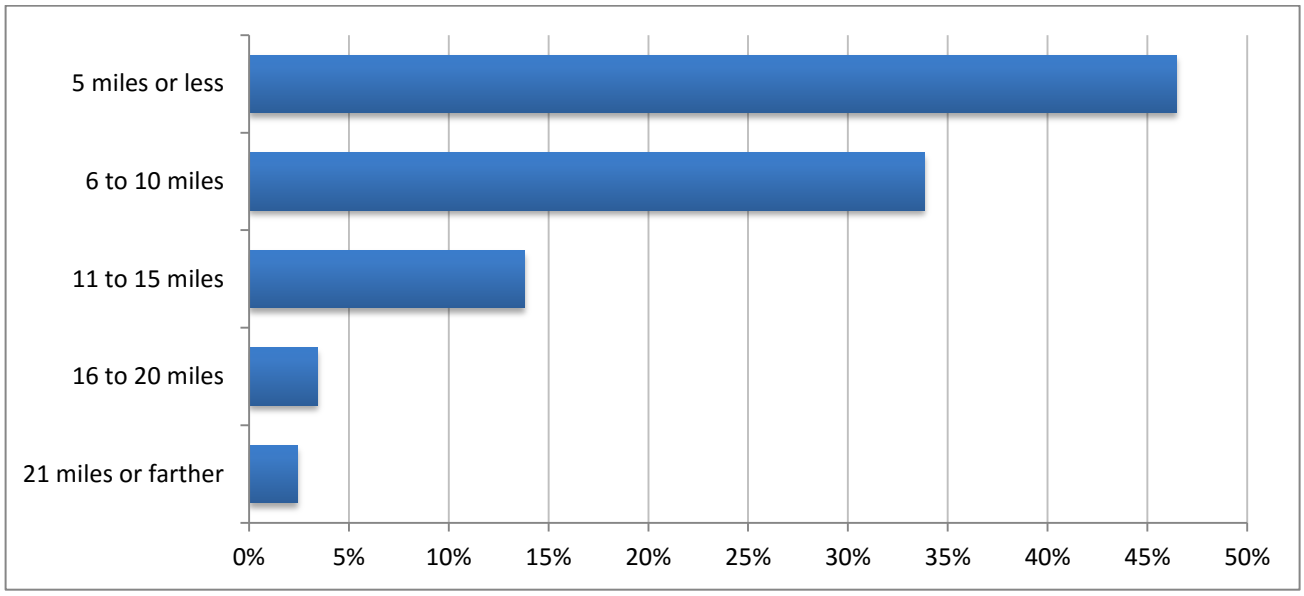
The majority of survey participants, 96.2%, reported that they think there is a need to offer commuter/inter-regional bus service in the I-81/I-64 corridor. As shown in Figure 1-1, 40% of participants reported that they *would* use the bus service and 56% answered that they *might* use the service. Only 4% answered that they *would not* use a commuter/inter-regional bus service in the I-81/I-64 corridor.

Figure 1-1: Would You Use Bus Service in the Corridor?



When asked how far they would be willing to travel from their home to reach a bus stop, 46% of respondents indicated they would be willing to travel five miles or less from their home to reach a bus stop. Thirty-four percent indicated they would travel six to ten miles and 14% indicated that they would travel eleven to fifteen miles to reach a commuter/inter-regional bus service in the I-81/I-64 corridor. Figure 1-2 provides a summary of the distance survey participants are willing to travel to reach a bus stop for a commuter/inter-regional bus service.

Figure 1-2: How far would you be willing to travel from your home prior to reaching a bus stop?



Origins and Destinations

Survey participants were asked to indicate the location from where they typically begin their trip, the location of their destination, and the purpose of their trip.

Trip Origins

As indicated in Table 1-1, the largest number of survey respondents reported that they begin their trips in Harrisonburg (29%), followed by Staunton (25%), Waynesboro (9%), and Stuart's Draft (6%).

Table 1-1: Top Trip Origins

Trip Origin	Number of Responses	Percent of Total
Harrisonburg	176	29%
Staunton	152	25%
Waynesboro	53	9%
Stuarts Draft	38	6%
Fishersville	20	3%
Charlottesville	18	3%
Verona	16	3%
Weyers Cave	15	2%
Bridgewater	12	2%
Crozet	10	2%

Trip Destinations

As seen in Table 1-2, destinations within Charlottesville dominated participant's responses with five out of the top six destinations. The UVA Medical Center was the top destination (19%) followed by James Madison University (15%) in Harrisonburg. Rounding out the top six destinations were UVA (14%), downtown Charlottesville (5%), Charlottesville Airport (3%), and Charlottesville Amtrak Station (3%). UVA, UVA Medical Center, downtown Charlottesville, and the Amtrak Station combined were the final destination of 41% of survey participants.

Table 1-2: Top Trip Destinations

Destination	Number of Responses	Percent of Total
University of Virginia Medical Center (Charlottesville)	119	19%
James Madison University (Harrisonburg)	92	15%
University of Virginia (Charlottesville)	88	14%
Downtown Charlottesville Area	30	5%
Charlottesville Albemarle Airport	21	3%
Charlottesville Amtrak Station	17	3%

Table 1-3 provides primary trip purposes as reported by survey respondents. More than half of the respondents listed work as the primary purpose of their trip (63%). Eleven percent indicated they were running errands and a combined total of 8% reported that their trip through the corridor was for a rail, air, or long distance bus connection.

Table 1-3: Primary Purpose of Travel through the Corridor

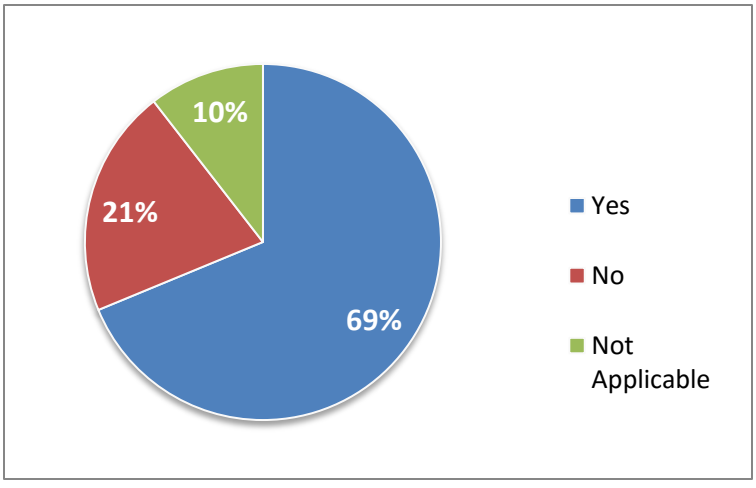
Purpose	Number of Responses	Percent of Total
Work	393	63%
Errands	67	11%
Medical	36	6%
School/Classes	34	5%
Connection – Rail Travel	22	4%
Connection – Air Travel	26	4%
Connection – Bus Travel	2	0%
Other	40	6%

Travel Characteristics

The survey asked participants about their current method of traveling the I-81/I-64 corridor with questions about mode of travel, parking and employer transportation subsidies. Most participants (81%) indicated they *drove alone* when they traveled the I-81/I-64 corridor. Only 8% of survey participants indicated they generally did not have a car available for use. The second most frequently used mode of transportation was *carpooling* at 14% and then *other* at 5%. Only three survey participants (0.5%) answered that they take a bus when traveling the I-81/I-64 corridor.

When asked about parking at their destinations, respondents indicated that parking was affordable and mostly available. The availability of parking at destinations seemed to be adequate, as 69% (391 responses) indicated they can usually find a convenient parking spot. Twenty one percent (118 participants) reported they usually cannot find a convenient parking spot, and 10% (60 participants) reported that the question was not applicable to them. The availability of parking as reported in the survey is illustrated in Figure 1-3.

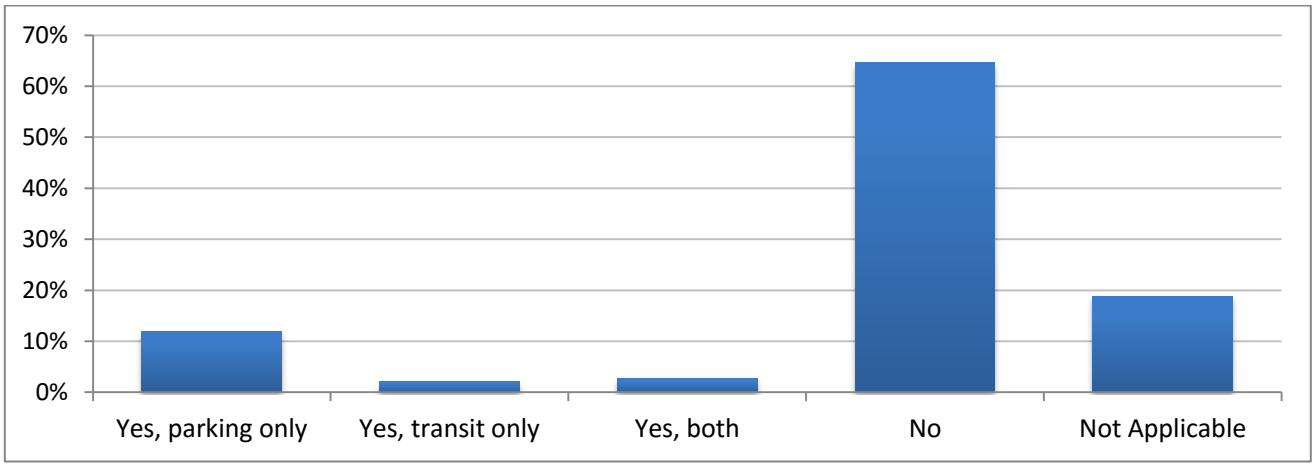
Figure 1-3: Can you usually find a convenient parking spot?



More than half of survey participants, 56% (343 participants), indicated that they paid for parking when driving their car to work or school. The reported average cost to park was $532 a year with a range of $20 to $2,000 a year.

As shown graphically in Figure 1-4, when asked if their employer subsidized the cost of either parking at work or taking transit to work, 65% indicated they were not offered either benefit. Nineteen percent indicated the question was not applicable to them. Twelve percent indicated they received subsidized parking, 3% indicated they were offered both parking and transit subsidies, and 2% indicated they were offered transit subsidies only.

Figure 1-4: Employer Subsidies for Parking or Transit

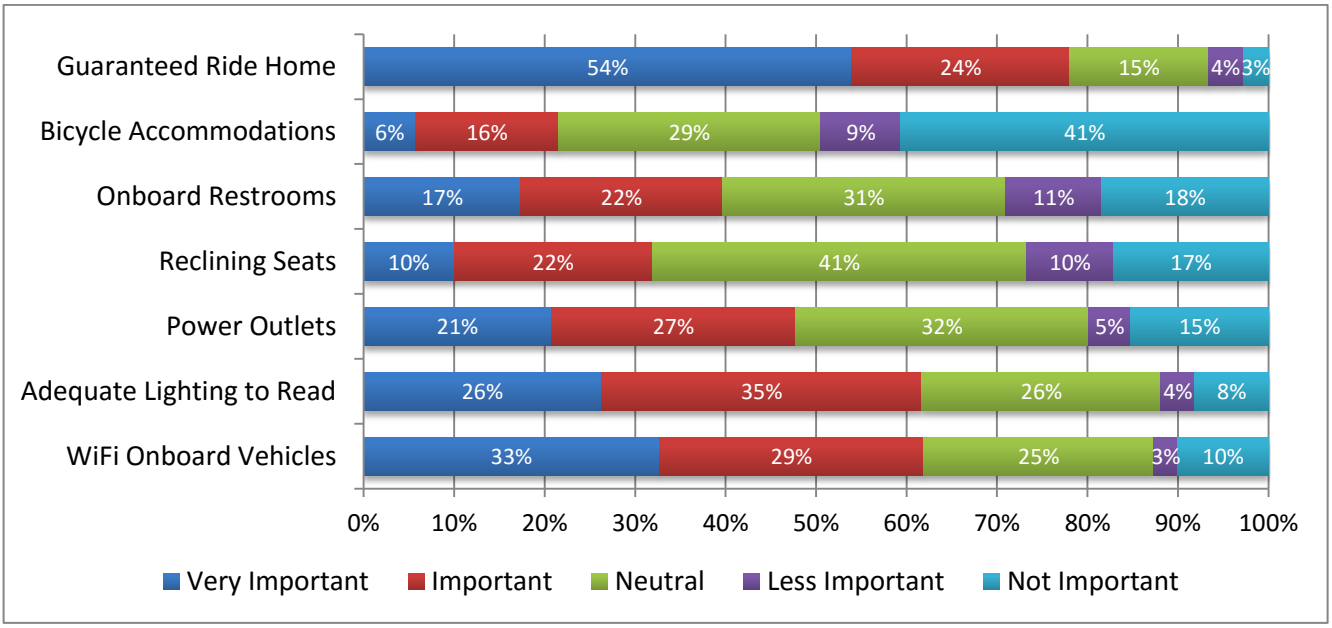


Potential Amenities, Fares, and Schedules

Passenger and Commuter Services

When asked about passenger amenities/commuter services, survey participants indicated the availability of a guaranteed ride home was the most important feature of this proposed service. As indicated in Figure 1-5, 54% of participants selected a guaranteed ride home as the most important amenity and only 3% indicated this was the least important amenity for them. Wi-Fi onboard the vehicles also rated highly followed by adequate lighting and power outlets.

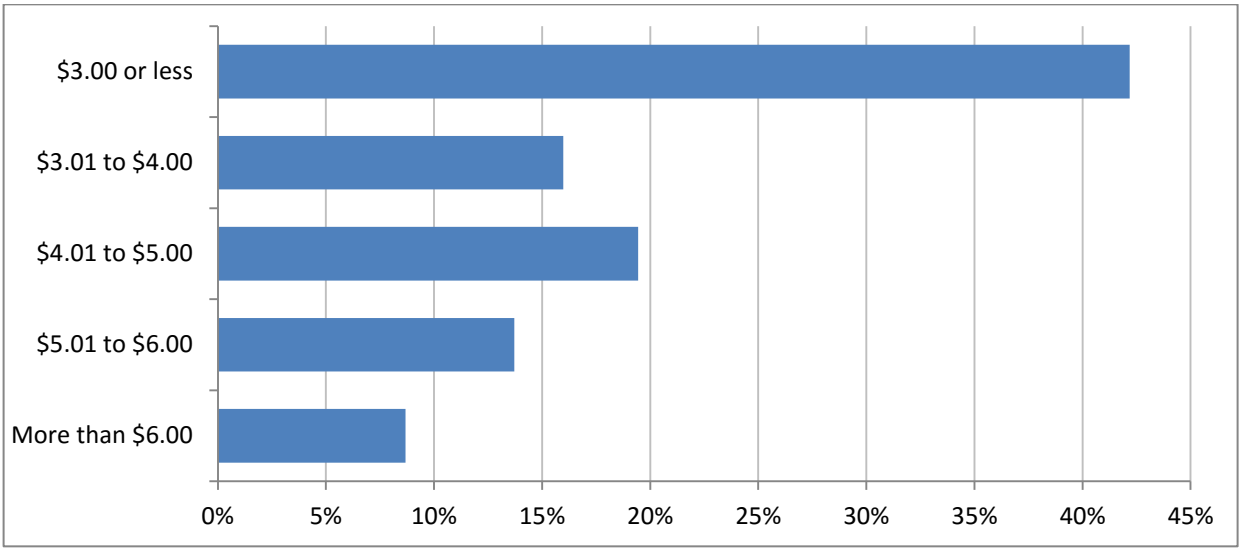
Figure 1-5: Desired Passenger Amenities



Fares

Respondents were asked what fare they would be willing to pay for a commuter or regional bus within the Harrisonburg, Staunton, and Charlottesville corridor. Figure 1-6 shows that 42% of respondents indicated they would be willing to pay $3 or less, 16% would be willing to pay between $3.01 and $4, and 19% would be willing to pay between $4.01 and $5 for one-way travel between Harrisonburg and Charlottesville.

Figure 1-6: What fare would you be willing to pay to travel via regional bus between Harrisonburg and Charlottesville?



Scheduling

There were several survey questions that asked participants about the timing of their trips through the I-81/I-64 corridor. These questions included a mix of questions about frequency of travel, time they left for their trip, time they stay at their destination, and connections to other modes of transportation. The open-ended comments indicated that scheduling was a high priority for potential riders. There were 208 responses; scheduling was mentioned 48 times, more than any other topic.

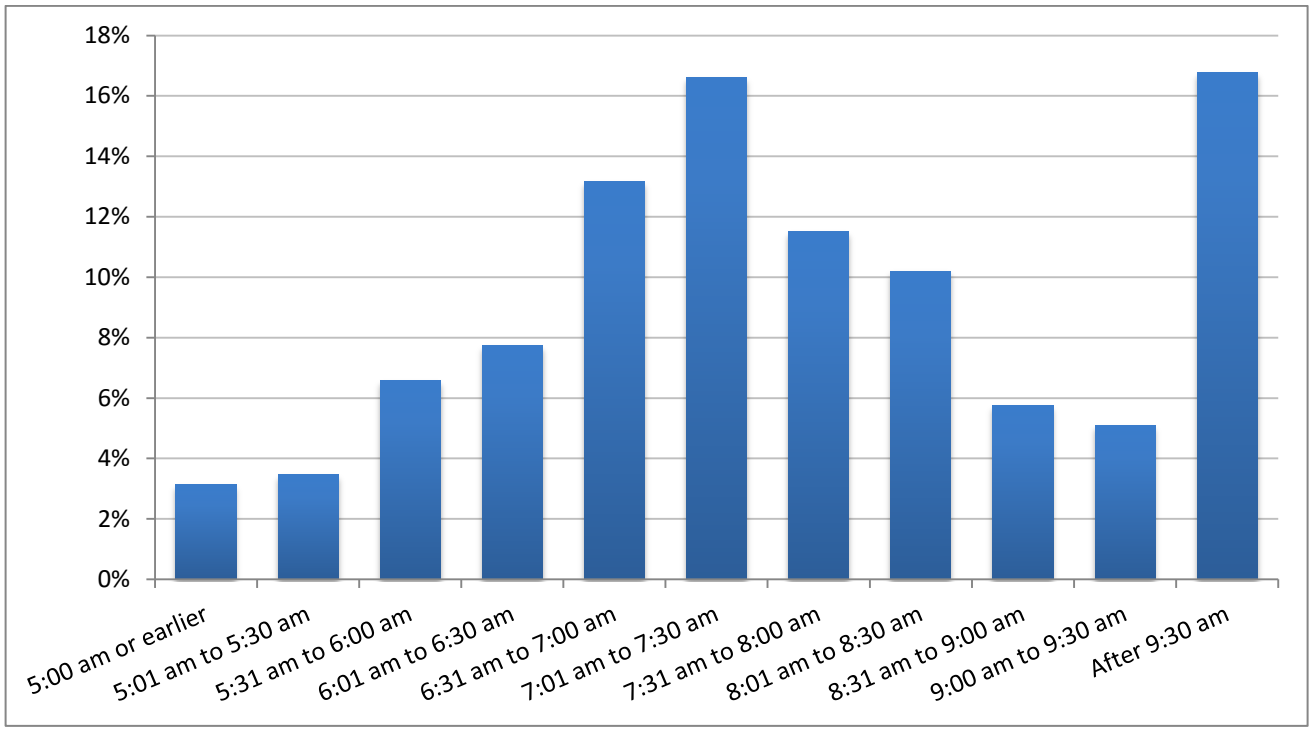
The frequencies of travel on the corridor are shown in Table 1-4. These results show that just fewer than half of survey participants reported they travel through the corridor daily. Participants could choose more than one response to this question to appropriately reference weekend travel.

Table 1-4: Frequency of Travel through the Corridor

Frequency	Number of Responses	Percent of Total
Every Weekday (Mon - Fri)	291	48.0%
4 Weekdays per Week	54	8.9%
3 Weekdays per Week	54	8.9%
2 Weekdays per Week	18	3.0%
1 Weekday per Week	32	5.3%
1 to 3 Weekdays per Month	60	9.9%
Less Than 1 Weekday per Month	57	9.4%
Every Saturday	19	3.1%
Every Sunday	13	2.1%
Occasionally Saturdays or Sundays	140	23.1%

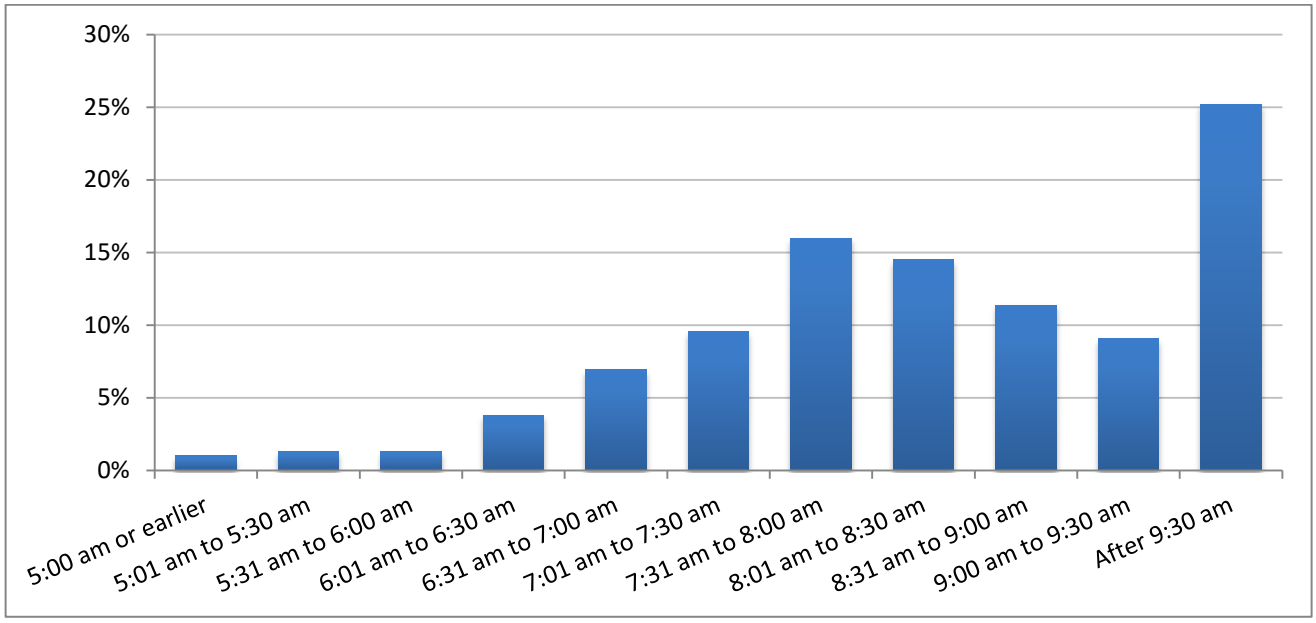
When asked about the time they leave in the morning, responses varied widely, from 5:00 a.m. or earlier (3%) to after 9:30 a.m. (17%). Figure 1-7 demonstrates the variation in leave times for the I-81/I-64 corridor. Seven to 7:30 a.m. (17%) was tied with after 9:30 a.m. (17%) for the most frequently reported leave time in the mornings.

Figure 1-7: Morning Commute Departure Times



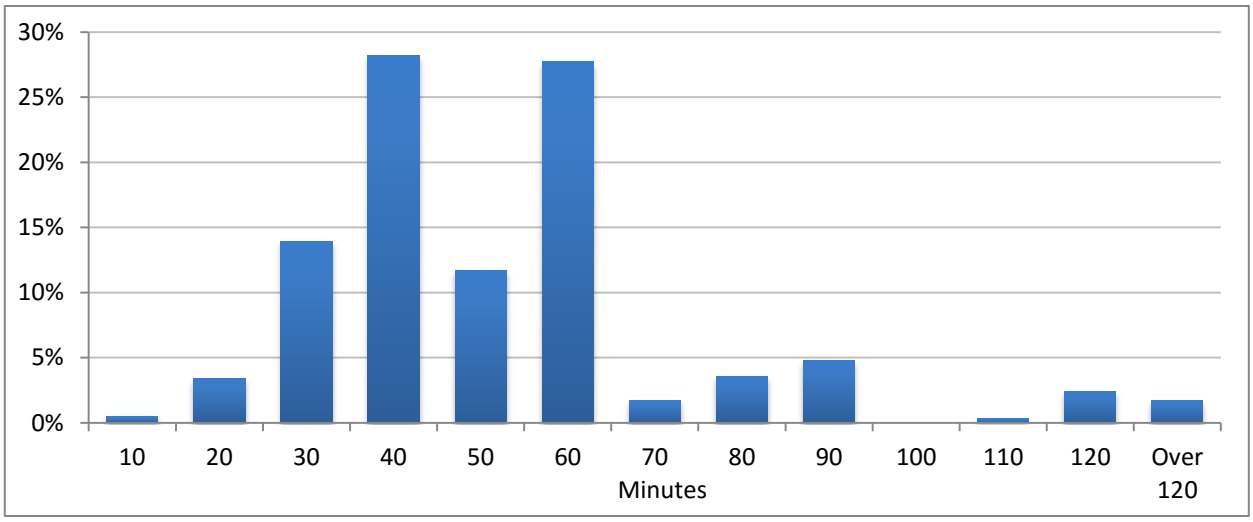
When asked about arrival times, survey participants reported arriving at their destinations after 9:30 a.m. (25%). As seen in Figure 1-8, answers to this question had some variation.

Figure 1-8: Morning Commute Arrival Times



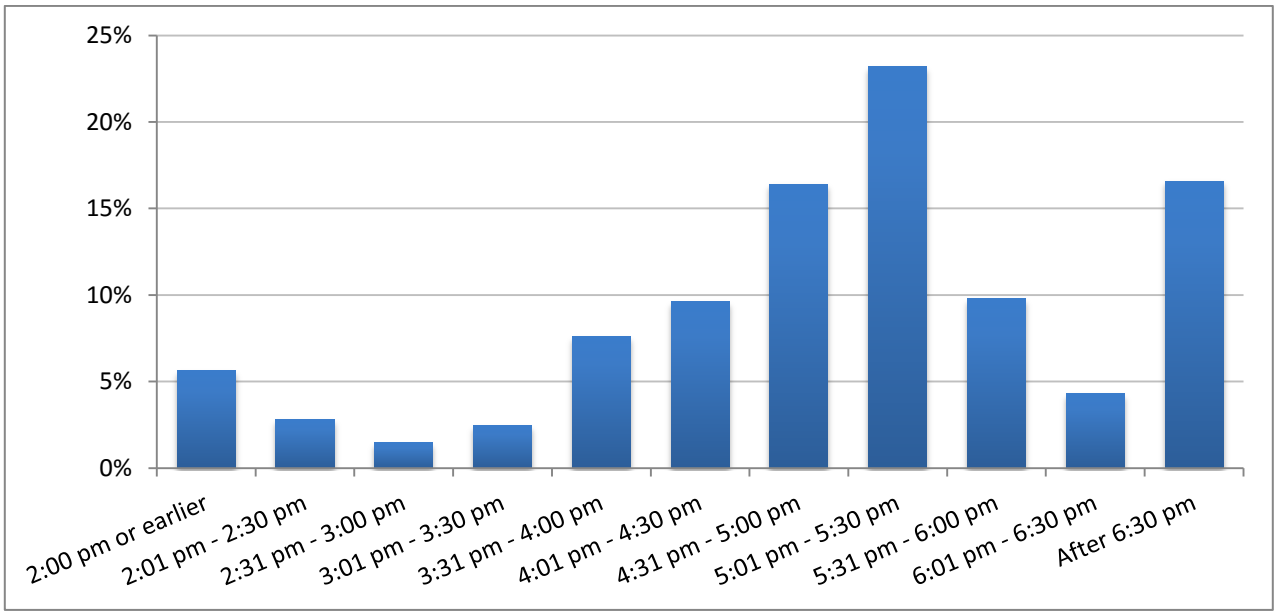
When asked about the number of minutes spent commuting, survey responses varied, with the most frequently reported commute time being either 40 minutes (28%) or 60 minutes (28%). There were a few long-commute times reported, with 5% reporting a 90-minute commute, and a combined total of 4% reported a commute of two hours or more. Figure 1-9 illustrates the variation of times survey participants reported they spent commuting.

Figure 1-9: Time Spent Commuting



As illustrated in Figure 1-10, 23% of respondents reported leaving their primary daily destination between 5:00 p.m. and 5:30 p.m. Approximately 17% reported leaving after 6:30 p.m. and 16% reported leaving between 4:31 p.m. and 5:00 p.m.

Figure 1-10: Afternoon Commute Departure Times



Park and Ride Lots

There were several questions on the survey that asked about the use of park and ride lots in the corridor. The results indicated that just 52 of the 609 survey participants use the park and ride lots in the corridor. As shown in Table 1-5, most park and ride lot users reported using lots that are not "official" park and ride lots. These lots included retail and residential locations. Kohl's in Waynesboro was specifically mentioned by several participants.

Table 1-5: Park and Ride Lot Usage

Lot	Number of Responses	Percent of Total
Other Lot	31	59.6%
Waynesboro	13	25.0%
Verona	4	7.7%
East Main Street, Waynesboro	1	1.9%
US 29 South at I-64	1	1.9%
Walmart South Lot	1	1.9%
Pantops Shopping Center	1	1.9%

The majority of people who use the park and ride lots reported that they carpool from the lots to their primary destination, with 32 respondents indicating how many people are typically in the carpool. These responses show that the most common carpool size is two members (18 responses), followed by four members (8 responses), and three members (6 responses).

When asked if they thought there is a need for improvements to park and ride facilities in the corridor, 60% of respondents, answered yes, and noted the need for improvements. As shown in Table 1-6, respondents are concerned with safety and security. Out of the 27 respondents that answered the question about improvements to park and ride facilities, 56%, listed better security as a needed improvement. Survey participants were allowed to select more than one answer for this question.

Table 1-6: Desired Park and Ride Improvements

Answer Options	Number of Responses	Percent of Total
Better security	15	56%
Park and ride lots in other locations	7	26%
More parking spaces	2	7%
Better amenities	2	7%
Better signage from area roadways to access the lot	1	4%

Twenty-seven participants chose to answer the question and 12 participants provided written comments on specifics about amenities that would be useful to them. Some open-ended comments to this question included:

- The Waynesboro park and ride lot is not monitored and vehicles are spending months in that lot. There is an RV there now that has been there for at least 6 weeks.
- There is a need for better lighting.
- A park and ride in Staunton is needed.
- The Waynesboro park and ride lot is terrible. My plate stickers have been stolen, a car has been stolen, the trash is never picked up, and it is not a nice lot. It is not taken care of at all. That is why we moved to the Kohl's parking lot across the way.
- Lined spaces and more frequent trash pickup are needed.

Waynesboro Park and Ride Lot

Open Ended Comments

Participants were asked to: "Please provide any comments you may have concerning the need to initiate a commuter/inter-regional bus service in the I-81/I-64 corridor, connecting Harrisonburg and Charlottesville." There were 208 responses to this open-ended question, mostly in favor of the service, especially to Charlottesville. A word analysis of the comments found that Charlottesville was stated 54 times, ranking it the third most mentioned word after *bus* (#1) and *service* (#2). Almost all responses were positive and enthusiastic about the services, 47 responses specifically expressed a desire for the service to be implemented. One commenter stated:

> *"I feel that a commuter/inter-regional bus service connecting Harrisonburg and Charlottesville is greatly needed and would contribute immensely to the economy and quality of life in the region. This bus service would enable residents of Harrisonburg to get access to regional public transportation through Amtrak. It would enable residents of Harrisonburg to travel to Charlottesville to access medical facilities and educational resources/ libraries unavailable within the city of Harrisonburg."*

Only five of the 208 comments stated that they *would not* or *probably would not* use the service and most of those thought the bus service would be good for other people, just not themselves. Scheduling and cost were mentioned the most, as motivation for using the service. A regional connection was also ranked highly among responses. Connecting with air travel was mentioned sixteen times in the responses. The full responses to the commuter survey are provided in Appendix C.

Analysis of Population and Employment Data

This section analyzes population and demographic data to assess the need for transit in the Harrisonburg, Staunton, Waynesboro, and Charlottesville region. Data ranging from historical populations to autoless households are documented and analyzed. Data sources for this information include the 2000 and 2010 Census as well as the Census Bureau's American Community Survey 2010 to 2014 Five Year Estimates.

Population Profile

Table 1-7 shows the census population counts from 2000 and 2010 and projections for 2020 through 2040 from the University of Virginia's Weldon Cooper Center for Public Service.

From the 2000 to the 2010 Census, the region as a whole grew by 15%. Each of the region's jurisdictions, with the exception of the City of Staunton, experienced population growth. The largest population increases were in Albemarle County (25%), the City of Harrisonburg (21%), and Rockingham County (13%).

Future population estimates project Albemarle County will lead the region in expected growth nearly doubling the County's population from 2000 to 2040. The City of Harrisonburg is also expected to experience a rise in population with an estimated 75,000 people living in the City by 2040. Each of the region's seven jurisdictions is expected to experience double digit growth rates from 2010 to 2040.

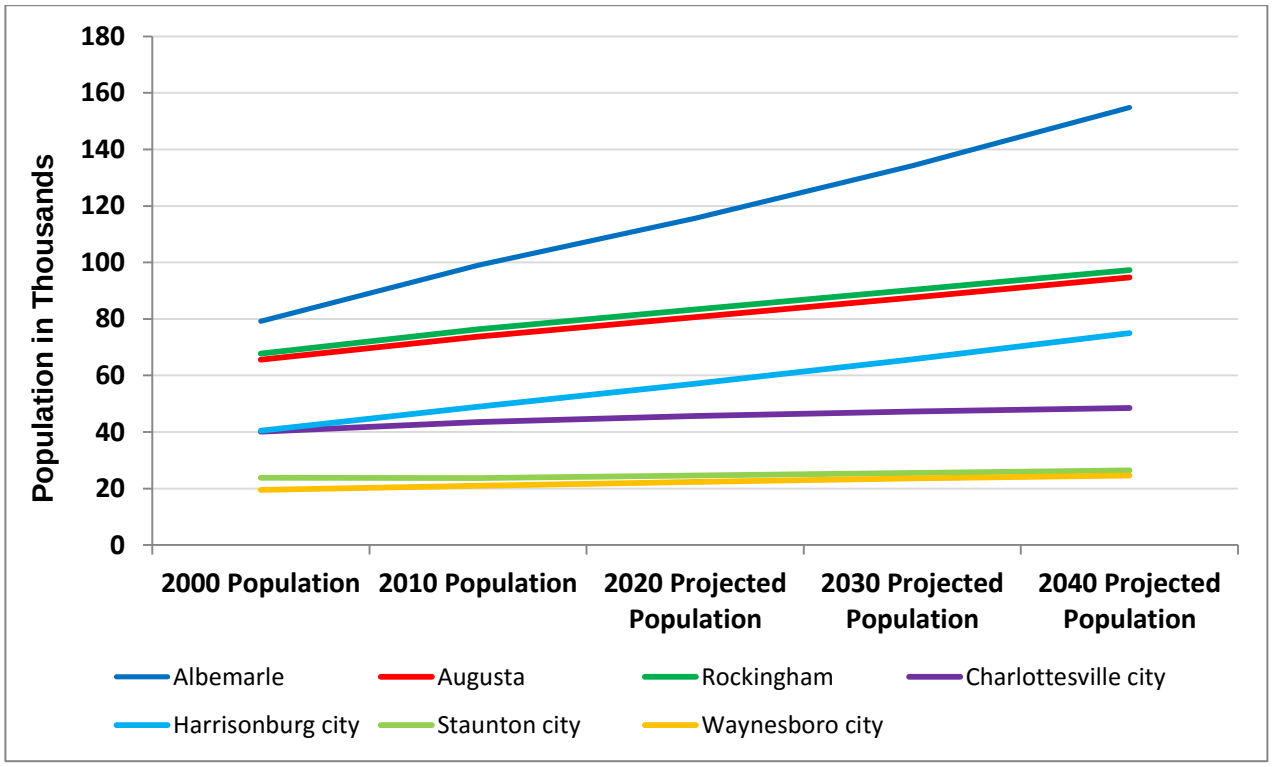
Table 1-7: Historical and Projected Populations

Jurisdiction	2000 Population	2010 Population	2020 Projected Population	2030 Projected Population	2040 Projected Population	2000-2040 Percent Change	2010-2040 Percent Change
Albemarle County	79,236	98,970	115,642	134,196	154,814	95%	56%
Augusta County	65,615	73,750	80,655	87,580	94,713	44%	28%
Rockingham County	67,725	76,314	83,431	90,341	97,249	44%	27%
City of Charlottesville	40,099	43,475	45,636	47,252	48,545	21%	12%
City of Harrisonburg	40,468	48,914	57,114	65,768	75,015	85%	53%
City of Staunton	23,853	23,746	24,605	25,574	26,440	11%	11%
City of Waynesboro	19,520	21,006	22,375	23,575	24,613	26%	17%
Total Region	**336,516**	**386,175**	**429,457**	**474,288**	**521,390**	**55%**	**35%**

Source: United States Census Bureau and Weldon Cooper Center for Public Service

The historical and projected population trends are displayed in Figure 1-11. As depicted in the graph, all jurisdictions are experiencing population growth; however, Albemarle County's population is expected to increase at a much faster rate than the other jurisdictions.

Figure 1-11: Historical and Projected Population Trends



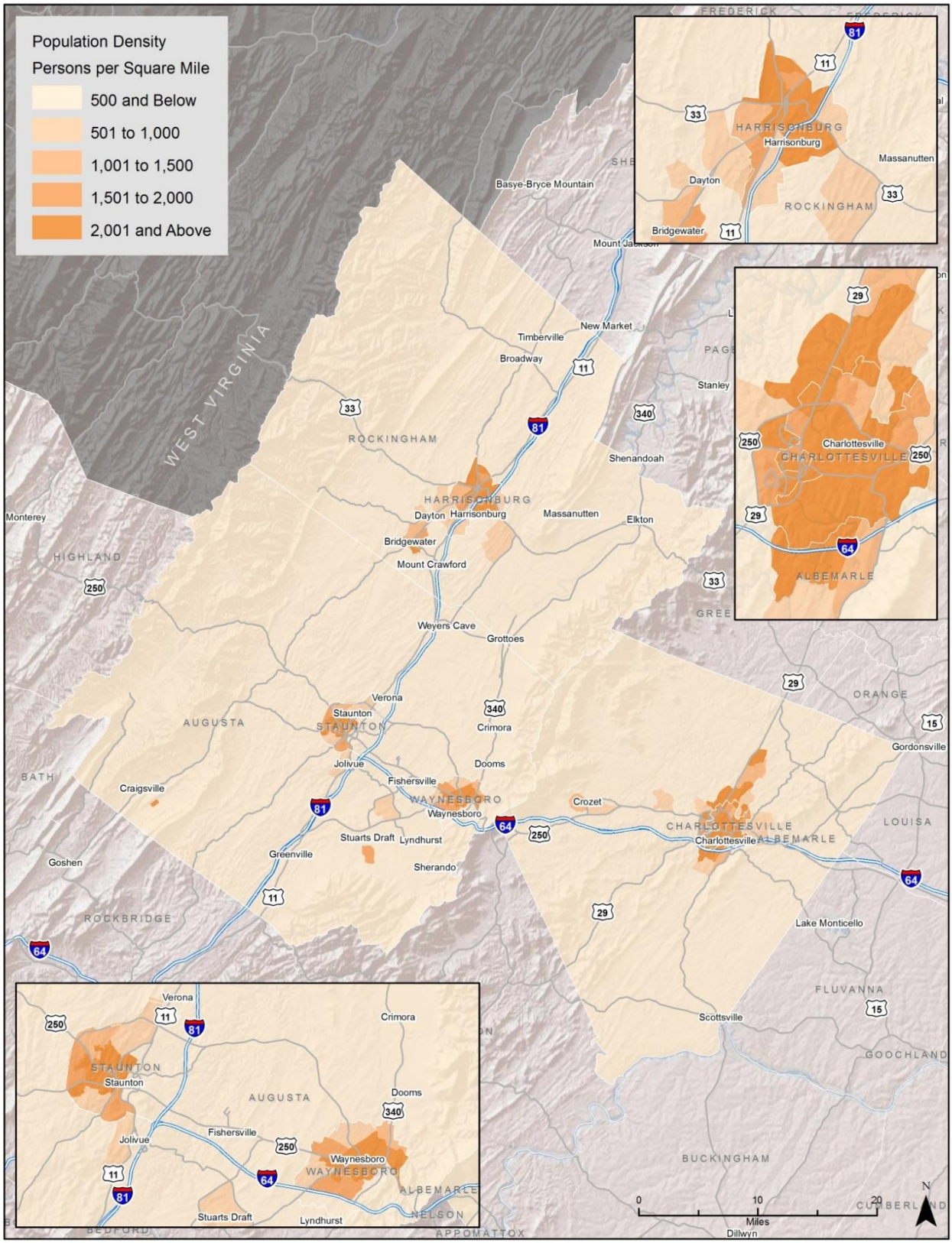
Source: United States Census Bureau and Weldon Cooper Center for Public Service

Population Density

Population density is a key factor in determining where public transit services may be feasible. As a general rule of thumb, while exceptions will always exist, areas with a density of 2,000 or more persons per square mile will typically be able to support daily scheduled service. Areas with densities below 2,000 persons per square mile are generally suitable for flex routes and areas with less than 1,000 persons per square mile are generally served by on-demand services.

As Figure 1-12 illustrates, areas with population densities above 2,000 persons per square mile are primarily located in the Cities of Charlottesville, Harrisonburg, Staunton, and Waynesboro. Areas with densities below 2,000 but above 1,000 persons per square mile are largely located around the region's four cities and also include Bridgewater, Crozet, and Stuarts Draft.

Figure 1-12: 2010 Census Population Density



Source: U.S. Census, 2010

Employment Profile

The top employers for the various jurisdictions within the region are predominately the area's medical centers, universities, public school systems, and chief retailers. The top ten employers by jurisdiction, as published in each jurisdiction's annual Comprehensive Annual Financial Report (FY2015), are broken down in Tables 1-8 to 1-14.

Table 1-8: Top Ten Employers in Albemarle County

Rank	Albemarle County	Number of Employees
1	UVA/Blue Ridge Hospital	1000+
2	County of Albemarle	1000+
3	Martha Jefferson Hospital - Sentara Healthcare	1000+
4	State Farm Mutual Automobile Insurance	1000+
5	U.S. Department of Defense	500-999
6	Northrop Grumman Corporation	500-999
7	Piedmont Virginia Community College	500-999
8	Troy Construction, LLC	250-499
9	Walmart	250-499
10	GE Fanuc Automation Manufacturing	250-499

Table 1-9: Top Ten Employers in Augusta County

Rank	Augusta County	Number of Employees
1	Augusta County Schools	1000+
2	Augusta Health	1000+
3	McKee Foods Corporation	500-999
4	Hershey Chocolate of Virginia	500-999
5	Target Corporation	500-999
6	Hollister, Inc.	250-499
7	Daikin McQuay, Inc.	250-499
8	Blue Ridge Community College	250-499
9	J.B. Hunt Transport	250-499
10	County of Augusta	250-499

Table 1-10: Top Ten Employers in the City of Charlottesville

Rank	Charlottesville	Number of Employees
1	UVA Medical Center	1000+
2	City of Charlottesville	1000+
3	UVA Health Services Foundation	1000+
4	Charlottesville City Schools	500-999
5	ServiceLink Management Com Inc.	500-999
6	SNL Security LP	500-999
7	Aramark Campus LLC	500-999
8	Lakeland Tours	250-499
9	Atlantic Coast Athletic Club	250-499
10	Association for Investment Management	250-499

Table 1-11: Top Ten Employers in the City of Harrisonburg

Rank	Harrisonburg	Number of Employees
1	James Madison University	1000+
2	Harrisonburg City Schools	1000+
3	Aramark Campus LLC	500-999
4	City of Harrisonburg	500-999
5	Tenneco Automotive Operations	500-999
6	Rosetta Stone	500-999
7	George's & Company	500-999
8	Eastern Mennonite University	250-499
9	Virginia Mennonite Retirement	250-499
10	Walmart	250-499

Table 1-12: Top Ten Employers in Rockingham County

Rank	Rockingham County	Number of Employees
1	Rockingham County Schools	1000+
2	Sentara Healthcare- Rockingham Memorial Hospital	1000+
3	Cargill Meat Solutions	1000+
4	Walmart	1000+
5	Great Eastern Resort Management (Massanutten)	1000+
6	R.R. Donnelley & Sons Company	1000+
7	Marshall's	500-999
8	Pilgrim's Pride Corp.	500-999
9	County of Rockingham	500-999
10	Merck Sharp & Dohme Corporation	500-999

Table 1-13: Top Ten Employers in the City of Staunton

Rank	Staunton	Number of Employees
1	Western State Hospital	500-599
2	Staunton City Schools	500-599
3	City of Staunton	250-499
4	Mary Baldwin College	250-499
5	Walmart	250-499
6	Care Advantage	100-249
7	Virginia School for the Deaf and Blind	100-299
8	Virginia Department of Transportation	100-249
9	Best Buy Distribution	100-249
10	Envoy- Staunton	100-249

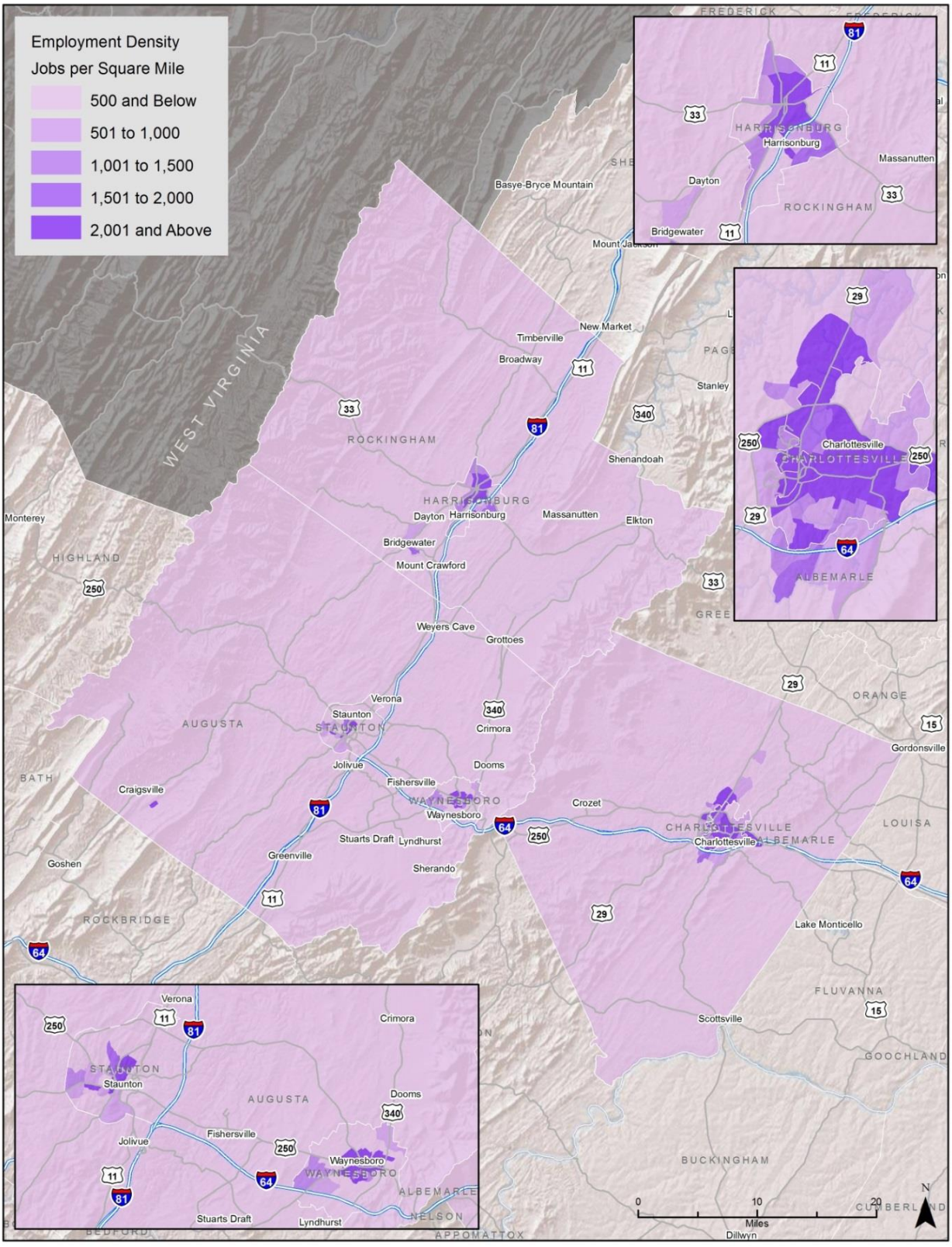
Table 1-14: Top Ten Employers in the City of Waynesboro

Rank	Waynesboro	Number of Employees
1	Waynesboro City Schools	500-999
2	Ntelos Payroll Corporation	250-499
3	Invista/DuPont	250-499
4	City of Waynesboro	250-499
5	Walmart	250-499
6	Lumos Payroll Corporation	250-499
7	Adecco	100-249
8	Chicopee Incorporated Dip	100-249
9	Kroger	100-249
10	Augusta Lumber LLC	100-249

Employment Density

Figure 1-12 provides a map of employment per square mile. Employment density is an important indicator of where major origins and destinations are located; not only does it represent places of work but often shows activity centers where important goods and services are located. Large job centers are unsurprisingly located in the regional population centers.

Figure 1-12: Employment Density



Source: U.S. Census, 2010

Commute Patterns – U.S. Census

In order to gain an understanding of the total pool of potential commute users, data were collected from the U.S. Census Bureau's Longitudinal Employer Household Dynamics dataset. The first set of data collected was the overall number of people who commute among the jurisdictions in the study area. These data are shown in Table 1-15.

Table 1-15: Regional Journey to Work Data

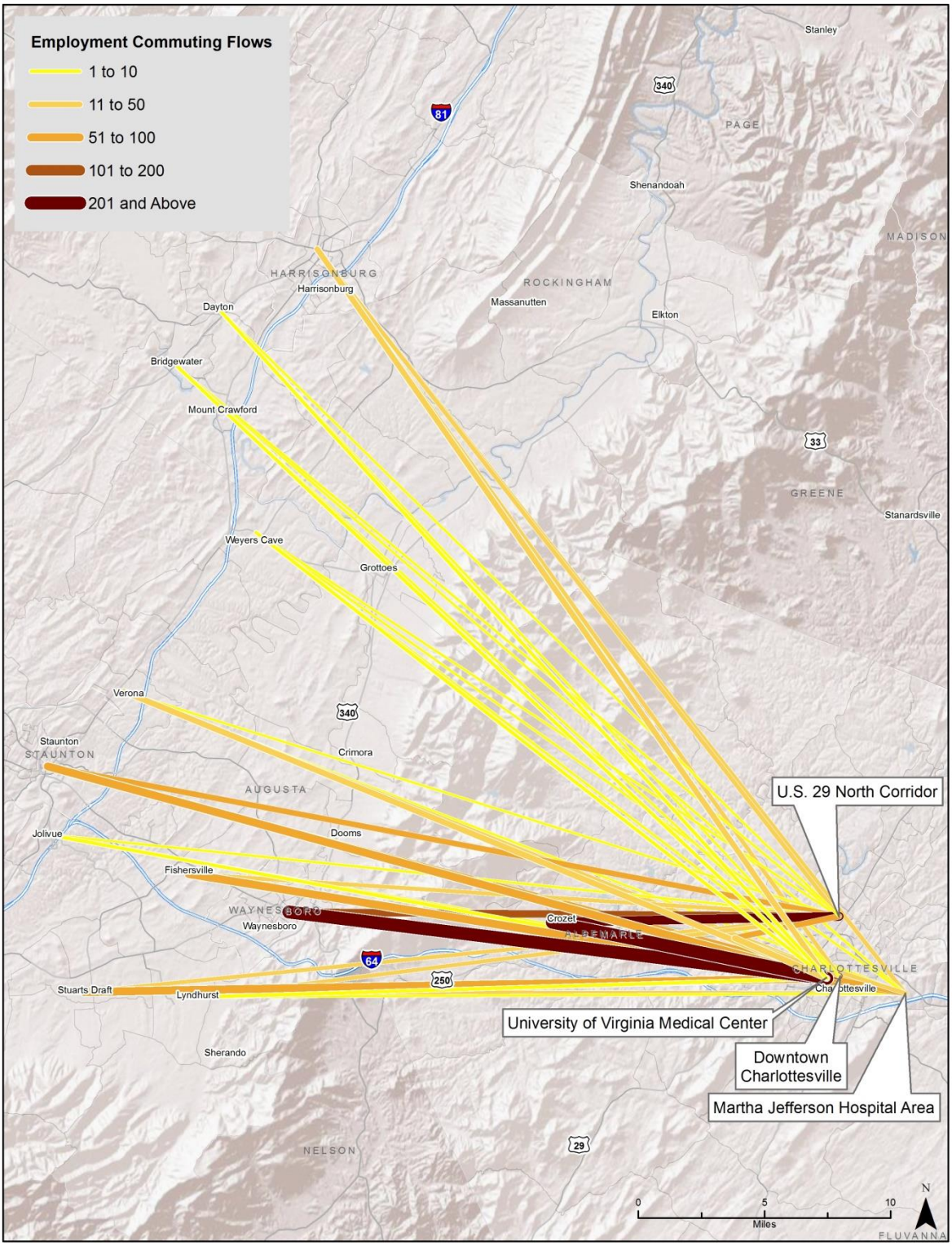
		To						
		Albemarle County	Augusta County	Charlottesville City	Harrisonburg City	Rockingham County	Staunton City	Waynesboro City
From	Albemarle County	16,960	522	12,937	549	296	322	381
	Augusta County	1,407	11,064	1,047	2,454	2,613	3,824	3,230
	Charlottesville City	5,968	133	6,811	211	94	146	102
	Harrisonburg City	226	530	173	7,365	4,478	307	189
	Rockingham County	607	1,547	435	13,070	12,543	563	466
	Staunton City	382	2,466	382	685	428	2,950	686
	Waynesboro City	905	2,090	717	326	292	677	2,280

Source: Longitudinal Employer Household Dynamics (LEHD) Origin-Destination Employment Statistics, 2014.

These data show that there is a significant level of commuting among the study jurisdictions, with the numbers generally decreasing with distance, as would be expected.

Given that commuter bus demand is typically sensitive to the total number of passenger stops and the associated travel time, the commute data was further refined using data collected at the block group level. The study team calculated the top six employment block group destinations in the study area and gathered the associated data for the block group origins for the people who travel to these five block groups for work purposes. Four of these block groups are in the Charlottesville area. Figure 1-13 shows the employment commuter flow from the primary Shenandoah Valley origins to these four job centers and Table 1-16 provides the commute data from the study corridor for these four block groups.

Figure 1-13: Employment Commuting Flows from the Shenandoah Valley to Key Employment Locations in the Charlottesville Area



Source: LEHD Local Origin Destination Employment Statistics (LODES), 2014.

Table 1-16: Commute Patterns from the Study Corridor to the Primary Employment Block Groups in the Charlottesville Area

	Number of Commuters per Work Destination from Study Corridor				
Workers Home in Study Corridor[1]	**29 North Corridor**	**Downtown Charlottesville**	**UVA Medical Center Area**	**Martha Jefferson Hospital/ State Farm Area**	**Total**
Harrisonburg	25	31	20	18	94
Dayton	0	3	2	0	5
Bridgewater	2	6	6	3	17
Weyers Cave	2	6	4	4	16
Verona	9	12	17	7	45
Staunton	84	62	76	44	266
Jolivue	5	2	3	5	15
Fishersville	47	21	62	24	154
Stuarts Draft	38	31	52	36	157
Lyndhurst	14	4	8	8	34
Waynesboro	185	150	210	88	633
Crozet	395	199	231	98	923
Ivy	72	37	25	13	147
Totals	**878**	**564**	**716**	**348**	**2506**

(1) Not including Charlottesville origins

Source: LEHD Local Origin Destination Employment Statistics (LODES), 2014.

The fifth and sixth block groups are in Harrisonburg- number five is the block group associated with JMU and number six is the block group associated with downtown Harrisonburg. The corresponding data for these two block group is provided in Table 1-17.

Table 1-17: Commute Patterns from the Study Corridor to the Primary Employment Block Groups in the Harrisonburg Area

	Number of Commuters per Work Destination from Study Corridor		
Workers Home in Study Corridor [1]	**Harrisonburg/JMU**	**Harrisonburg Downtown**	**Total**
Staunton	185	45	230
Waynesboro	31	19	50
Weyers Cave	54	18	72
Fishersville	32	10	42
Verona	32	10	42
Charlottesville	36	6	42
Totals	**370**	**108**	**478**

(1) Not including Harrisonburg or Rockingham County origins

Source: LEHD Local Origin Destination Employment Statistics (LODES), 2014.

Commute Data – UVA and JMU

In addition to the LEHD Origin-Destination Employment Statistics (LODES) data, employee commute data were collected from UVA and JMU. As anchor institutions and the region's largest employers, it is important to include these data in the analysis of potential riders. These data showed higher levels of commuting through the corridor than the LODES data.

Employee Data from UVA

The data provided by UVA is shown in Table 1-18. These data focus on the three major population centers in the corridor. There are likely to be additional employees who live in the corridor, but outside of one of these population centers.

Table 1-18: Number of UVA Employees Residing in Harrisonburg, Staunton, and Waynesboro

Home Location of UVA Employees	Number of UVA Employees
Harrisonburg	68
Staunton	191
Waynesboro	516
Total from Selected Areas	**775**

Source: University of Virginia

To make sure that UVA employees are included in the overall commuter counts, estimates of the number of employees from Harrisonburg, Staunton, and Waynesboro were increased to the number of UVA employees for those locations where the LODES numbers were lower. The revised, combined commuter data, using both datasets is provided in Table 1-19.

The numbers could not be added together, as some UVA employees were likely included in the LEHD count. Given this data anomaly, it is likely that these data represent a low estimate of the actual numbers of commuters making the trip to these employment centers on a regular basis.

It should be noted that the LODES data include only workers living within the specific jurisdiction, and not those who may reside just outside. This may account for the lower LODES numbers as compared to the UVA data.

Table 1-19: Combined Commuter Data- Selected Charlottesville Destinations

	Number of Commuters Per Destination		
Home Location of Workers	**Downtown and UVA Medical Combined**	**Martha Jefferson Hospital/ State Farm Area**	**Total**
Harrisonburg	68	18	86
Dayton	5	0	5
Bridgewater	12	3	15
Weyers Cave	10	4	14
Verona	29	7	36
Staunton	191	44	235
Jolivue	5	5	10
Fishersville	83	24	107
Stuarts Draft	83	36	119
Lyndhurst	12	8	20
Waynesboro	516	88	604
Total Employees from Corridor	**1014**	**237**	**1251**

Source: LEHD and UVA

Employee Data from JMU

Similar to the UVA data, employment data from JMU also showed higher numbers of commuters through the corridor than the LODES data. JMU data are shown in Table 1-20.

Table 1-20: Number of JMU Employees Residing in Charlottesville- Weyers Cave Corridor

Home Location of JMU Employees	Number of JMU Employees
Charlottesville	74
Fishersville	27
Staunton	196
Verona	27
Waynesboro	48
Weyers Cave	66
Total from Selected Areas	**438**

Source: James Madison University (JMU)

To make sure that JMU employees are included in the commuter estimates, estimates of the number of employees from the corridor were increased to the number of JMU employees for the locations where the LODES numbers were lower. The revised, combined commuter data, using both datasets is provided in Table 1-21.

The numbers could not be added together, as some of the JMU employees were likely included in the LEHD count. Given this data anomaly, it is likely that these data represent a low estimate of the actual numbers of commuters making the trip to these employment centers on a regular basis.

It should be noted that the LODES data include only workers living within the specific jurisdiction, and not those who may reside just outside. This may account for the lower LODES numbers as compared to the JMU data.

Table 1-21: Combined Commuter Data- Harrisonburg Destination

	Number of Commuters per Work Destination from the Study Corridor		
Workers Home in Study Corridor [1]	**Harrisonburg/JMU**	**Harrisonburg Downtown**	**Total**
Staunton	196	45	241
Waynesboro	48	19	67
Weyers Cave	66	18	84
Fishersville	32	10	42
Verona	32	10	42
Charlottesville	74	6	80
Totals	**448**	**108**	**556**

(1) Not including Harrisonburg or Rockingham County origins

Source: LEHD and JMU

ANALYSIS OF TRANSIT DEPENDENT POPULATIONS

In addition to population data, this analysis also examined a select number of population groups that may be potential riders for a public transportation service along the Interstate 64 and 81 corridors. These populations include individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or disability.

To provide an objective measure when mapping the above mentioned population groups a relative measurement was used based on the study area's average. For the purpose of this study, the study area is defined as the Cities of Charlottesville, Harrisonburg, Staunton, and Waynesboro, and the Counties of Albemarle, Augusta, and Rockingham. A threshold of low, elevated, moderate, high, and very high was used for each demographic group. The low threshold consists of block groups with below average concentrations of a specific demographic group; while the very high threshold consists of block groups with more than twice the average concentration. The thresholds elevated, moderate, and high make up the middle ground between the average and twice the average and are divided into thirds.

Autoless Households

Households without at least one personal vehicle are more likely to depend upon the mobility offered by public transit than those with access to a vehicle. Within the study area 6.6% of households do not have access to a vehicle. Analyzing this segment of the population is important because many of the land uses in the region are at distances too far for non-motorized travel. Figure 1-14 provides a visual representation of the region's autoless

households. As seen on the map, very high concentrations of autoless households are found in Bridgewater, Charlottesville, Elkton, Harrisonburg, Staunton, Verona, and Waynesboro.

Single Vehicle Households

Households with only one available vehicle may also face transportation challenges. For many families living in single vehicle households basic errands, school, and work trips must be coordinated or prioritized. Trips that are not a top priority may not be possible without alternative transportation options. Of the region's households, 29.8% have access to only one vehicle. As displayed in Figure 1-15, concentrations of one vehicle households are found in and around Broadway, Charlottesville, Elkton, south of Fishersville, Harrisonburg, and Staunton.

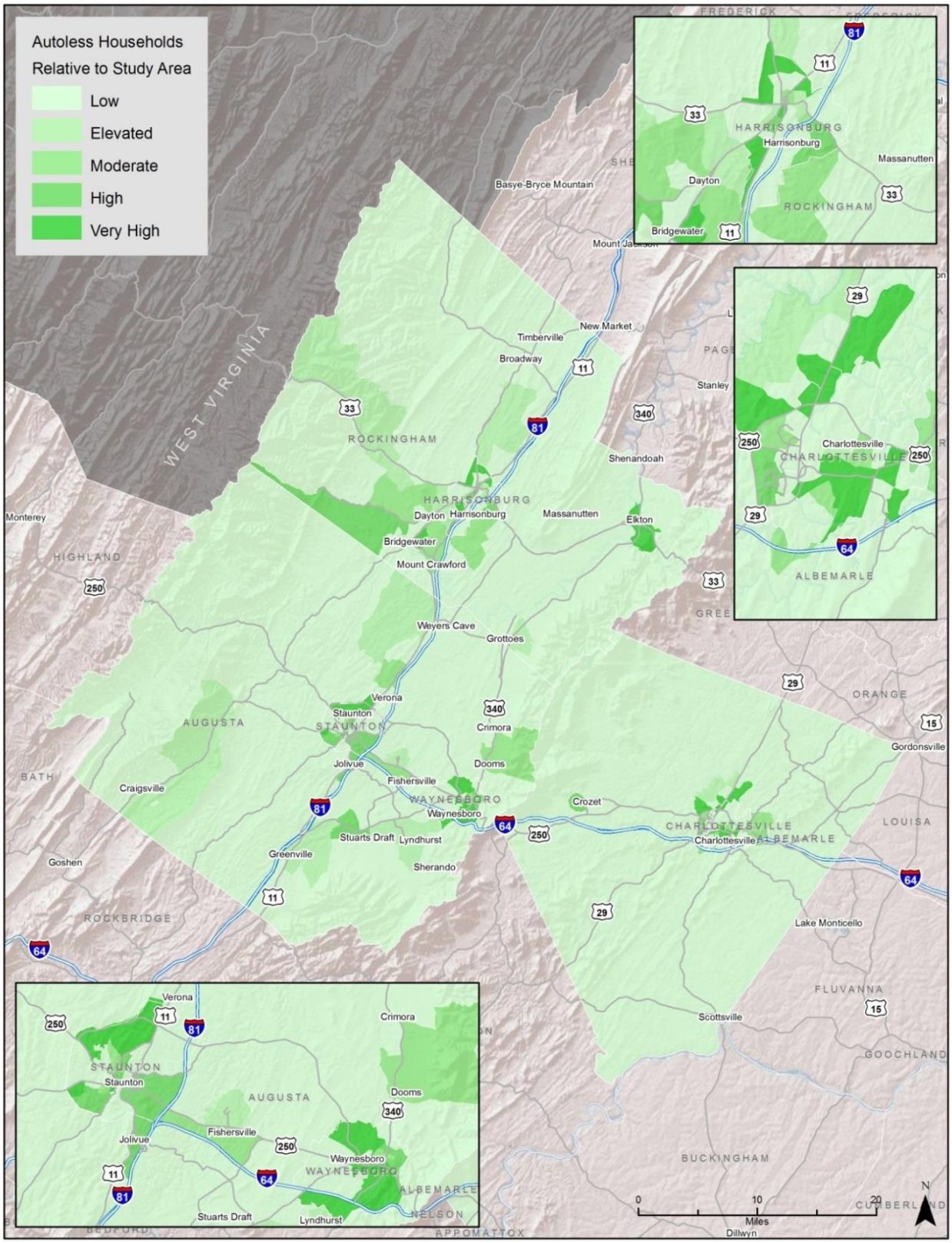
Youth – Aged 10 to 17

Youths and teenagers, aged 10 to 17, may be unable to drive or are just beginning to learn to drive. This age group typically does not have access to a vehicle and can appreciate the availability of a public transportation service. Those aged 10 to 17 make up 9.2% of the region's population. As seen in Figure 1-16 this population group is widely dispersed throughout the region. High concentrations are found in the rural areas of Albemarle, Augusta, and Rockingham Counties. Perhaps the most notable observation is that this age group is not found in high concentrations in the downtown portions of the region's major cities but along their peripheries.

Young Adults – Aged 18 to 24

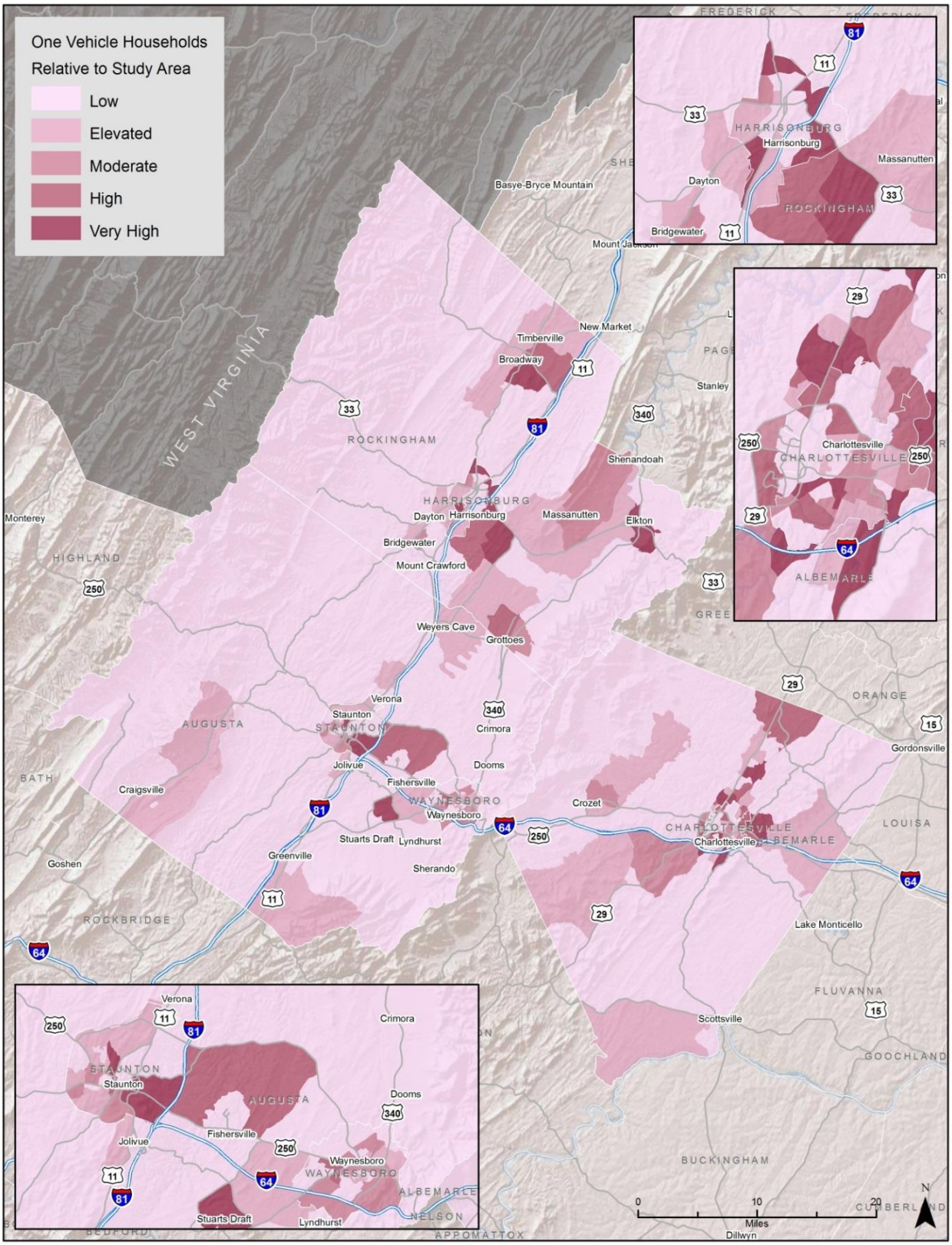
Young adults, aged 18 to 24 years old, are typically college students or entry-level workers who may not be able to afford or have not prioritized ownership of a personal automobile. Many of these individuals may be splitting time between classes, jobs, and social activities where regional transportation links can give a sense of freedom. Of the region's population, 15.2% consists of those aged 18 to 24. Figure 1-17 displays the relative concentrations of this age group in the region. High concentrations of young adults are found in Bridgewater, Charlottesville, Harrisonburg, and Staunton. These locations are also home to four of the region's largest colleges and universities: Bridgewater College (Bridgewater), University of Virginia (Charlottesville), James Madison University (Harrisonburg), and Mary Baldwin College (Staunton).

Figure 1-14: Autoless Households



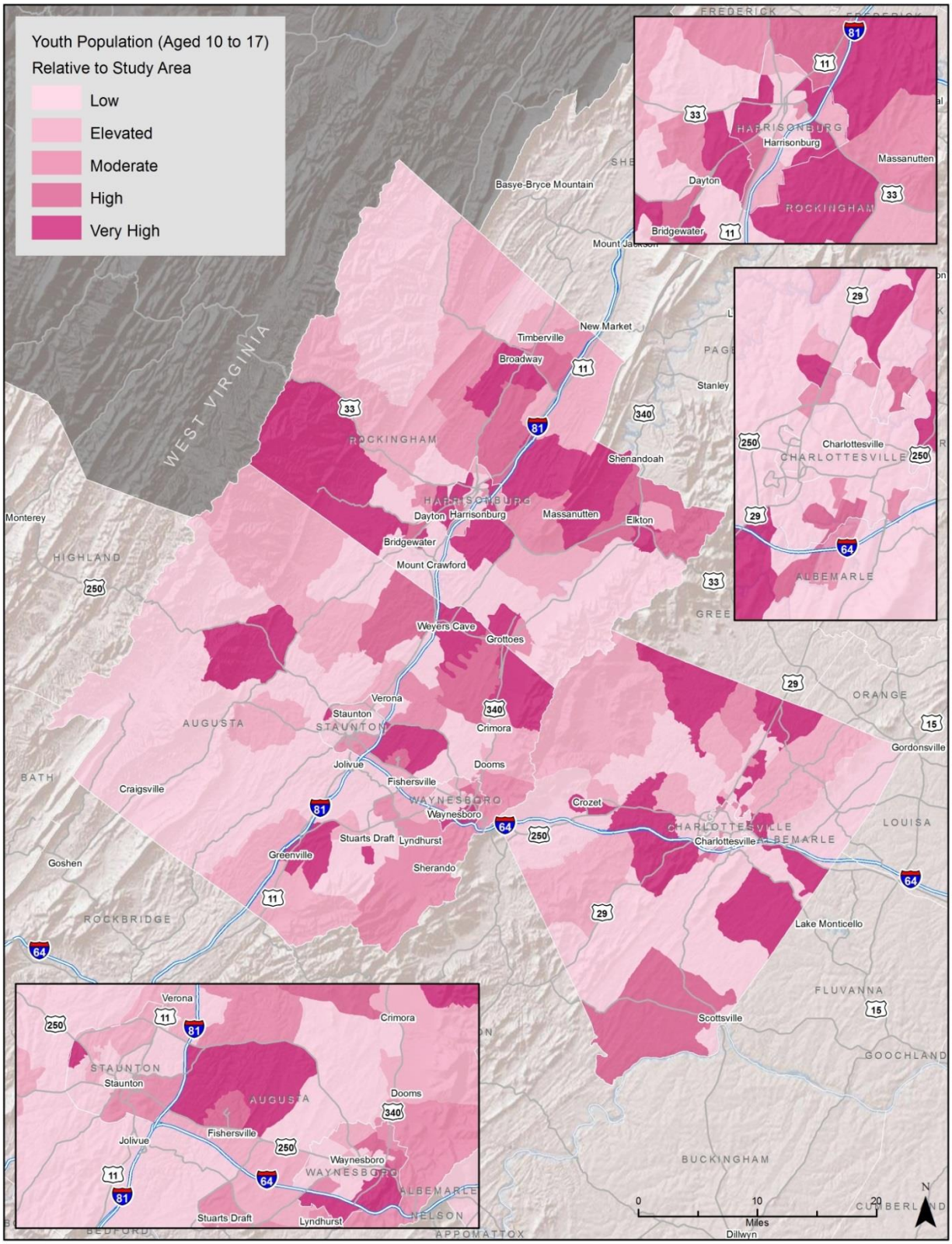
Source: U.S. Census, 2010.

Figure 1-15: Single Vehicle Households



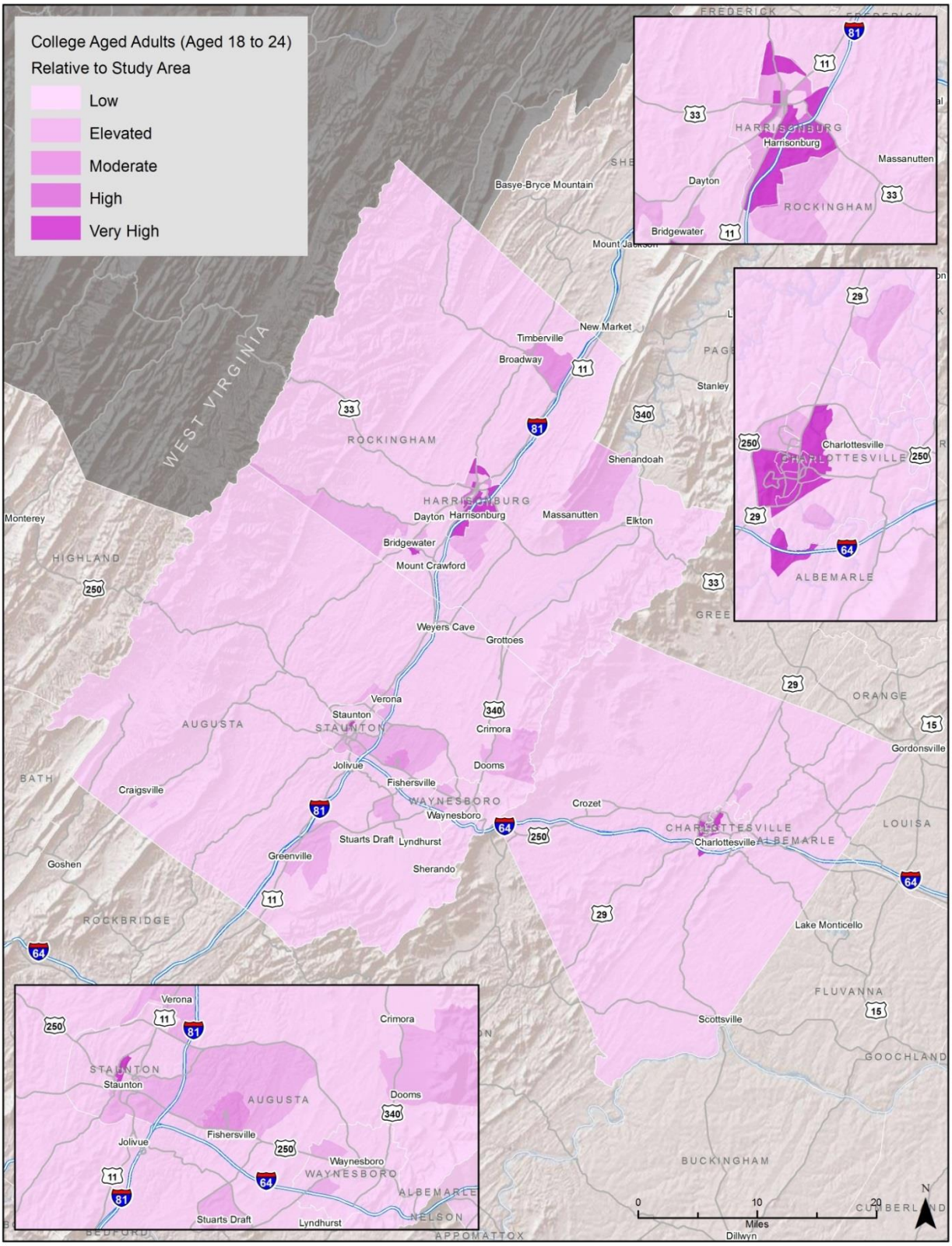
Source: U.S. Census, 2010.

Figure 1-16: Youth (Aged 10 to 17)



Source: U.S. Census, 2010.

Figure 1-17: Young Adults (Aged 18 to 24)



Source: U.S. Census, 2010.

Seniors – Aged 65 and Above

Those aged 65 years and older may begin to scale back their use of personal vehicles as they age. Individuals in this age group appreciate alternative transportation options as a vital link to social activities and long-distance medical trips. Those aged 65 and above make up 14.8% of the region's population. Illustrated in Figure 1-18, concentrations of this age group are predominately found in the rural areas surrounding the region's major cities. High concentrations are found around Bridgewater, Charlottesville, Dayton, Elkton, Fishersville, Harrisonburg, Massanutten, and Staunton.

Below Poverty

This socioeconomic population represents individuals who earn less than the federal poverty level. Those living at or below the poverty level may face financial hardships that make ownership and maintenance of a personal vehicle difficult, and thus may be more inclined to depend on public transportation. Those earning less than the federal poverty level make up 14.7% of region's population. As seen in Figure 1-19, below poverty populations are mostly found in and around Charlottesville, Harrisonburg, Staunton, Stuarts Draft, and Waynesboro.

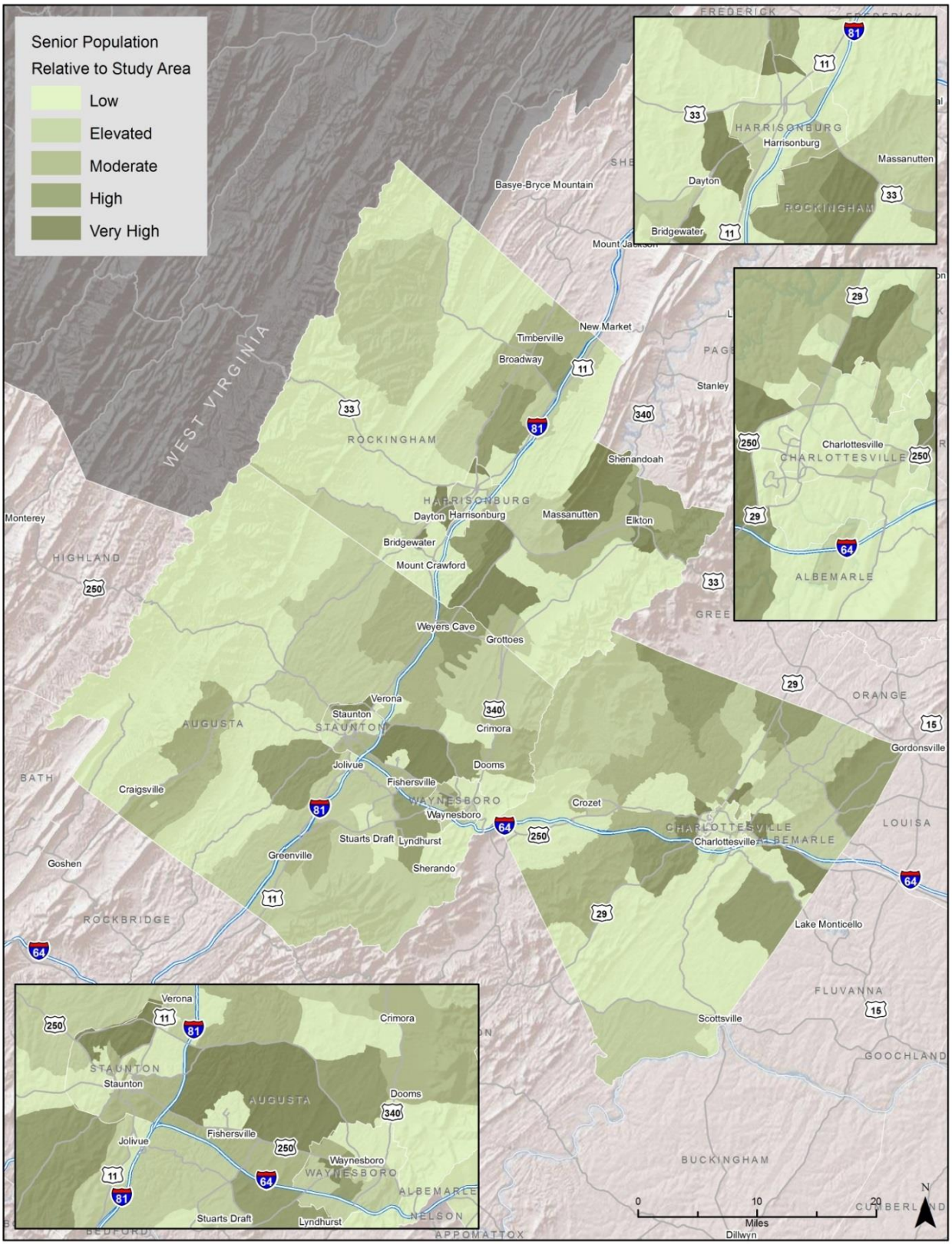
Persons with Disabilities

Individuals with mental or physical disabilities may be unable to operate a personal vehicle and consequently be more likely to rely on public transportation. People with disabilities make up 10.5% of region's population. Unlike the populations detailed above, disability data is only available at the census tract level, not the block group. Though it cannot show finer trends, this information is still important to consider. Shown in Figure 1-20, high concentrations of persons with disabilities are found between Staunton and Waynesboro, in the northern portion of Staunton and in rural areas of Albemarle and Rockingham Counties.

Transit Dependence Index (TDI)

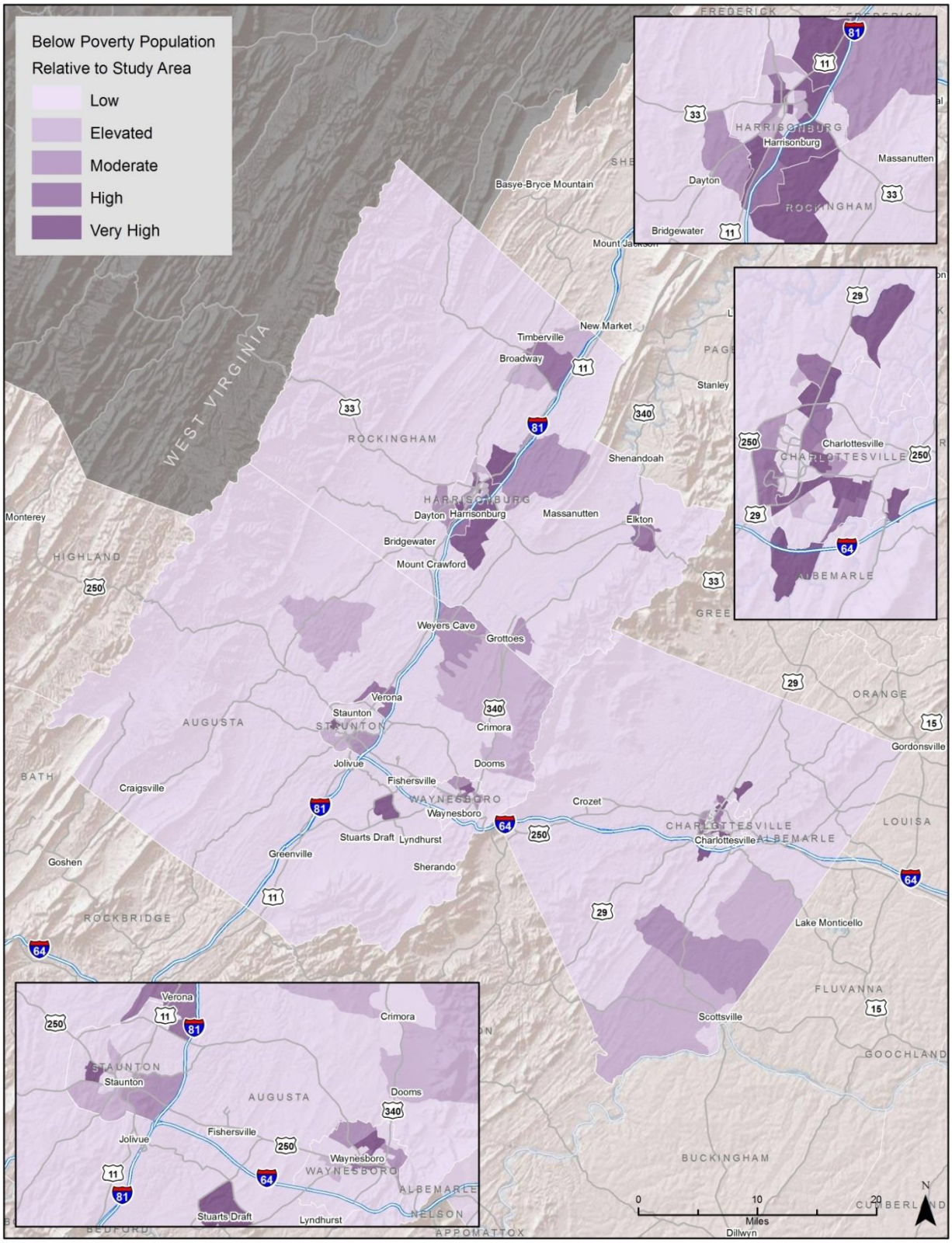
The TDI provides an aggregate measure of transportation need that is based on census data including population density, autoless households, senior populations, youth populations, and below poverty populations. Each of the TDI factors was analyzed previously in this section. Similar to those demographic groups, the TDI utilizes the overall average of each demographic group and then combines those averages to create the TDI index. As Figure 1-21 shows, areas with high TDI scores include Bridgewater, Charlottesville, Crozet, Harrisonburg, Staunton, and Waynesboro.

Figure 1-18: Seniors (Aged 65 and Above)



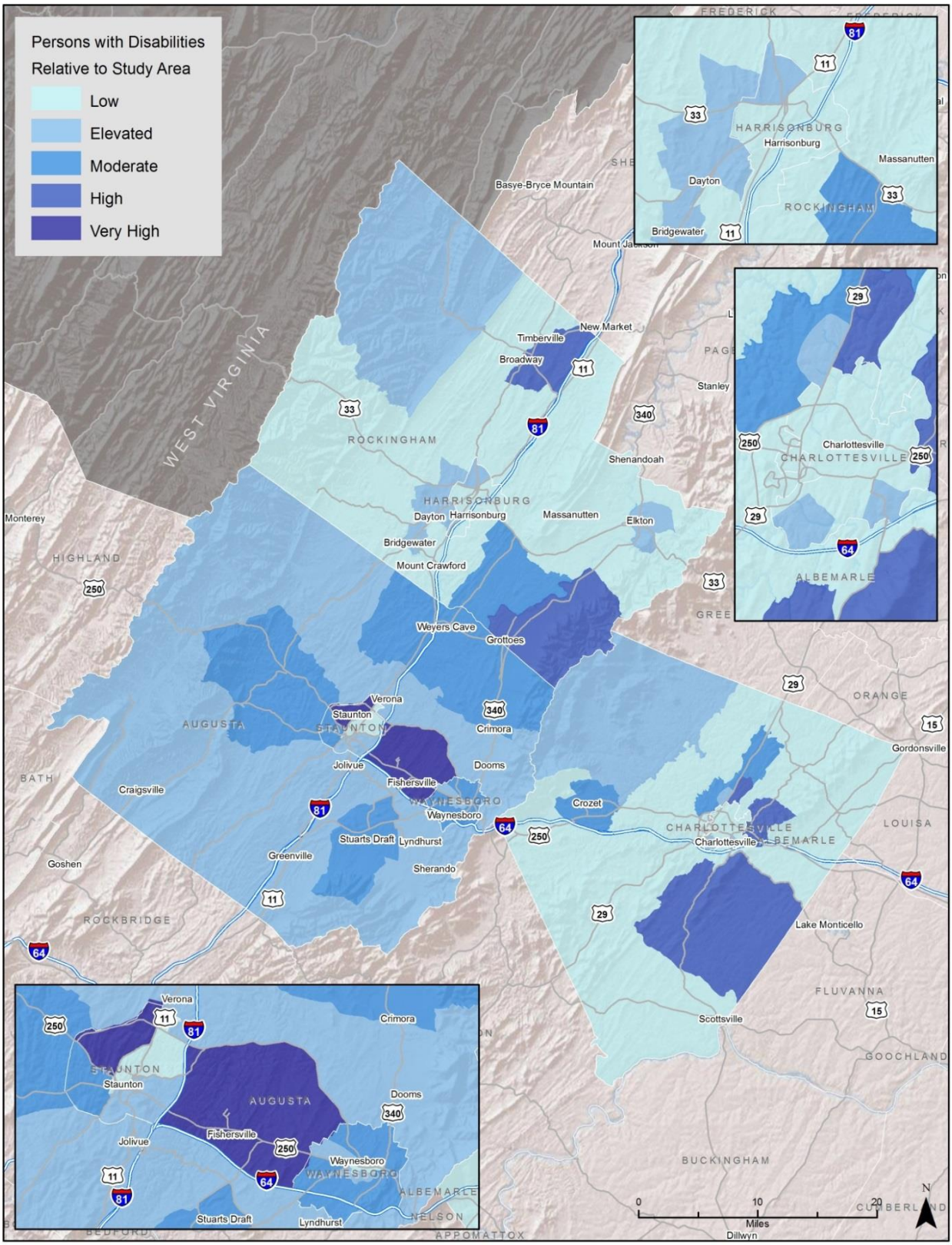
Source: U.S. Census, 2010.

Figure 1-19: Below Poverty



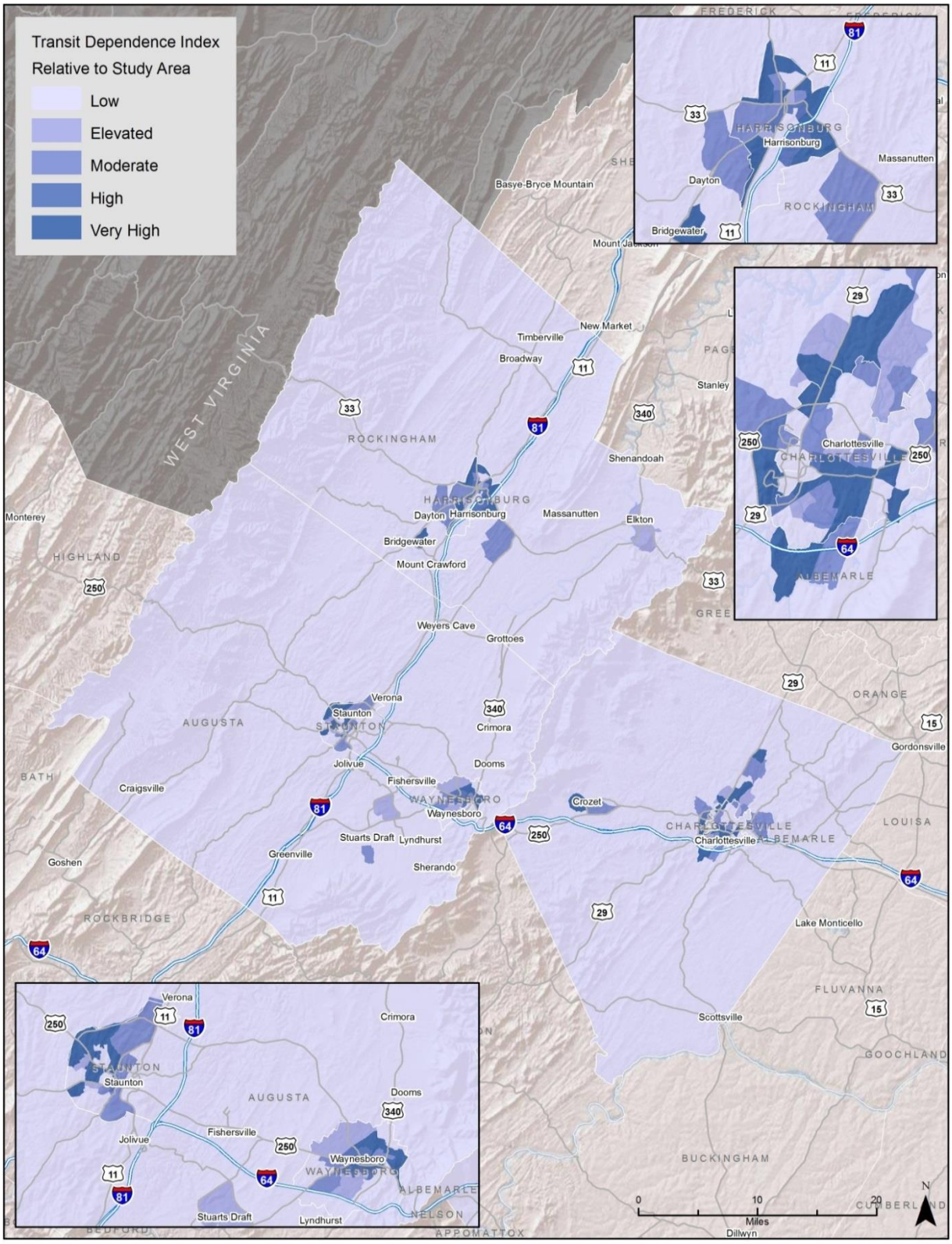
Source: U.S. Census, 2010.

Figure 1-20: Persons with Disabilities



Source: U.S. Census

Figure 1-21: Transit Dependence Index

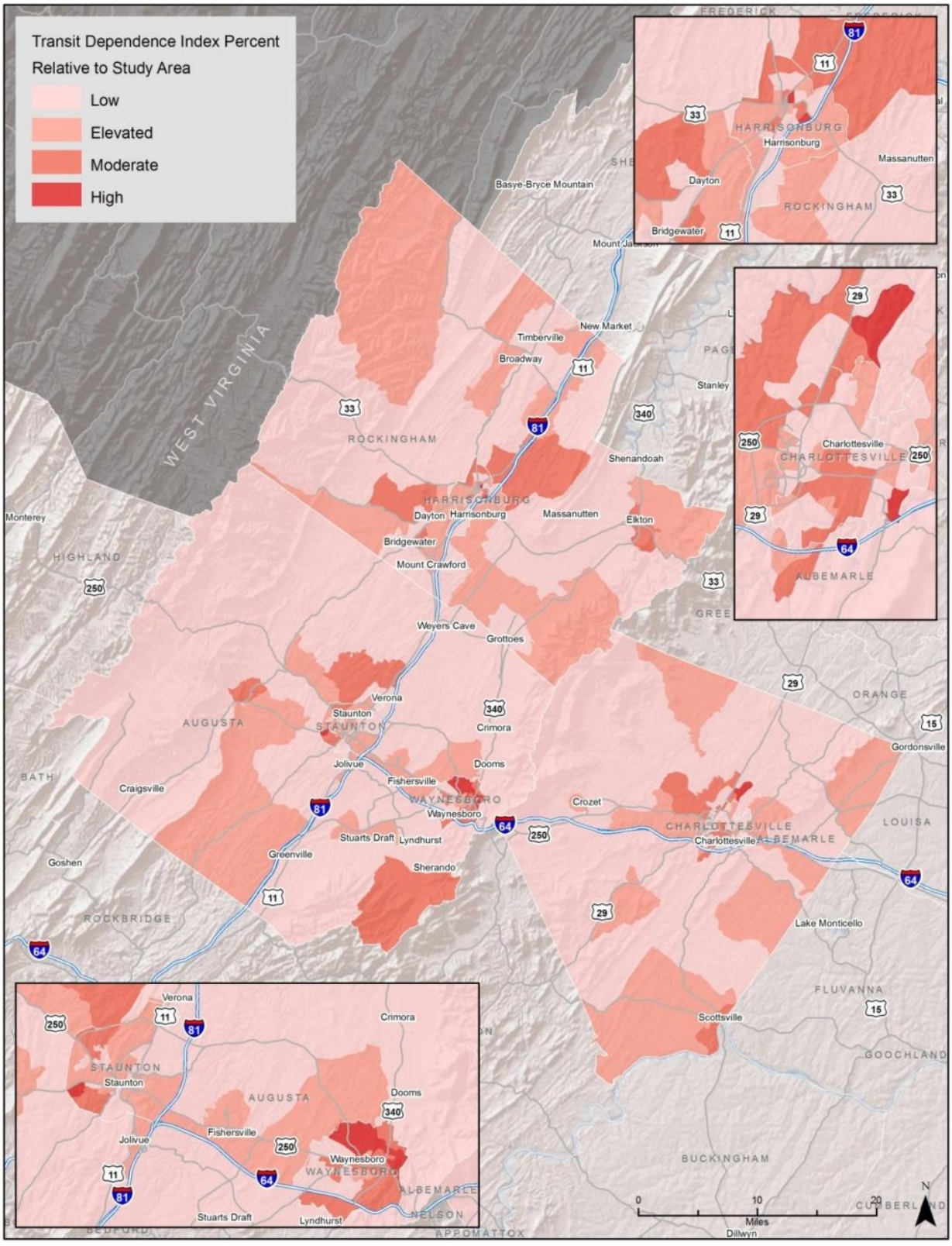


Source: U.S. Census, 2010.

Transit Dependence Index Percentage (TDIP)

The TDIP offers a complementary analysis to the TDI. Nearly identical to the TDI measure, the only difference between the two is the removal of the population density factor. Without population density, block groups highlight the degree or percentage of transit needy populations. Illustrated in Figure 1-22, the TDIP is not closely associated with the larger cities, as the TDI is, but rather dispersed throughout the region. As seen in the legend, none of the block groups in the region met the "very high" classification as none were more than twice the region's average. Areas with high TDIP scores are found around the Charlottesville vicinity, central Harrisonburg, Staunton, and Waynesboro.

Figure 1-22: Transit Dependence Index Percentage



Source: U.S. Census, 2010.

LAND USE ANALYSIS

Identifying land uses and major trip generators in the central Shenandoah region complements the above demographic analysis by indicating where transit services may be most needed. Trip generators attract people for various reasons, including work, school, and shopping. Many trip generators include common origins and destinations, for example, higher level educational institutions may be a destination for many students in the region but they also double as trip origins for students living on campus. This also holds true with medical facilities, shopping centers, non- profit and governmental agencies since many people see these as sources of goods and services but these also employment sites. As shown in Figure 1-23 the region's trip generators are largely found in Charlottesville, Harrisonburg, Staunton, and Waynesboro.

The study region includes a number of colleges and universities including Blue Ridge Community College (Weyers Cave), Bridgewater College (Bridgewater), Eastern Mennonite University (Harrisonburg), James Madison University (Harrisonburg), Mary Baldwin College (Staunton), Murphy-Deming College of Health Sciences (Fishersville), Piedmont Virginia Community College (Charlottesville), and the University of Virginia (Charlottesville).

James Madison University, one of the major anchor universities, is in the process of building a new convocation center, which will be an 8,500-seat structure and will host multiple types of events annually, including basketball games, public speakers, university convocation and graduation, high school graduation ceremonies, concerts, conventions, trade shows, and family entertainment options.

The region's major employers are listed in the employment profile section of this report. While large employers in the educational, governmental, and medical fields are typically located in the major population centers, many manufacturing and industrial facilities are located around the Harrisonburg, Staunton, and Waynesboro areas.

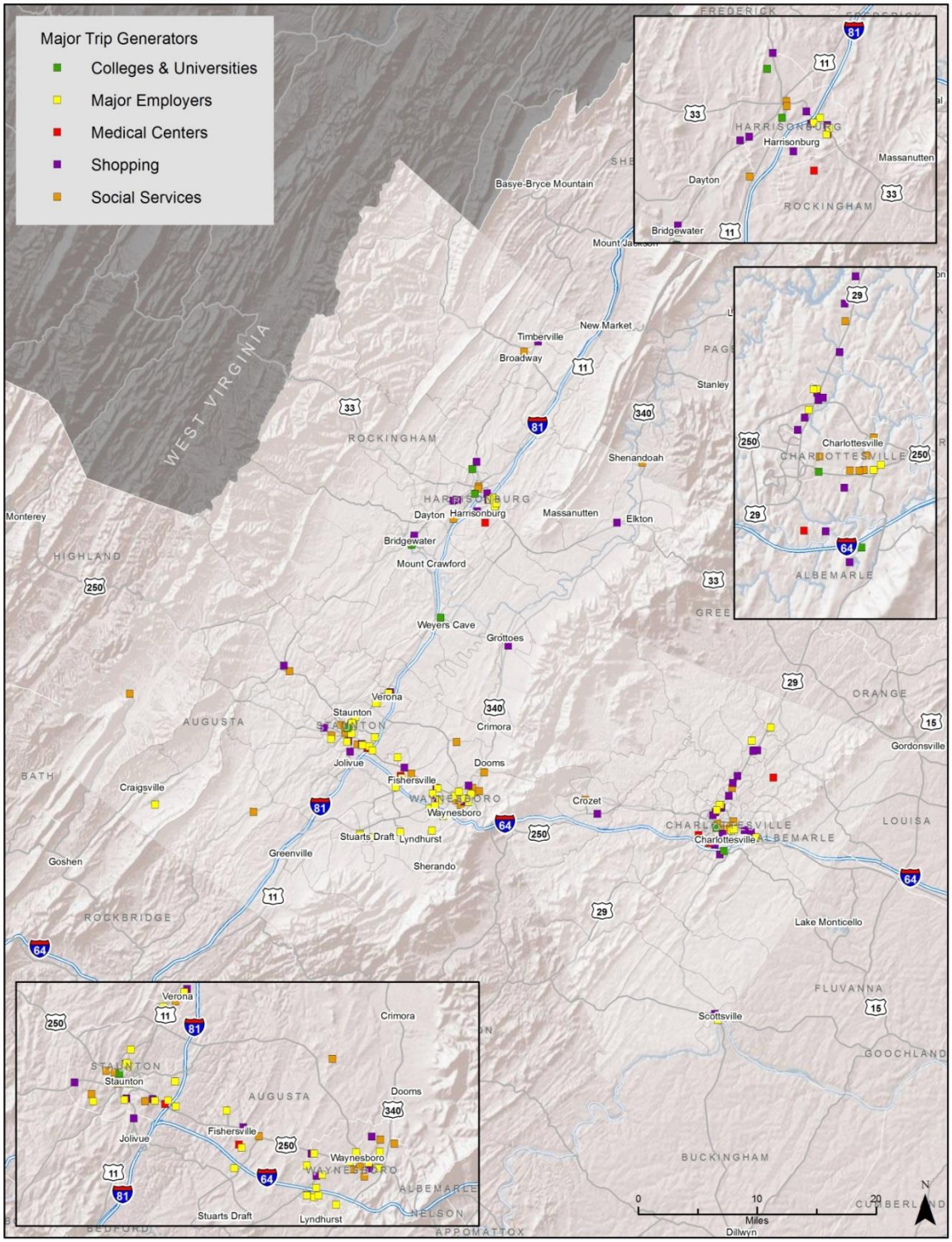
The region includes a number of local and regional medical centers including Augusta Health (Fishersville), Sentara Martha Jefferson Hospital (Charlottesville), Sentara Rockingham Memorial Hospital (Harrisonburg), UVA Medical Center (Charlottesville), UVA HealthSouth Rehabilitation Center (Charlottesville), and Western State Hospital (Staunton).

Shopping centers include retail destinations where residents may purchase essential items such as groceries or general merchandise; these include malls, large retail establishments, and large grocery stores. These locations are regionally dispersed, with many of the smaller towns also having a supermarket. Within the region, one of the largest agglomerations of this type of land use is along the U.S. 29 corridor north of Charlottesville.

Human service agencies provide assistance and resources to residents seeking support in a spectrum of issues ranging from childhood development to senior care. The majority of these

facilities are located in larger urban areas of the region; however, many of the smaller towns also have senior facilities and public libraries.

Figure 1-23: Major Trip Generators



REVIEW OF PREVIOUS SURVEYS, PLANS, AND STUDIES

This section of the needs assessment highlights a number of plans, surveys, and studies that have been adopted throughout the region, with a focus on whether and to what extent the need for inter-regional bus service is addressed within each.

Albemarle County Comprehensive Plan (2015)

While the need for intercity bus service is not mentioned in the Albemarle County Comprehensive Plan, there is a recommendation within the Transportation Section to study the implementation of an east-west passenger train through the Albemarle-Charlottesville region (Strategy 11c). The recommendation suggests that the proposed route would begin each morning in either Harrisonburg or Staunton and follow the Cardinal route on the Buckingham Branch line to Charlottesville, with intermediate stops in Waynesboro and Crozet. From the Charlottesville area, the train would continue east on the Buckingham Branch line, making stops in Gordonsville and Orange before switching to the Norfolk Southern Piedmont line (Route 29 North) for the trip north to Washington, D.C. and the Northeast Corridor.[1]

Central Shenandoah Planning District Commission (CSPDC) Transit Development Plan (2015)

While the focus of the CSPDC Transit Development Plan (TDP) is on sustaining and improving public transportation services within the context of the current service area, the need to conduct a study regarding the feasibility and implementation of inter-regional services is specifically addressed. Surveys conducted for the TDP, as well as stakeholder input, showed a desire for area residents to travel to and from Charlottesville from the study area.[2]

City of Charlottesville Comprehensive Plan (2013)

The Transportation Section of the City of Charlottesville's Comprehensive Plan does not specifically discuss inter-regional bus service through the study corridor, but it does discuss and advocate for a number of supportive strategies, including:

- Transportation demand management strategies;
- Incentives for employees who do not drive to work;
- Exploration of additional park and ride lots;
- Improving the regional transit system;

[1] Albemarle County Comprehensive Plan, Adopted June 10, 2015.
[2] Central Shenandoah Planning District Commission, Transit Development Plan, Final Report, August, 2015.

- Working with regional and state organizations to create a robust regional transit network; and
- Working to examine future demand for additional Amtrak service.[3]

Charlottesville- Albemarle MPO 2040 Long Range Transportation Plan (LRTP)

The 2040 LRTP for the Charlottesville-Albemarle MPO was adopted by the MPO Policy Board in 2014. There is one project outlined in the constrained LRTP that is relevant to the development of public transit services for the I-81/I-64 Corridor. This project is the implementation of peak hour commuter public transit service on 30-minute headways from Crozet to downtown Charlottesville.[4]

Charlottesville Area Transit - Transit Development Plan (2012-2017)

Charlottesville Area Transit's (CAT) Transit Development Plan focuses on transit projects for the City of Charlottesville and areas of Albemarle County. The recommendations do not address the need for service in the I-64 corridor, but do mention needs in the Route 250 Corridor in Albemarle County.[5]

Harrisonburg Department of Public Transportation (HDPT) Transit Development Plan (TDP) (2011)

The most recent HDPT TDP, completed in 2011, included a discussion concerning the need for intercity bus service in the corridor. The recommendations advocated for outreach to Megabus to serve JMU/ Harrisonburg, as well as for DRPT to consider the I-81/I-64 corridor for a Section 5311 (f) project. These recommendations recognized that intercity bus services were beyond the mission of HDPT, but that HDPT should make a direct connection to any intercity bus services that included Harrisonburg as a stop.[6]

Harrisonburg- Rockingham MPO 2035 Long Range Transportation Plan

Completed in 2012, the Harrisonburg-Rockingham MPO's (HRMPO) Long Range Transportation Plan (LRTP) focuses primarily on transportation needs within the City of Harrisonburg and Rockingham County. The need for regional bus transportation is not specifically articulated in the LRTP.[7]

[3] City of Charlottesville Comprehensive Plan, Transportation Section, Adopted by the City Council, August 2013.
[4] Charlottesville-Albemarle MPO 2040 LRTP, Adopted 2014.
[5] Charlottesville Area Transit, Transit Development Plan, Fiscal Years 2012-2017, May 2011.
[6] Harrisonburg Department of Public Transportation, Transit Development Plan, Final Report, 2011.
[7] Harrisonburg-Rockingham MPO 2035 Long Range Transportation Plan, Adopted March 15, 2012.

James Madison University Campus Master Plan (2009)

The transportation section of the JMU Campus Master Plan focuses on internal circulation patterns for cars, transit, bicycles, and pedestrians. Current and future infrastructure improvements, including parking needs, are discussed. There is not a discussion of inter-regional travel in the corridor.[8]

James Madison University Transportation Department Surveys (2015)

The JMU Transportation Department conducts an annual transportation survey for both faculty/staff and students. The results from the 2015 survey were provided to the study team for review. Information from these surveys that is relevant to the I-81/I-64 public transportation study is presented below.

Faculty Staff Transportation Survey

The 2015 JMU faculty/staff transportation survey received 553 responses. These responses indicated that the average commute distance for faculty/staff members is 11.5 miles, with a high value of 50 miles. Most survey respondents (75%) indicated that they make one round trip to campus each day, 15% indicated two trips; 2% indicated three trips; and 8% indicated more than three trips.

The most popular arrival time listed was between 7:00 a.m. and 8:00 a.m. (40%), followed by between 8:00 a.m. and 9:00 a.m. (30%). Departure times showed a similar grouped pattern, with 42% listing between 5:00 p.m. and 6:00 p.m. and 29% indicating between 4:00 p.m. and 5:00 p.m. The majority of survey respondents reported that they drive alone (84%), followed by walk (7%); rode a bike (4%), and carpool (3%). Most respondents reported that they do not generally move their cars during the day (78%).

When asked what transportation improvement would make them less likely to drive a car to campus, the most popular response was if "buses served where I live" (54%). There were several comments associated with this question, many of which indicated a need for flexible transportation (child care; the need to travel to meetings; family emergencies).

Blue Ridge Community College Survey – JMU Employees

JMU conducted an employee survey that focused on the Blue Ridge Community College (BRCC) Shuttle. This survey received 203 responses. Of the survey respondents, 63% reported that they were aware of the BRCC Shuttle, though just 17% reported they had used the service. The survey asked respondents to indicate how the shuttle could be improved. This was an open-ended question, receiving a variety of responses. The most frequently cited

[8] James Madison University, Campus Master Plan, 2009.

improvement focused on improving the schedule (a variety of requests); providing a faster return from JMU to Staunton; providing more information/advertising concerning the service; providing service to Charlottesville; providing a direct connection between Bridgewater and JMU; and providing a connection to Massanutten.

The survey also asked respondents how likely they would be to use regular regional bus service to commute to campus. There were 178 responses to this question, with 47% (83 responses) indicating they would be likely to use this type of service. Another 30% reported a neutral response; and 23% reported they were not likely to use this type of service. When asked what type of bus/shuttle they would be likely to use, service to Charlottesville was cited the most frequently, followed by service to Staunton.

Blue Ridge Community College Survey – JMU Students

The student version of the BRCC Shuttle survey received 212 responses. Of the survey participants, 42% reported that they had heard of the service and just 10% had used the service.

This survey asked participants to rank what cities in Virginia they would like to go to most often. Responses ranked travel to Northern Virginia, Charlottesville, and the Virginia Tech area the highest. The final question asked about specific destinations for bus service. The most frequent responses for this question were Amtrak and airports.

JAUNT Transit Development Plan (2012-2017)

JAUNT provides public transportation service in the primarily rural counties of Albemarle, Fluvanna, Louisa, Nelson and Buckingham, as well as serving as the ADA complementary paratransit provider for CAT in the Charlottesville area. JAUNT operates a fleet of 75 vehicles. The JAUNT TDP specifically mentions the need for service in the I-64 Corridor. Projects listed for implementation during the TDP time frame include increased service between Crozet and Charlottesville, as well as inter-jurisdictional service from Staunton and Waynesboro to Charlottesville via Crozet.[9] JAUNT currently offers two morning and two afternoon trips from Crozet to Charlottesville and two morning and three afternoon return trips from Charlottesville. The current service hours are not oriented to daily work commute needs. JAUNT has not implemented service from Staunton or Waynesboro.

Recent information collected from JAUNT indicated that the TDP is significantly outdated and JAUNT does not have current plans to expand the Crozet service. In FY2016 JAUNT provided 3,556 passenger trips to/from the Crozet area.

[9] JAUNT Transit Development Plan, Fiscal Years 2012-2017, June 2011.

Staunton – Augusta - Waynesboro MPO 2040 Long Range Transportation Plan

The Staunton-Augusta-Waynesboro MPO completed the 2040 LRTP in 2015. The lack of intercity bus service to provide connections outside the region is specifically cited in Chapter 3: Existing Conditions and Deficiencies. The LRTP adopted the CSPDC 2015 TDP by reference.[10]

University of Virginia Grounds Plan, 2008

The Master Plan for the University of Virginia is termed the "Grounds Plan." The Transportation Section contains seven strategies. While none of the strategies specifically mentions inter-regional bus service, one discusses transportation demand management (TDM) strategies and two mention the need for multi-modal connections.[11]

Virginia Intercity Bus Plan (2013)

The Virginia Intercity Bus Plan included a review of the federal, carrier, and state policies regarding intercity bus service and funding. A complete inventory of intercity bus service was conducted, including legacy carriers, new curbside carriers, and long-distance commuter bus services. The study described recent service changes and documented passenger facilities. A consultation process was conducted that included mailed surveys to private intercity carriers, regional planning organizations, and local transit providers. The study looked at demographic indicators, connectivity between high needs towns, and key statewide destinations. The costs, ridership, and revenues for potential new routes were estimated, and recommendations made regarding priority corridors for the use of Section 5311(f) funding. One of the priority corridors from the study is the I-81 corridor, from Blacksburg to Washington, D.C. Service on this corridor is likely to be implemented with funding assistance from the Section 5311 (f) program.

A second implementation phase of the study includes DRPT issuing Request for Proposals (RFP) to solicit an intercity bus operator for the priority corridors. The RFP was issued in February 2017, and DRPT is in the process of reviewing the proposals and choosing a contractor for the I-81 corridor, between Blacksburg and Washington, D.C.

Other Planning Documents

Project staff reviewed the comprehensive plans for the Cities of Staunton and Waynesboro, and Rockingham County, with a focus on reviewing the transportation sections of each plan.

[10] Staunton-Augusta-Waynesboro MPO 2040 Long Range Transportation Plan, December 2015.
[11] University of Virginia, Office of the Architect, Grounds Plan, 2008.

The transportation discussion for each of these plans did not contain references to improved inter-regional or intercity travel in the study corridor.

DEMAND ESTIMATES

Based on the survey results and the experience of the study team, inter-regional bus service in the I-81/I-64 corridor is likely to attract three primary user groups on a regular basis:

1) Commuters who travel the corridor regularly to get to work.
2) Intercity bus (Greyhound)/Amtrak riders who need to access a connection point.
3) People who do not or choose not to drive and need to access Charlottesville or Harrisonburg for medical, shopping, entertainment, and/or personal business reasons.

The demand for each of these markets is discussed individually below, with a summary table at the end that includes a demand estimate for inter-regional service through the corridor.

Commuters

An important user group for this type of service will likely be commuters, as they generally will make two passenger trips, Monday through Friday, throughout the year. In order to estimate how many people may choose to ride a commuter bus option through the corridor, the Longitudinal Employer Household Data (LEHD) and the UVA and JMU commute data, presented previously, were further analyzed.

Charlottesville Area Destinations

The first analysis considers all four of the potential Charlottesville area destinations, as well as the origins of Crozet and Ivy. The numbers of commuters from origins in the I-81/I-64 corridor to these four Charlottesville-area destinations, along with rider estimates for a number of possible commuter bus mode splits are provided in Table 1-22. The base data was drawn from the LEHD Local Origin Destination Employment Statistics (LODES), 2014 and UVA employee data.

Table 1-22: Number of Commuters and Potential Riders by Various Mode Splits- All Stops

	Number of Commuters per Work Destination from the Study Corridor				
Workers Home in Study Corridor [1]	**29 North Corridor**	**Downtown Charlottesville**	**UVA and Medical Center Area**	**Martha Jefferson Hospital /State Farm Area**	**Total**
Harrisonburg	25	31	68	18	142
Dayton	0	3	2	0	5
Bridgewater	2	6	6	3	17
Weyers Cave	2	6	4	4	16
Verona	9	12	17	7	45
Staunton	84	62	191	44	381
Jolivue	5	2	3	5	15
Fishersville	47	21	62	24	154
Stuarts Draft	38	31	52	36	157
Lyndhurst	14	4	8	8	34
Waynesboro	185	150	516	88	939
Crozet	395	199	231	98	923
Ivy	72	37	25	13	147
Total Employees from Corridor	**878**	**564**	**1185**	**348**	**2975**

(1) Not including Charlottesville origins. UVA data includes Harrisonburg, Staunton, and Waynesboro

Potential Total Riders to Each Destination from the Study Corridor by Various Mode Splits					
Inter-Regional Bus Mode Split	**29 North Corridor**	**Downtown Charlottesville**	**UVA/ Medical Center Area**	**Martha Jefferson Hospital /State Farm Area**	**Total**
2%	18	11	24	7	60
3%	26	17	36	10	89
4%	35	23	47	14	119
5%	44	28	59	17	149
6%	53	34	71	21	179
7%	61	39	83	24	208
8%	70	45	95	28	238
9%	79	51	107	31	268
10%	88	56	119	35	298

Given that Crozet and Ivy are relatively close to Charlottesville and will require a significant deviation for riders originating in the Shenandoah Valley, a second analysis was performed without the potential commuters from Crozet and Ivy. This analysis is shown in Table 1-23.

Table 1-23: Number of Commuters and Potential Riders by Various Mode Splits- without Crozet and Ivy Origins

	Number of Commuters per Work Destination from the Study Corridor				
Workers Home in Study Corridor [1]	29 North Corridor	Downtown Charlottesville	UVA/ Medical Center Area	Martha Jefferson Hospital/ State Farm Area	Total
Harrisonburg	25	31	68	18	142
Dayton	0	3	2	0	5
Bridgewater	2	6	6	3	17
Weyers Cave	2	6	4	4	16
Verona	9	12	17	7	45
Staunton	84	62	191	44	381
Jolivue	5	2	3	5	15
Fishersville	47	21	62	24	154
Stuarts Draft	38	31	52	36	157
Lyndhurst	14	4	8	8	34
Waynesboro	185	150	516	88	939
Total Employees from Corridor	**411**	**328**	**929**	**237**	**1905**

(1) Not including Charlottesville origins. UVA data includes Harrisonburg, Staunton, and Waynesboro.

Without Crozet and Ivy Potential Total Riders to Each Destination from the Study Corridor by Various Mode Splits					
Inter-Regional Bus Mode Split	29 North Corridor	Downtown Charlottesville	UVA/ Medical Center Area	Martha Jefferson Hospital /State Farm Area	Total
2%	8	7	19	5	38
3%	12	10	28	7	57
4%	16	13	37	9	76
5%	21	16	46	12	95
6%	25	20	56	14	114
7%	29	23	65	17	133
8%	33	26	74	19	152
9%	37	30	84	21	171
10%	41	33	93	24	191

In recognition of the more dispersed work locations in the Route 29 North destination, an additional analysis was conducted without the Route 29 North destination. These results are shown in Table 1-24.

Table 1-24: Number of Commuters and Potential Riders by Various Mode Splits- without the Route 29 North Destination

Without the Route 29 North Corridor				
	Number of Commuters per Work Destination from the Study			
Workers Home in Study Corridor [1]	Downtown Charlottesville	UVA/ Medical Center Area	Martha Jefferson Hospital /State Farm Area	Total
Harrisonburg	31	68	18	117
Dayton	3	2	0	5
Bridgewater	6	6	3	15
Weyers Cave	6	4	4	14
Verona	12	17	7	36
Staunton	62	191	44	297
Jolivue	2	3	5	10
Fishersville	21	62	24	107
Stuarts Draft	31	52	36	119
Lyndhurst	4	8	8	20
Waynesboro	150	516	88	754
Crozet	199	231	98	528
Ivy	37	25	13	75
Total Employees from Corridor	**564**	**1185**	**348**	**2097**

(1) Not including Charlottesville origins. UVA data includes Harrisonburg, Staunton, and Waynesboro.

Without the Route 29 North Corridor Potential Total Riders to Each Destination from the Study Corridor by Various Mode Splits				
Inter-Regional Bus Mode Split	Downtown Charlottesville	UVA Medical Center Area	Martha Jefferson Hospital /State Farm Area	Total
2%	11	24	7	42
3%	17	36	10	63
4%	23	47	14	84
5%	28	59	17	105
6%	34	71	21	126
7%	39	83	24	147
8%	45	95	28	168
9%	51	107	31	189
10%	56	119	35	210

The last commuter analysis using Charlottesville area destinations examined the potential demand without the Route 29 corridor destination and without Crozet and Ivy. This analysis is provided in Table 1-25.

Table 1-25: Number of Commuters and Potential Riders by Various Mode Splits- without Route 29 North Destination and without Crozet and Ivy Origins

Without the Route 29 North Corridor and Without Crozet and Ivy				
	Number of Commuters per Work Destination from the Study			
Workers Home in Study Corridor [1]	Downtown Charlottesville	UVA/ Medical Center Area	Martha Jefferson Hospital /State Farm Area	Total
Harrisonburg	31	68	18	117
Dayton	3	2	0	5
Bridgewater	6	6	3	15
Weyers Cave	6	4	4	14
Verona	12	17	7	36
Staunton	62	191	44	297
Jolivue	2	3	5	10
Fishersville	21	62	24	107
Stuarts Draft	31	52	36	119
Lyndhurst	4	8	8	20
Waynesboro	150	516	88	754
Totals	**328**	**929**	**237**	**1494**

(1) Not including Charlottesville origins. UVA data includes Harrisonburg, Staunton, and Waynesboro

Without the Route 29 North Corridor and Without Crozet and Ivy				
Potential Total Riders to Each Destination from the Study Corridor by Various Mode Splits				
Inter-Regional Bus Mode Split	Downtown Charlottesville	UVA Medical Center Area	Martha Jefferson Hospital /State Farm Area	Total
2%	7	19	5	30
3%	10	28	7	45
4%	13	37	9	60
5%	16	46	12	75
6%	20	56	14	90
7%	23	65	17	105
8%	26	74	19	120
9%	30	84	21	134
10%	33	93	24	149

Harrisonburg Destinations

When looking at the LEHD data for major employment block groups in the corridor, the fifth and sixth highest employment block groups were located in Harrisonburg. These are the JMU area and downtown Harrisonburg. The numbers of commuters from origins in the I-81/I-64 corridor to these two Harrisonburg destinations, along with rider estimates for a number of possible commuter bus mode splits are provided in Table 1-26.

Table 1-26: Number of Commuters and Potential Riders by Various Mode Splits- Harrisonburg Destinations

	Number of Commuters per Work Destination from the Study Corridor		
Workers Home in Study Corridor [1]	**Harrisonburg/JMU**	**Harrisonburg Downtown**	**Total**
Staunton	196	45	241
Waynesboro	48	19	67
Weyers Cave	66	18	84
Fishersville	32	10	42
Verona	32	10	42
Charlottesville	74	6	80
Totals	**448**	**108**	**556**

(1) Not including Harrisonburg or Rockingham County origins. Includes JMU Employee Data.

Potential Total Riders to Each Destination from the Study Corridor by Various Mode Splits			
Inter-Regional Bus Mode Split	**Harrisonburg/JMU**	**Harrisonburg Downtown**	**Total**
2%	9	2	11
3%	13	3	17
4%	18	4	22
5%	22	5	28
6%	27	6	33
7%	31	8	39
8%	36	9	44
9%	40	10	50
10%	45	11	56

These commuter data indicate that there is likely to be more commuter bus demand from the I-81/I-64 corridor to Charlottesville than in the reverse direction.

Commuter Ridership

To develop an estimate of commuter ridership traveling to work in Charlottesville, the study team used the commuter flows that are associated with the Charlottesville destinations of UVA; downtown Charlottesville; and Martha Jefferson Hospital/State Farm, excluding potential riders from Crozet and Ivy.

Based on a fairly conservative mode split of 3%, we can estimate that about 45 commuters would use the service daily. This level of ridership equates to 22,950 annual passenger trips from the eastbound commuter market. For the opposite flow direction, from Charlottesville to Harrisonburg, an estimated seventeen daily riders would use the service. This equates to 8,670 annual passenger trips.

Intercity Bus/Greyhound Service

In order to estimate the demand for intercity bus service in the corridor the study team used an intercity bus demand estimation model that was developed for the Transit Cooperative Research Program.[12] Characteristics used for the service assumed that it would be operated Monday through Friday by a local provider with no interline ticketing (the passenger would have to buy a separate ticket once they reach the Greyhound station), and no stop at a commercial airport. The model inputs include the population of the urbanized areas served (origin ends); number of stops; length of the route; whether it serves a correctional facility and/or a commercial airport; and whether or not it is operated by a national intercity bus carrier (Greyhound).

This model estimated the following intercity bus demand in the corridor:

- Regression Model: 6,800 annual passenger trips
- Trip Rate Model: 10,200 annual passenger trips
- Two method- average: 8,500 annual passenger trips

It should be noted that intercity bus service in the I-81 corridor from Blacksburg to Washington, D.C. via Dulles Airport is likely to be implemented in the future using Section 5311 (f) funding. DRPT is currently working on a request for proposals to implement service in the corridor. If intercity bus service is implemented through the I-81 corridor, including service to Staunton and Harrisonburg, demand for the inter-regional service to Charlottesville will likely decrease to about 5,000 annual passenger trips. This estimate assumes that 50% of

[12] Transit Cooperative Research Program, Project B-37, Estimation of Demand for Rural Intercity Bus Service Toolkit, prepared by KFH Group, Inc., 2011.

intercity bus riders from Harrisonburg would use the I-81 service; 50% of Staunton riders would use the I-81 service; and Waynesboro riders would likely use a service that connects to Charlottesville.

The current Charlottesville Greyhound bus and Amtrak arrival and departure times are provided in Table 1-27. This schedule will be consulted for the development of the service alternatives so that a meaningful connection to Greyhound bus and Amtrak rail services can be planned.

Table 1-27: Charlottesville Greyhound Bus and Amtrak Arrival and Departure Times

Carrier	Table	Schedule	Arrival	Departure	Origin	Destination	Notes
Greyhound	143	3925	12:55	End	Baltimore		Stops at Amtrak Charlottesville at 12:50
Greyhound	144	1510	4:20	4:30	Nashville	Richmond	
Greyhound	144	1511	6:45	6:55	Richmond	Nashville	
Amtrak	Crescent	20	7:09	7:09	New Orleans	New York	Daily
Amtrak	Thruway	6020		7:55		Richmond	Daily
Greyhound	144	1514	8:25	8:40	Nashville	Richmond	
Greyhound	143	3926		8:45		Baltimore	
Amtrak	NE Regional	176	8:52	8:52	Lynchburg	Boston	Monday-Friday
Amtrak	NE Regional	156	11:13	11:13	Lynchburg	Boston	Saturday-Sunday
Greyhound	144	1529	13:20	13:30	Richmond	Nashville	
Amtrak	Cardinal	51	13:43	13:52	New York	Chicago	Sunday, Wednesday, Friday
Amtrak	Cardinal	50	15:10	15:19	Chicago	New York	Wednesday, Friday, Sunday
Greyhound	143	3824		16:50		Baltimore	Stops at Amtrak Charlottesville at 17:00
Greyhound	144	1508	16:35	16:50	Nashville	Richmond	

Carrier	Table	Schedule	Arrival	Departure	Origin	Destination	Notes
Amtrak	NE Regional	147	19:01	19:01	Boston	Lynchburg	Saturday
Amtrak	NE Regional	145	19:16	19:16	Boston	Lynchburg	Sunday
Amtrak	NE Regional	171	19:23	19:23	Boston	Lynchburg	Monday-Friday
Amtrak	Thruway	6019	19:30	End	Richmond		Daily
Greyhound	143	3927	20:50	End	Baltimore		
Amtrak	Crescent	19	20:52	20:52	New York	New Orleans	Daily
Greyhound	144	1539	21:25	21:40	Richmond	Nashville	

Source: Greyhound and Amtrak timetables, June, 2016

Other Types of Trips

The third component of the demand for inter-regional bus service is associated with medical appointments, education, and personal errands. The commuter survey data indicated that about 22% of travel in the corridor is for these types of trip purposes. Given the estimates for work trips and intercity bus trips, the estimated demand for medical, education, and other trips is about 8,000 passenger trips annually (18% of the total).

Total Estimated Corridor Demand

The total estimated demand for inter-regional bus travel in the corridor is highlighted by the three markets in Table 1-28 below. These estimates contemplate the demand for a mature system; with first year demand likely to be about half of the total, as the system is implemented and the public become aware of the service. Service quality, reliability, and price will also affect the actual demand for service.

This level of annual demand, assuming 255 service days (Monday through Friday), suggests a daily demand of 175 passenger trips per day. To accommodate 175 daily passenger trips, the service will need to operate between four and five round trips each day.

Table 1-28: Estimated Annual Demand for Inter-regional Bus Service

Market	Estimated Annual Demand
Commuter Trips- both directions	31,620
Intercity Bus Trips	5,000
Other Trips	8,000
Total Estimated Demand	**44,620**

Note: Based on 255 annual service days

SUMMARY AND REVISION FROM TECHNICAL MEMORANDUM #1

This first chapter prepared for the Inter-Regional Public Transportation Feasibility Study has documented the need for service through the corridor for three primary user groups: commuters, travelers, and people with medical or other appointments. Demand estimates based on stakeholder, survey, demographic, and commuter data were developed. This revised chapter also includes the commuter data provided by UVA and JMU, which were not available at the time of the first draft of Technical Memorandum #1.

In addition, the original version of this chapter (Technical Memorandum #1, presented to the study committee on August 23, 2016) included preliminary service alternatives. In order to reduce redundancy within the final report, the discussion and analysis of the service and organizational alternatives has been moved to Chapter 2.

Chapter 2
Alternatives

INTRODUCTION

Based on feedback from the steering committee with regard to the need and demand information presented in Chapter 1, coupled with a discussion of preliminary alternatives, the study team developed the full range of service, organizational, and funding alternatives, which are the focus of Chapter 2. There is also a discussion of park and ride lot needs, which is important to the eventual development of public transportation service. The first draft of Chapter 2 was Technical Memorandum #2, which included some additional data from UVA that has been incorporated into Chapter 1, along with data received from JMU.

SERVICE ALTERNATIVES

The basic options for providing inter-regional service between Harrisonburg and Charlottesville are as follows:

1. Serve the full corridor and provide bi-directional service.
2. Serve the full I-81 corridor, provide bi-directional service, and skip the Martha Jefferson/State Farm area.
3. Serve the full corridor and focus on peak direction service only.
4. Originate trips from Weyers Cave rather than Harrisonburg.

These options are explored below.

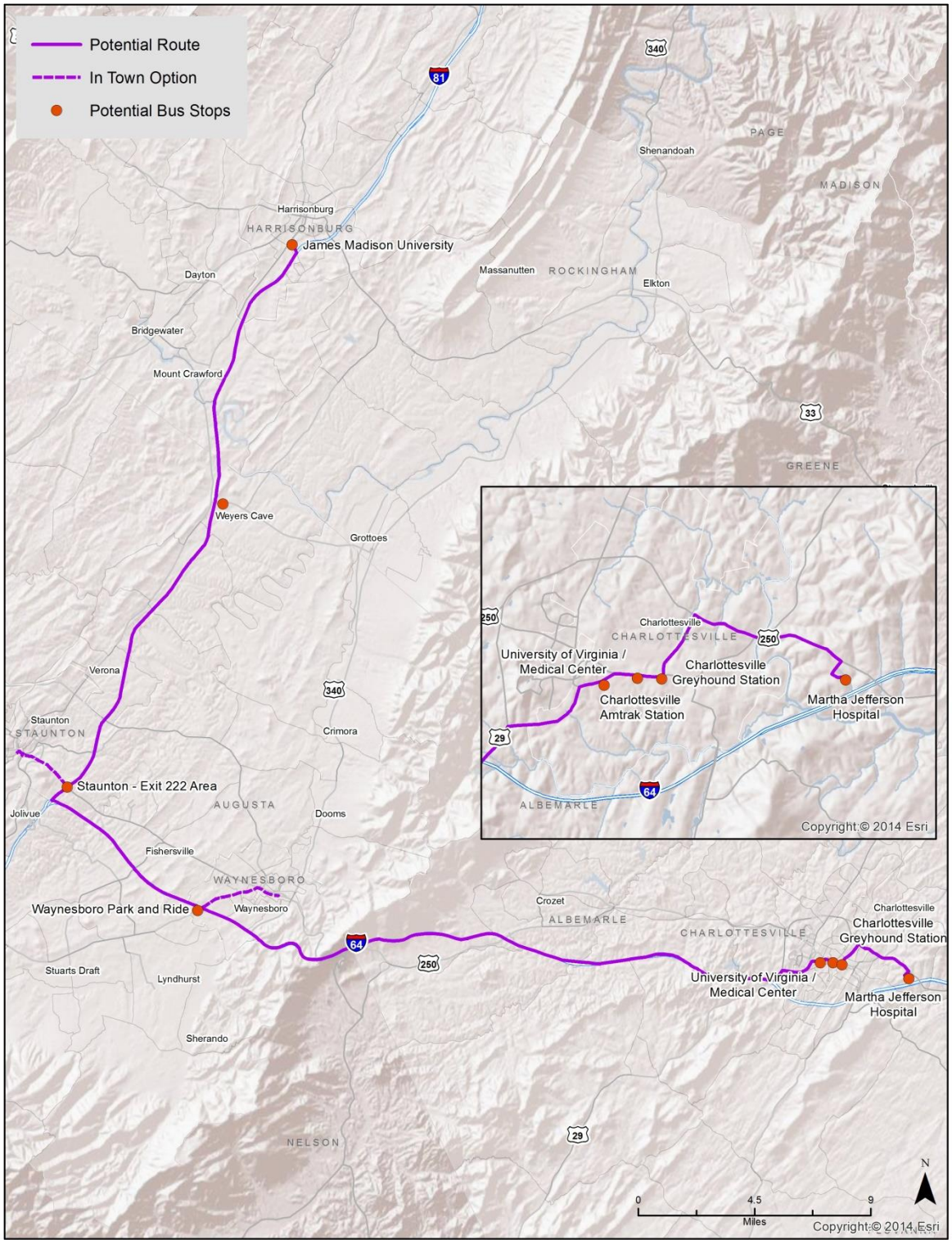
Option 1: Full Corridor, Bi-Directional Service

The first alternative includes providing service for the full corridor, originating in Harrisonburg, making stops in Weyers Cave, Staunton, Waynesboro and Charlottesville. The eastbound trip would focus on providing service from park and ride lot locations (to be determined) to three specific Charlottesville locations (the University of Virginia; downtown/ Greyhound/Amtrak- likely to include four actual passenger stops; and the Martha Jefferson/State Farm area). Weyers Cave has been included to ensure that service includes a rural component. This is important from a financing perspective, as there may be federal rural transit funding available to help fund the service.

Vehicles would make a return trip from Charlottesville to Waynesboro, Staunton, and Harrisonburg. The return trip for the morning will pick up at the three Charlottesville locations listed above, and then provide westbound service to Waynesboro (in-town); the

Staunton transit transfer location; and James Madison University. Figure 2-1 provides a map of the full corridor with the proposed stops.

Figure 2-1: Harrisonburg to Charlottesville, Full Travel Corridor



A sample schedule is provided as Table 2-1. The table was constructed to help determine the number of vehicle trips that would be possible, as well as to see if the schedule would need to have one or two buses assigned. The full corridor is about 63 miles one-way, depending upon the specific path of travel.

Table 2-1: Full Travel Corridor, Sample Schedule

Eastbound Stops	**A.M. Service**			**P.M. Service**	
	Bus 1	**Bus 2**	**Bus 1**	**Bus 1**	**Bus 2**
James Madison University- Godwin	5:00	6:30	10:00	3:00	5:25
Harrisonburg - Park and Ride, TBD	5:04	6:34	10:04	n.s.	n.s.
Weyers Cave - Park and Ride, TBD	5:18	6:48	10:18	n.s.	n.s.
Staunton - downtown	n.s.	n.s	n.s	3:45	6:00
Staunton - Park and Ride, TBD	5:36	7:06	10:36	n.s.	n.s.
Waynesboro Park and Ride	5:50	7:20	10:50	n.s.	n.s.
Waynesboro downtown	n.s.	n.s	n.s	4:10	6:25
University of Virginia - University Drive, Charlottesville	6:30	8:00	11:30	4:50	7:05
University of Virginia Medical Center, Charlottesville	6:32	8:02	11:32	4:52	n.s.
Downtown Charlottesville - Amtrak	**6:34**	**8:04**	11:34	**4:54**	7:10
Downtown Charlottesville - Greyhound	**6:36**	**8:06**	**11:36**	**4:56**	7:12
Martha Jefferson	6:50	8:20	11:50	5:10	n.s.
Westbound Stops	**A.M. Service**		**P.M. Service**		
	Bus 1	**Bus 2**	**Bus 1**	**Bus 2**	**Bus 1**
Martha Jefferson	6:55	n.s.	12:30	3:30	5:10
Downtown Charlottesville - Greyhound	**7:15**	**9:00**	12:45	3:45	**5:26**
Downtown Charlottesville - Amtrak	7:17	**9:02**	**12:47**	**3:47**	5:28
University of Virginia Medical Center, Charlottesville	7:19	9:04	12:49	3:49	5:30
University of Virginia - University Drive, Charlottesville	7:21	9:06	12:51	3:51	5:32
Waynesboro Downtown	8:01	9:46	1:30	n.s.	n.s.
Waynesboro Park and Ride	n.s	n.s.	1:42	4:31	6:12
Staunton Park and Ride	n.s	n.s.	1:55	4:43	6:25
Staunton Transit Center	8:26	10:12	2:05	n.s.	n.s.
Weyers Cave Park and Ride	n.s	n.s.	2:23	5:01	6:43
Harrisonburg Park and Ride	n.s	n.s.	2:35	5:15	6:57
JMU- Godwin	9:02	10:48	2:40	5:20	7:03

Bold Yellow shading denotes connection with Greyhound or Amtrak service within 2 hours.
n.s.: no service

The full travel corridor, with the schedule listed above, would require about 21 revenue hours per weekday, for an annual total of 5,355 revenue hours. The annual revenue service miles based on this schedule would be about 160,650. This schedule includes three morning and afternoon trips in the peak direction and two morning and afternoon trips in the non-peak direction. Two vehicles would be needed for service.

Advantages

- Connects two major state universities via public transportation.
- Provides a connection to Amtrak and Greyhound. Using the current Greyhound schedule, a "meaningful" connection (i.e. within two hours) is made on four of the five eastbound trips and three of the five westbound trips. Three eastbound trips and three westbound trips would connect to Amtrak schedules. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection to Greyhound is important, as it could allow for 100% federal funding for the trips that provide this connection. There may also be funding available via the Amtrak Thruway program.
- Provides commuter bus service from Central Shenandoah Valley to UVA facilities in Charlottesville.
- Provides commuter bus service from Charlottesville to Waynesboro, Staunton, and Harrisonburg.
- Provides direct service between Staunton and Harrisonburg and between Staunton and Waynesboro.
- Provides a mid-day trip.

Disadvantages

- The full bi-directional schedule is the most expensive option, requiring 5,355 annual revenue hours and just over 160,000 annual revenue miles.

Cost

- The cost will include annual operating expenses, as well as the cost of two vehicles (either purchased or included as part of an operating rate). There is a significant range of operating costs, depending upon the provider of service. These costs could range from a low of about $57 per hour (JAUNT) to $3.65 a mile (mid-range, VA Intercity Bus Plan). This range equates to $305,235 (low end) to $586,373 (high end). The high end

figure would include vehicles. A spare vehicle may also be needed, depending upon the existing vehicle resources of the service provider.

- A full coach vehicle is about $600,000 per vehicle. Smaller vehicles may also be a possibility, and these would be less expensive (in the $200,000 range).

Ridership

- The ridership estimate for full corridor service, with bi-directional service is 44,620. This level of demand equates to 175 passenger trips per service day. With ten one-way vehicle trips, the average load per vehicle would be between 17 and 18 passengers. It is likely that this load would not be spread evenly, with significantly more ridership experienced on the trips that serve the peak commute direction. It is possible that vehicles with 25-30 seats would be needed for peak trips.

Option 2: Full Corridor, Bi-Directional Service, No Martha Jefferson

The second option for inter-regional service is similar to Option 1; however, the Martha Jefferson/ State Farm area is eliminated from service. The LEHD data indicated significantly lower numbers of commuters traveling to this area of Charlottesville from the Shenandoah Valley, as compared to UVA and downtown.

The I-81 and I-64 portion of the route remains the same as Option 1, originating in Harrisonburg, and making stops in Weyers Cave, Staunton, Waynesboro and Charlottesville. The eastbound trip would focus on providing service from park and ride lot locations (to be determined) to two Charlottesville locations (UVA and downtown/ Greyhound/ Amtrak - likely to include four actual passenger stops). Weyers Cave has been included to ensure that the service includes a rural component. This is important from a financing perspective, as there may be federal rural transit funding available to help fund the service.

The vehicles would then make a return trip from Charlottesville to Waynesboro, Staunton, and Harrisonburg. The return trip for the morning will pick up at the Charlottesville locations listed above, and then provide westbound service to Waynesboro (in-town); Staunton transit transfer location; and JMU. Figure 2-2 provides a map of the full corridor without the Martha Jefferson stop.

A sample schedule is provided as Table 2-2. The table was constructed to help determine the number of vehicle trips that would be possible, as well as to see if the schedule would need to have one or two buses assigned. The full corridor without Martha Jefferson is about 59 miles each way. Without serving Martha Jefferson and following the sample schedule provided in Table 2-2, this service would require about fifteen revenue hours per weekday, for an annual total of 3,825. The annual revenue service miles based on this schedule would be about

135,405. This schedule has one less vehicle trip than the previous option, which reduces the service hours and miles. Two vehicles would be needed for service.

Figure 2-2: Harrisonburg to Charlottesville – No Martha Jefferson Stop

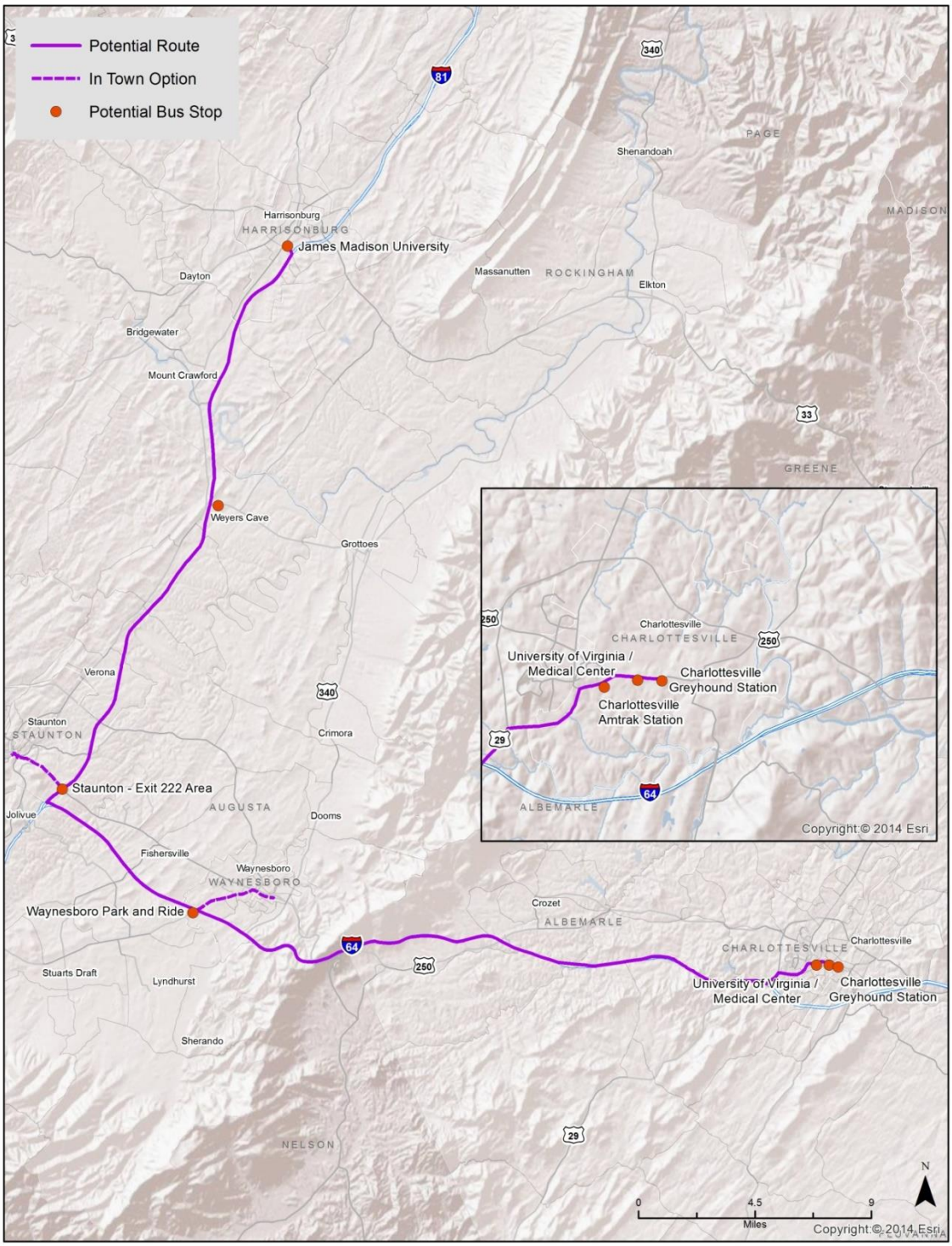


Table 2-2: Harrisonburg- Charlottesville – without Martha Jefferson- Sample Schedule

Eastbound Stops	A.M. Service			P.M. Service
	Bus 1	Bus 2	Bus 1	Bus 1
James Madison University- Godwin	5:00	6:30	9:00	5:15
Harrisonburg - Park and Ride, TBD	5:04	6:34	9:04	n.s.
Weyers Cave - Park and Ride, TBD	5:18	6:48	9:18	n.s.
Staunton – downtown	n.s.	n.s	n.s	6:00
Staunton - Park and Ride, TBD	5:36	7:06	9:36	n.s.
Waynesboro Park and Ride	5:50	7:20	9:50	n.s.
Waynesboro downtown	n.s.	n.s	n.s	6:20
University of Virginia - University Drive, Charlottesville	6:30	8:00	10:30	7:00
University of Virginia Medical Center, Charlottesville	6:32	8:02	10:32	7:02
Downtown Charlottesville - Amtrak	**6:34**	**8:04**	**10:34**	7:04
Downtown Charlottesville - Greyhound	6:36	8:06	10:36	7:06

Westbound Stops	A.M. Service		P.M. Service		
	Bus 1	Bus 2	Bus 1	Bus 2	Bus 1
Downtown Charlottesville - Greyhound	**7:00**	**8:30**	3:30	**5:00**	7:30
Downtown Charlottesville - Amtrak	7:02	**8:32**	3:32	5:02	**7:32**
University of Virginia Medical Center, Charlottesville	7:04	8:34	3:34	5:04	7:34
University of Virginia - University Drive, Charlottesville	7:06	8:36	3:36	5:06	7:36
Waynesboro Downtown	7:46	9:16	n.s	n.s	n.s.
Waynesboro Park and Ride	n.s	n.s.	4:16	5:46	8:16
Staunton Park and Ride	n.s	n.s.	4:30	6:00	8:30
Staunton Transit Center	8:12	9:42	n.s.	n.s.	n.s.
Weyers Cave Park and Ride	n.s	n.s.	4:48	6:18	8:48
Harrisonburg Park and Ride	n.s	n.s.	5:00	6:30	9:00
JMU- Godwin	8:50	10:20	5:05	6:35	9:05

Bold Yellow shading denotes connection with Greyhound or Amtrak service within 2 hours.
n.s.: no service

Advantages

- Connects two major state universities via public transportation.
- Provides a connection to Amtrak and Greyhound. Using the current Greyhound schedule, a "meaningful" connection (i.e. within two hours) is made on three of the four eastbound trips and three of the five westbound trips. Two eastbound trips and

two westbound trips would connect to Amtrak schedules. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection to Greyhound is important, as it could allow for 100% federal funding for the trips that provide this connection. There may also be funding available through the Amtrak Thruway program.

- Provides commuter bus service from Central Shenandoah Valley to Charlottesville and UVA.
- Provides commuter bus service from Charlottesville to Waynesboro, Staunton, and Harrisonburg.
- Provides direct service between Staunton and Harrisonburg.
- Provides direct service between Staunton and Waynesboro.
- Serves the highest demand destination areas of Charlottesville, reducing service hours and miles.

Disadvantages

- Does not provide service to the Martha Jefferson area, which was identified as work destination, both by survey participants and the LEHD data. This will reduce the demand for service by an estimated 4,400 annual trips (3,600 commute trips and 800 "other" trips).

Cost

- The cost will include annual operating expenses, as well as the cost of two vehicles (either purchased or included as part of an operating rate). There is a significant range of operating costs, depending upon the provider of service. These costs could range from a low of about $57 per hour (JAUNT) to $3.65 a mile (mid-range, VA Intercity Bus Plan). This range equates to $218,000 (low end) to $494,230 (high end). The high end figure would include vehicles.
- A full coach vehicle is about $600,000 per vehicle. Smaller vehicles may also be a possibility, and these would be less expensive (in the $200,000 range). A spare vehicle may also be needed, depending upon the existing vehicle resources of the service provider.

Ridership

- The ridership estimate without serving Martha Jefferson is 40,220 annual passenger trips. This ridership equates to 159 passenger trips per service day, for an average vehicle load of between seventeen and eighteen passengers per vehicle trip. It is likely that this load would not be spread evenly, with significantly more ridership experienced on the trips that serve the peak commute direction. It is possible that vehicles with 25-30 seats would be required for peak trips.

Option 3: Full Corridor, Peak Direction Only Service

The third service alternative includes providing service for the full corridor, originating in Harrisonburg, making stops in Weyers Cave, Staunton, Waynesboro and Charlottesville. The eastbound trip would focus on providing service from park and ride lot locations (to be determined) to three specific Charlottesville locations (UVA facilities; downtown/ Greyhound/ Amtrak- likely to include four actual passenger stops; and the Martha Jefferson/State Farm area). Weyers Cave has been included to ensure that service includes a rural component. This is important from a financing perspective, as there may be federal rural funding available to help fund the service.

Unlike Option 1, the vehicle would not include revenue service in the non-peak direction. The return trip would be deadhead, focusing on returning to Harrisonburg quickly for the next revenue service trip.

A sample schedule is provided as Table 2-3. The table was constructed to help determine the number of vehicle trips that would be possible, as well as to see if the schedule would need to have one or two buses assigned. The full corridor is about 63 miles one-way, depending upon the specific path of travel. This option totals 2,805 annual revenue service hours and 96,390 annual revenue service miles. Two vehicles would be needed for service.

Table 2-3: Full Service Corridor – Peak Direction Only

Eastbound Stops	**A.M. Service**		
	Bus 1	**Bus 2**	**Bus 1**
James Madison University- Godwin	5:00	6:30	8:30
Harrisonburg - Park and Ride, TBD	5:04	6:34	8:34
Weyers Cave - Park and Ride, TBD	5:18	6:48	8:48
Staunton – downtown	n.s.	n.s	n.s
Staunton - Park and Ride, TBD	5:36	7:06	9:06
Waynesboro Park and Ride	5:50	7:20	9:20
Waynesboro downtown	n.s.	n.s	n.s
University of Virginia - University Drive, Charlottesville	6:30	8:00	10:00
University of Virginia Medical Center, Charlottesville	6:32	8:02	10:02
Downtown Charlottesville - Amtrak	**6:34**	**8:04**	**10:04**
Downtown Charlottesville - Greyhound	**6:36**	**8:06**	10:06
Martha Jefferson	6:50	8:20	10:20
***Westbound* Stops**	**P.M. Service**		
	Bus 1	**Bus 2**	**Bus 1**
Martha Jefferson	1:30	3:30	5:00
Downtown Charlottesville - Greyhound	**1:45**	3:45	**5:15**
Downtown Charlottesville - Amtrak	1:47	**3:47**	5:17
University of Virginia Medical Center, Charlottesville	1:49	3:49	5:19
University of Virginia - University Drive, Charlottesville	1:51	3:51	5:21
Waynesboro Downtown	n.s	n.s.	n.s.
Waynesboro Park and Ride	2:31	4:31	6:01
Staunton Park and Ride	2:44	4:44	6:14
Staunton Transit Center	n.s.	n.s.	n.s.
Weyers Cave Park and Ride	3:03	5:03	6:33
Harrisonburg Park and Ride	3:17	5:17	6:47
JMU- Godwin	3:22	5:22	6:52

Bold Yellow shading denotes connection with Greyhound or Amtrak service within 2 hours.
n.s.: no service

Advantages

- Connects two major state universities via public transportation.
- Provides a connection to Amtrak and to Greyhound. Using the current Greyhound schedule, a "meaningful" connection (i.e. within two hours) is made on all three of the

eastbound trips and two of the three westbound trips. Two eastbound trips and one westbound trip would connect to Amtrak schedules. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection to Greyhound is important, as it could allow for 100% federal funding for the trips that provide this connection. There may also be funding available through the Amtrak Thruway program.

- Provides commuter bus service from the Central Shenandoah Valley to UVA.
- Serves the highest demand origin-destination pairs.
- Is less expensive than the bi-directional options.

Disadvantages

- Does not provide service oriented to the non-peak direction (i.e., from Charlottesville to the Shenandoah Valley). This will reduce the demand for service by an estimated 9,170 annual trips (8,670 commute trips and 500 "other" trips).
- Eliminating the non-peak direction will limit the usefulness of the service for non-work trips and Greyhound/Amtrak connections.

Cost

- The cost will include annual operating expenses, as well as the cost of two vehicles (either purchased or included as part of an operating rate). There is a significant range of operating costs, depending upon the provider of service. These costs could range from about $57 per hour (JAUNT) to $3.65 a mile (mid-range, VA Intercity Bus Plan). This range equates to $159,885 (low end) to $351,823 (high end). The high end figure would include vehicles. For this option, costs are likely to be a bit on the higher side on a per unit basis, as the provider will have to cover the non-revenue time miles, which will be significant.
- A full coach vehicle is about $600,000 per vehicle. Smaller vehicles may be a possibility, and these would be less expensive (in the $200,000 range). A spare vehicle may also be needed, depending upon the existing vehicle resources of the service provider.

Ridership

- The ridership estimate for peak-direction service only is 33,950 annual passenger trips. This level of ridership equates to 133 daily passenger trips. With six vehicle trips, the

average load for this option would be 22 passengers per vehicle trip. It is likely that this load would not be spread evenly, with significantly more ridership experienced on the trips that serve the peak time. It is possible that vehicles with 25-30 seats would be required for peak trips.

Option 4: Originate Service in Weyers Cave

The fourth alternative includes providing service for much of the corridor, but eliminating the segment between Harrisonburg and Weyers Cave. The purpose of this option is to reduce the time and miles associated with the service, while still retaining a park and ride option relatively close to Harrisonburg. The eastbound trip would focus on providing service from Weyers Cave, Staunton, and Waynesboro to three specific Charlottesville locations (UVA facilities; downtown/ Greyhound/Amtrak- likely to include four actual passenger stops; and the Martha Jefferson/State Farm area). Weyers Cave was chosen as the route origin to ensure that the service includes a rural component. This is important from a financing perspective, as there may be federal rural transit funding available to help fund the service.

The vehicles would make a return trip from Charlottesville to Waynesboro, Staunton, and Weyers Cave. The return trip for the morning would pick up at the three Charlottesville locations listed above, and then provide westbound service to Waynesboro (in-town); Staunton transit transfer location; and Blue Ridge Community College (BRCC) in Weyers Cave. Figure 2-3 provides a map of the full corridor with the proposed stops.

A sample schedule is provided as Table 2-4. The table was constructed to help determine the number of vehicle trips that would be possible, as well as to see if the schedule would need to have one or two buses assigned. The full corridor is about 52 miles one-way, depending upon the specific path of travel. The estimated annual revenue hours for this option are 3,634 and the estimated revenue miles are 106,000. Two vehicles would be required for service.

Figure 2-3: Weyers Cave to Charlottesville – Bi-Directional Service

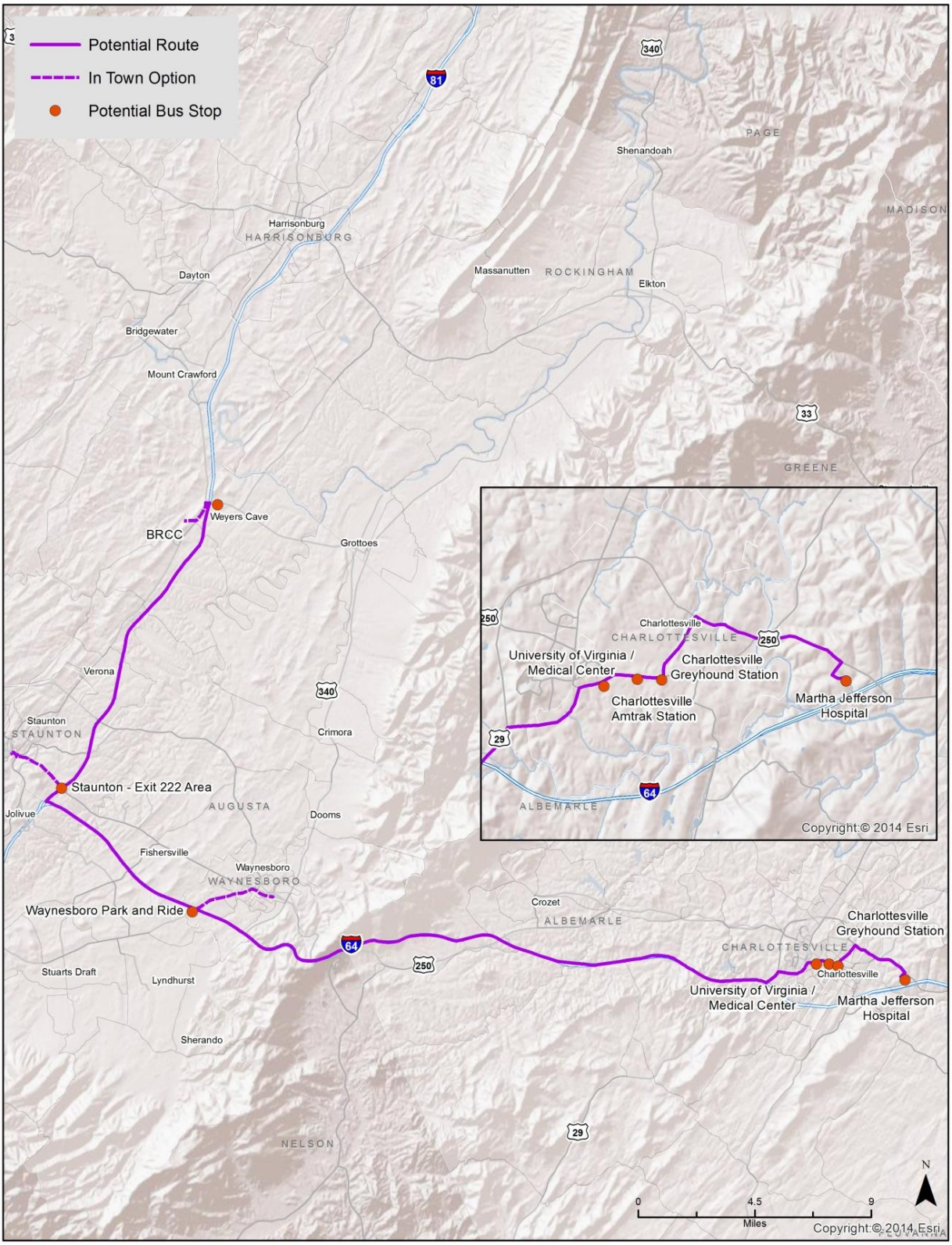


Table 2-4: Weyers Cave to Charlottesville – Bi-Directional Service- Sample Schedule

Eastbound Stops	A.M. Service			P.M. Service
	Bus 1	Bus 2	Bus 1	Bus 1
Blue Ridge Community College	n.s.	n.s.	9:10	5:10
Weyers Cave - Park and Ride, TBD	5:15	6:45	9:15	n.s.
Staunton - downtown	n.s.	n.s	n.s	5:35
Staunton - Park and Ride, TBD	5:33	7:03	9:33	n.s.
Waynesboro Park and Ride	5:53	7:23	9:53	n.s.
Waynesboro downtown	n.s.	n.s	n.s	6:00
University of Virginia - University Drive, Charlottesville	6:33	8:03	10:33	6:40
University of Virginia Medical Center, Charlottesville	6:36	8:06	10:36	6:42
Downtown Charlottesville - Amtrak	6:38	**8:08**	**10:38**	6:44
Downtown Charlottesville - Greyhound	**6:40**	**8:10**	10:40	6:46
Martha Jefferson	6:55	8:25	10:55	n.s.
Westbound Stops	**A.M. Service**		**P.M. Service**	
	Bus 1	**Bus 2**	**Bus 1**	**Bus 2**
Martha Jefferson	7:00	n.s.	3:15	5:10
Downtown Charlottesville - Greyhound	**7:15**	**8:45**	3:30	**5:26**
Downtown Charlottesville - Amtrak	**7:17**	8:47	**3:32**	5:28
University of Virginia Medical Center, Charlottesville	7:19	8:49	3:34	5:30
University of Virginia - University Drive, Charlottesville	7:21	8:51	3:36	5:32
Waynesboro Downtown	8:01	9:31	n.s.	n.s.
Waynesboro Park and Ride	n.s.	n.s.	4:16	6:12
Staunton Park and Ride	n.s	n.s.	4:36	6:25
Staunton Transit Center	8:26	9:56	n.s.	n.s.
Weyers Cave Park and Ride	n.s	n.s.	4:56	6:43
Blue Ridge Community College	8:50	10:20	5:01	6:48

Bold Yellow shading denotes connection with Greyhound or Amtrak service within 2 hours.
n.s.: no service

Advantages

- Connects Blue Ridge Community College and UVA.
- Provides a connection to Amtrak and Greyhound. Using the current Greyhound schedule, a "meaningful" connection (i.e. within two hours) is made on all three

eastbound trips and two of the three westbound trips. Two eastbound trips and one westbound trip would connect to Amtrak schedules. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection to Greyhound is important, as it could allow for 100% federal funding for the trips that provide this connection. There may also be funding available through the Amtrak Thruway program.

- Provides commuter bus service from Central Shenandoah Valley to UVA.
- Serves the highest demand origin-destination pairs.
- Is less expensive than the full-corridor options.

Disadvantages

- Does not connect to Harrisonburg, which eliminates the JMU connection for the service. This will eliminate the option for people who want to use the service to get to work in Harrisonburg, and also reduce the peak-direction ridership.
- This option eliminates the connection of two major state universities.

Cost

- The cost will include annual operating expenses, as well as the cost of two vehicles (either purchased or included as part of an operating rate). There is a significant range of operating costs, depending upon the provider of service. These costs could range from about $57 per hour (JAUNT) to $3.65 a mile (mid-range, VA Intercity Bus Plan). This range equates to $207,124 (low end) to $387,192 (high end). The high end figure would include vehicles.
- A full coach vehicle is about $600,000 per vehicle. Smaller vehicles may be a possibility, and these would be less expensive (in the $200,000 range). A spare vehicle may also be needed, depending upon the existing vehicle resources of the service provider.

Ridership

- The ridership estimate for this option is 30,930 annual passenger trips. This level of ridership equates to 121 passenger trips per service day and an average vehicle load of fifteen passengers. It is likely that this load would not be spread evenly, with significantly more ridership experienced on the trips that serve the peak commute direction. It is possible that vehicles with 25-30 seats would be required for peak trips.

Other Options

The study team considered options for the service to originate in Staunton and/or Waynesboro, but neither of these options provided a logical rural service stop, which is likely to be needed to be considered to access federal rural transit funding through the Virginia Department of Rail and Public Transportation (DRPT).

Options 1 through 4 provide the base options for service through the corridor that include a rural stop. Elements of these options can be re-combined using different service parameters to form additional alternatives, if desired by the stakeholder group. For example, BRCC is only served by Option 4, and it may be desirable to serve this destination within the context of the other options as well. It should be noted that BRCC is currently served by BRITE, with connections to Staunton and the rest of the BRITE system, as well as to JMU and the HDPT system.

In addition, a service design could be phased-in, starting with a lower level of service that is geared to serve the highest demand origin-destination pairs with fewer operating hours (such as peak direction service only). This would be a lower cost way to test demand for service as compared to implementing the full corridor, bi-directional service; however, this option would reduce the usefulness of the service for non-work trips and Greyhound/Amtrak connections.

FARES

The survey data indicated that a relatively low fare is desired by potential riders, with 42% indicating $3.00 or less each way, followed by $4.01 -$5.00 (19%); $3.01-$4.00 (16%); and $5.01 to $6.00 (14%). These data suggest that the one-way fare will need to be relatively low.

Base fares provided by other inter-regional and commuter bus services in Virginia and elsewhere are documented below:

- Smart Way (Blacksburg to Roanoke) - $4.00 each way
- Martz Bus (Fredericksburg – Washington, DC) - $40 per round trip (unsubsidized)
- Virginia Regional Express (VRE) train – Fredericksburg to Washington, D.C. - $11.55 each way (cash fare)
- JAUNT service between Nelson County and Wintergreen resort - $ 4.00 each way
- JAUNT service between Buckingham County and Charlottesville - $3.50 each way
- Loudoun County Transit – Leesburg to Washington, D.C. - $9.00 each way SmarTrip; $10.00 each way cash
- Omniride (Potomac and Rappahannock Transportation Commission - PRTC) - Prince William County to Washington, D.C. - $8.75 cash; $6.50 SmarTrip
- Greater Richmond Transit Company (GRTC) Petersburg Express - $3.50 each way

- Maryland Transit Administration (MTA) Commuter Bus 505 (Hagerstown to Shady Grove; Hagerstown to Rock Spring Business Park) - $4.00 to $7.00 each way, depending upon zone.
- Shuttle-bus Zoom – Portland, Maine – connecting Biddeford to Portland – between $4.00 and $5.00 each way.

These fares show that the long distance commute fares into Washington, D.C. from exurban Virginia counties are relatively expensive when compared to the long distance commute fares to smaller cities in Virginia.

For financial planning purposes, a fare of $5.00 each way between Harrisonburg/Weyers Cave and Charlottesville; and $4.00 each way between Staunton/Waynesboro and Charlottesville is proposed. We have reduced this figure to an average fare of $3.00 per passenger trip to develop financial estimate, assuming that multi-trip discounts may be offered.

OPERATING AND CAPITAL COSTS AND POTENTIAL FUNDING

Operating Costs

As discussed with each service option, the actual cost to provide service could vary considerably, depending upon the type of service provider (local versus intercity), and the service option chosen. The range of estimated annual operating costs, along with estimates of fare box revenue, and federal and state funding possibilities are provided in Table 2-5.

This table was created in order to develop an estimate with regard to the amount of local match for operating that will likely be needed. As is shown in the table, the annual operating cost estimates include a range of local match requirements, from a low of $58,084 to a high of $110,808. It should be noted that the final estimates provided in Chapter 3 are higher, as they include the provision of vehicles.

In addition, each option provides several opportunities to connect in a meaningful way to current Greyhound and Amtrak schedules that service Charlottesville. This may provide an option for service to be considered for Greyhound's rural connection program, which assists in paying the local match for intercity bus service. The Amtrak connection may also provide an opportunity to participate in the Amtrak Thruway program, which also provides funding. Other sources of local match that could be pursued, depending upon the alternative chosen, include:

- University of Virginia
- James Madison University
- City of Harrisonburg
- Rockingham County

- Augusta County
- City of Staunton
- City of Waynesboro
- Major employers and health care facilities

Table 2-5: Estimated Annual Operating Parameters and Potential Funding Splits

	Estimated Annual Operating Parameters			Estimated Funding Splits					
Options	Service Hours	Revenue Miles	Operating Costs	Farebox Revenue	Federal S.5311	State Assistance	Local Assistance	Estimated Annual Ridership	Cost Per Trip
Option 1: Full Corridor, Bi-Directional Service	5,355	160,650	$ 444,465	$ 118,560	$ 162,953	$ 52,145	$ 110,808	44,620	$ 9.96
Option 2: Harrisonburg - Charlottesville, No Martha Jefferson	3,825	135,405	$ 317,475	$ 120,660	$ 98,408	$ 31,490	$ 66,917	40,220	$ 7.89
Option 3: Full Service Corridor - Peak Direction Only	2,805	96,390	$ 266,475	$ 101,850	$ 82,313	$ 26,340	$ 55,973	33,950	$ 7.85
Option 4: Weyers Cave - Charlottesville	3,634	106,000	$ 301,622	$ 92,790	$ 104,416	$ 33,413	$ 71,003	30,930	$ 9.75
Notes:	A mid-range cost per hour of $83 was used for these estimates for Options 1,2, and 4. $95 per hour was used for Option 3.								
	A fare of $3.00 each way was used to estimate farebox revenue. This is lower than the proposed fare and was used to account for multi-trip discounts that may potentially be offered.								

Capital Expenses

The capital expenses associated with operating service may include vehicles, waiting shelters, and bus stop signs. Vehicles could be provided by a contractor or leased, which would raise the operating cost per hour or mile, or they could be purchased using federal and state grant funds by one of the public stakeholder organizations.

There are two general classes of vehicles to consider for this market. The first is the traditional intercity coach that is fully equipped with seats that recline, a bathroom, lighting, power outlets, Wi-Fi, and luggage storage. These vehicles usually have a 55-seat capacity, which may not be needed for this service. These vehicles cost about $600,000 each.

A smaller vehicle may be viable for this service and could be equipped with most of the features of the intercity coach for significantly less dollars. The major differences would be seating capacity (28) and lack of a bathroom. These smaller vehicles cost about $185,000. An example of this type of vehicle is shown in Figure 2-4.

Figure 2-4: Greyhound Connect Vehicle

Interior

Luggage Compartment

Each of the alternatives discussed requires at least two vehicles, largely due to the length of the full round-trip for any of the service options discussed. A spare vehicle will also be needed, but maybe available through existing service fleets (depending upon the provider). If the service is provided by one of the local transit service providers, these vehicles would need to be leased or purchased. If the service is provided by a contractor, it is likely the contractor would provide the vehicles, and include the cost of the vehicle within the hourly or mileage rate for service. The vehicle options and potential funding splits are provided in Table 2-6 below.

Table 2-6: Estimated Vehicle Costs and Funding

Type of Vehicle	Total Cost Per Vehicle	Number of Vehicles	Total Cost	Federal	State	Local
Intercity Coach Vehicle	$ 600,000	2	$ 1,200,000	$ 960,000	$ 192,000	$ 48,000
Smaller Intercity Connector Vehicle	$ 185,000	2	$ 370,000	$ 296,000	$ 59,200	$ 14,800

PARK AND RIDE NEEDS

An important consideration for the implementation of service will be the specific stop locations. As noted by survey participants, there is a need for additional and better quality park and ride lots through the corridor.

Harrisonburg Park and Ride

A park and ride lot in Harrisonburg will be needed, located as close as possible to JMU, while still allowing quick access to I-81. Field research indicated that there currently is a JMU lot (Lot R11) directly adjacent to the I-81 Exit 245 interchange. This lot is shown in Figures 2-5 and 2-6 below. This lot would be good choice for the inter-regional bus stop as it already has a shelter and there is a traffic light at the entrance. Permission from JMU will be needed in order for this lot to be used for a commuter park and ride lot. Field research indicated that the lot is lightly used currently.

Discussions with stakeholders from Harrisonburg indicated that the Exit 245 interchange is scheduled to be re-configured, at which time some of the land used by this lot will no longer be available; however, a smaller park and ride lot is a part of the VDOT plan.

Figure 2-5: Aerial View of JMU's Lot R11

Figure 2-6: Photo of JMU's Lot R11

Weyers Cave Park and Ride

Currently there is not a public park and ride lot in Weyers Cave. Stakeholder input indicated there is a fenced gravel lot that has been used in the past as an informal park and ride lot, located along Weyers Cave Road, at Exit 235 of I-81 (VA Route 256). An aerial view of the proposed site is provided in Figure 2-7. This location was identified in VDOT's Park and Ride Investment Strategy (2013). The project sheet published by VDOT for this location described the construction of a new twenty space lot and estimated the cost to be $200,000.[1]

This location would be ideal, as it is very close to the interchange with I-81. A Smart Scale project was submitted for this project, in conjunction with a road widening project. It was not funded during the FY2017 round of project reviews.

If this location is not available, additional options could include the businesses adjacent to the intersection of Weyers Cave Road and Route 11, or Blue Ridge Community College. As previously mentioned, the inclusion of a park and ride service location that is located outside of an urbanized area is important from a federal funding perspective. Weyers Cave is in Augusta County.

Figure 2-7: Potential Location for Weyers Cave Park and Ride Lot

[1] Virginia Department of Transportation, Park and Ride Investment Strategy, 2013. Project sheets published at: http://www.virginiadot.org/travel/parkride/investment_strategies.asp.

Staunton Park and Ride

An important issue for any service that involves the Staunton area is the siting of a park and ride location. To minimize time for commuters, a park and ride site in the Staunton area will need to be as close as possible to I-81.

The City of Staunton is currently working with a developer on a plan for a significant project, Staunton Crossing, which is near the interchange of U.S. 250 and I-81. The city has submitted a Smart Scale application to VDOT for road improvements and a park and ride lot along VA Route 1426, which is adjacent to the Staunton Crossing development. This area would be a good location for an inter-regional stop.

The following are excerpts from a City of Staunton press release dated October 22, 2015, which describes the development:

"Staunton Crossing is the 278-acre former site of Western State Hospital (WSH). The City and Staunton's Economic Development Authority (EDA) entered into an agreement with the Virginia Department of Behavioral Health and Developmental Services and the Virginia Department of General Services to purchase the acreage for redevelopment in 2009. The new WSH was not yet constructed on its new site at the time of the agreement. Once the existing hospital was vacated in October 2013, the City was able to begin tangible preparations at Staunton Crossing for new development. The property is owned by the EDA and features nearby interstate access to both I-81 and I-64 and a mile of interstate frontage. Long range development plans allow for a wide variety of uses, including retail, hospitality and light industrial."

"'Working with Staunton's Economic Development Authority (EDA), the land is under contract by Staunton Crossing Partners, LLC. An agreement between the EDA and Staunton Crossing Partners, LLC sets the purchase price at $1.25 million. The developer intends to locate a mix of retail and commercial businesses on the site, utilizing its proximity to the intersections of Interstates 81 and 64 and U.S. Route 250."

If inter-regional service were to be implemented prior to the development of a dedicated park and ride lot, some of the large retailers along Route 250 could be approached to see if a portion of an existing retail parking lot could be used for a park and ride lot and inter-regional bus stop.

Waynesboro Park and Ride

There were a number of comments provided by park and ride users that suggested a need for improvements for the Waynesboro park and ride lot. These improvements should include the following: bus stop, shelter, and turn-around location; improved paving and striping; lighting; signage; and trash removal. The need for improvements for the Waynesboro park and ride lot

was included in the VDOT Park and Ride Investment Strategy.[2] The project sheet describes the project as a park and ride lot expansion, to include the addition of twenty spaces, as well as upgraded paving and lighting.

The CSPDC has recently submitted a Smart Scale application to improve the Waynesboro park and ride lot. This application requested funding to complete the following improvements:[3]

- Addition of 55 spaces
- Addition of a bus stop, shelter(s), and bus zone/pull off
- Lot resurfacing and striping
- Parking lot lighting
- Electric vehicle charging station
- Improved pedestrian access to adjacent shopping and dining locations
- Landscaping and buffering

The total grant request was $2,197,261.

AMENITIES

Potential riders indicated that the most important amenity would be a guaranteed ride home, followed by Wi-Fi, lighting, and power outlets. It should be noted that guaranteed ride home is already available in the corridor for car and vanpoolers through the regional Rideshare program.

ORGANIZATIONAL ALTERNATIVES

In order to initiate service in the corridor, it will be necessary for an organization to provide a leadership role, which will involve building consensus among stakeholders; refining the details of the proposed service; working with Greyhound and Amtrak; applying for and managing federal and state grants; and providing oversight and monitoring the program once implemented.

The CSPDC has served in this capacity for development of this feasibility study, and the continued leadership of the CSPDC could be a viable option for oversight of the program once implemented. There are other potential organizational alternatives as well. In addition, under any scenario, it will be important for a regional stakeholder group to continue to be involved with the service. Each organizational alternative is described below.

[2] [2] Virginia Department of Transportation, Park and Ride Investment Strategy, 2013. Project sheets published at: http://www.virginiadot.org/travel/parkride/investment_strategies.asp.

[3] CSPDC, information provided 10/10/2016.

Regional Stakeholder Committee

In order to ensure that the interests of all regional stakeholders continue to be considered, it is recommended that some version of the existing study committee be formalized to provide feedback on the service and direction with regard to future service initiatives. At a minimum this group should include the public transit providers in the corridor, UVA, JMU, and any local funding partners.

CSPDC Provides Grant Administration – Service is Contracted

Over the past several years the CSPDC involvement in public transportation has changed significantly, from that of a planning and advisory role, to the role of full public transportation grantee. Beginning in FY2018, the CSPDC will be the local grantee for both the urbanized area public transportation program and the rural area public transportation program. The CSPDC recently conducted a procurement process to choose a contractor for BRITE service for the next five years. The CSPDC has also recently become the local steward of the transit facility in Fishersville that was constructed with federal, state, and local funds.

Given that the CSPDC is already serving in a transit oversight role for public transportation in the Central Shenandoah region, and has taken a leadership role in conducting this feasibility study, a logical alternative is for the agency to also serve in a grant administration and oversight capacity for any new inter-regional services that are implemented.

Under this scenario the CSPDC would apply for grant assistance from DRPT to implement inter-regional service. If funded, the CSPDC would then conduct a procurement process to choose a contractor to operate service, similar to how they manage the current public transportation program in the region.

It should be noted that it is not feasible for two separate contractors to operate out of the CSPDC facility in Fishersville. If a separate contractor is chosen to operate the inter-regional service, they will need to find a different location from which to operate.

In future years, after the 2017-2022 BRITE contract period, it may be possible to bid the services together.

Advantages

- The CSPDC has already taken a leadership role through the development of the feasibility study.
- The CSPDC is an existing transit grantee in the region for the Section 5307 urban transit program and, beginning in FY2018 will also be the local sub-grantee for the Section 5311 rural transit program.

- The CSPDC is centrally located within the primary origin area for service.

Disadvantages

- It may be more expensive for the CSPDC to implement the service in comparison with an existing local transit service provider, as the total cost of service would include both CSPDC costs, the operator's costs, and the cost of conducting a procurement process.

- The actual cost for the operation of service would not be known prior to the procurement process, which may be an issue if service proposals from potential contractors are higher than anticipated.

Cost

- Currently CSPDC expenses for grant administration and project oversight are about $8.50 per revenue hour. Assuming the expenses would be similar to provide these services for an inter-regional transit program, the annual cost would be between $24,000 and $47,000 depending upon the size of the program implemented. These expenses would be in addition to the expenses of the service contractor.

City of Harrisonburg Provides Grant Administration and Provides Service

Another option to consider is for the Harrisonburg Department of Public Transportation (HDPT) to serve as the grantee for the service, as well as operating the service. HDPT provides public transportation service for the city, including a significant level of service oriented to the needs of JMU. HDPT also operates two limited service shuttle routes to Dayton and Bridgewater in Rockingham County. The City of Harrisonburg has operated the transit program since 1976 and recently completed construction of a new operations and maintenance facility.

Advantages

- HDPT has several years of experience managing federal and state transit grants.

- Three of the four service alternatives include starting the route in Harrisonburg, which would minimize non-revenue vehicle miles if HDPT were to be the service provider.

- HDPT is the service provider for JMU. The JMU community has expressed interest in public transportation service to Charlottesville.

- It will be possible to provide a relatively accurate cost estimate for the annual operating costs of the service.

Disadvantages

- Providing this service may be beyond the mission of HDPT, which focuses on meeting public transportation needs of residents of the City of Harrisonburg.

Cost

- HDPT's fully allocated cost per service hour includes the administrative expenses associated with applying for and managing grants. The FY2015 National Transit Database data indicated a cost per hour of $58.99 for fixed route service.

JAUNT Provides Grant Administration and Provides Service

JAUNT, Inc. is a regional transportation system providing public transportation service to the citizens of Charlottesville, Albemarle, Fluvanna, Louisa, Nelson, Buckingham and Amherst Counties. JAUNT began service in 1975, starting out as a coordinated human service agency and public transportation program. The program has grown over the years and now also includes a RideShare program, commuter routes to Charlottesville and Wintergreen, intra-county routes in each of the rural counties it serves, and night and weekend service for people with disabilities in the City of Charlottesville and Albemarle County.

JAUNT began operation as a private non-profit organization. In 1982, JAUNT became a public corporation owned by five local governments. Last year the JAUNT Board of Directors voted to remove any policy barriers that would prevent it from operating service outside of JAUNT's primary service area. This change in policy would allow JAUNT to operate the I-81/I-64 service. This service was mentioned in JAUNT's 2011 TDP, but was not pursued for implementation.

Advantages

- JAUNT has several years of experience managing federal and state transit grants.
- JAUNT has experience operating commuter services within its current service area.
- JAUNT has expressed interest in providing the service.
- It will be possible to provide a relatively accurate cost estimate for the annual operating costs of the service.

Disadvantages

- JAUNT's base of operation is in Charlottesville, which is the primary destination for service. This may result in more non-revenue vehicle miles than would occur through a Central Shenandoah-based service provider.

Cost

- JAUNT's fully allocated cost per revenue hour is $57 per hour.

SUMMARY AND NEXT STEPS

Four options for providing public transportation service for the I-81/I-64 corridor were presented, along with three organizational options. These options served as a starting point, and were modified based on input from the steering committee and stakeholders. There was a large range of per-unit cost estimates provided for the four service options. This range reflects the significant cost differences between local bus services that operate revenue service in both directions without a significant number of non-revenue hours and miles; and commuter bus services that operate peak direction only, resulting in a significant number of non-revenue hours and miles.

Park and ride options will be critical for the implementation of service through the corridor. Options for park and ride lots for each of the communities served were discussed.

The next steps in the study process were as follows:

- Stakeholder review and discussion of alternatives,
- Revision of alternatives based on stakeholder input,
- Development of service, organizational, and financial plan, and
- Local consensus building.

Chapter 3 presents the plan for service.

Chapter 3
Service and Implementation Plan

After review and discussion of the service options presented in Chapter 2, study committee members chose a service plan to consider for implementation. The chosen service plan includes bi-directional inter-regional public transportation service through the full corridor between the City of Harrisonburg and the City of Charlottesville, with interim stops in Weyers Cave, Staunton, Fishersville, and Waynesboro.

The service plan presented is based on the full corridor option discussion in Chapter 2, with some changes incorporated based on recommendations by the study committee and regional stakeholders. A general implementation plan is also provided.

SERVICE DESIGN

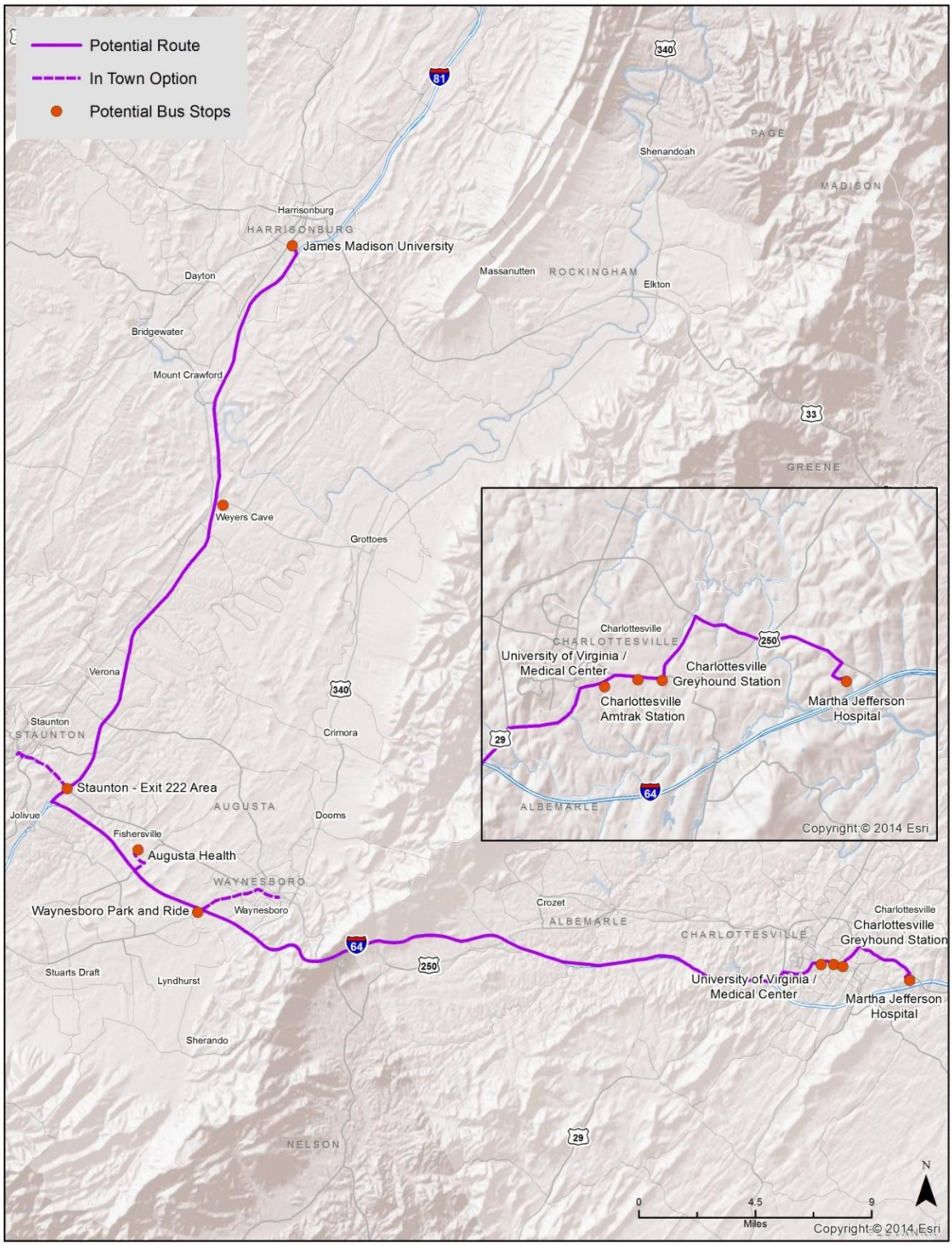
The chosen service design includes the provision of inter-regional public transportation for the full corridor, originating in Harrisonburg, making stops in Weyers Cave, Staunton, Fishersville (limited), Waynesboro, and Charlottesville. The full corridor is about 63 miles one-way, depending upon the specific path of travel.

Eastbound trips will focus on providing service from park and ride lots in the corridor to three specific Charlottesville locations (University of Virginia; downtown/ Greyhound/ Amtrak- likely to include four actual passenger stops; and Sentara Martha Jefferson/State Farm area). Weyers Cave has been included as a stop to ensure that the service includes a rural component. This is important from a financing perspective, as there may be federal rural transit funding available to help fund the service.

Westbound trips in the morning from Charlottesville to the Shenandoah Valley will focus on providing service to local transit hubs rather than to park and ride lots. Figure 3-1 provides a map of the full corridor with the proposed stops.

At the presentation of the draft final plan (May, 2017), there was a discussion concerning the need to extend the service to Martha Jefferson/State Farm. This extension requires a significant amount of time and there is likely to be lower demand from this area. The study committee indicated that this stop should only be included if there is funding participation from Sentara Martha Jefferson or State Farm. If there is not funding participation by entities using this stop, the schedule will change and the operating costs will be reduced.

Figure 3-1: Harrisonburg to Charlottesville, Full Travel Corridor



There was also a discussion concerning the need for service between Crozet and Charlottesville. There was concern about the additional travel time that this stop would necessitate for riders from the Shenandoah Valley, as well as the sentiment that service between Crozet and Charlottesville is more of a regional issue, rather than an inter-regional issue.

A sample schedule is provided as Table 3-1. This schedule was constructed to help determine how many buses will be needed, what the daily revenue service hours will be, and the possibilities for connecting with Greyhound and Amtrak services in Charlottesville. It should be considered preliminary, as it has not been tested using a bus with simulated dwell times. It is anticipated that there will be several iterations of the proposed schedule prior to implementation of service. The schedule was modified from those provided in Chapter 2, based on input received from the Stakeholder Committee. In addition, the extension to the Martha Jefferson/State Farm area is likely dependent upon funding participation.

Table 3-1: Full Travel Corridor, Sample Schedule

Eastbound Stops	***a.m. service***						***p.m. service***
	Bus 1	**Bus 2**	**Bus 3**	**Bus 1**	**Bus 2**	**Bus 3**	**Bus 1**
James Madison University- Godwin			6:30	8:30	9:15	10:45	5:15
Harrisonburg - Park and Ride, TBD			6:35	8:35	9:20	10:50	5:20
Weyers Cave - Park and Ride, TBD			6:48	8:48	9:34	11:03	n.s.
Staunton - transit hub		n.s.	n.s	9:10	n.s.	11:25	5:45
Staunton - Park and Ride, TBD		5:50	7:06	9:18	9:52	11:33	5:53
Augusta Health - Fishersville		n.s	n.s	9:28	n.s.	n.s.	n.s
Waynesboro Park and Ride		6:05	7:20	9:36	10:06	11:47	6:07
Waynesboro transit hub		n.s.	n.s	9:44	n.s.	11:55	6:15
University of Virginia - University Drive, Charlottesville		6:45	8:00	10:24	10:46	12:35	6:55
University of Virginia Medical Center, Charlottesville		6:47	8:02	10:26	10:48	12:37	6:57
Downtown Charlottesville - Amtrak		**6:49**	**8:04**	10:28	10:50	**12:39**	**6:59**
Downtown Charlottesville - Greyhound		6:51	**8:06**	10:30	10:52	**12:41**	7:01
Martha Jefferson		n.s.	8:20	10:44	n.s.	n.s.	n.s.
Charlottesville		**Short Break**	**Short Break**	**Service Break**	**Service Break**	**Service Break**	**Short Break**
	a.m. service			***p.m. service***			
Westbound Stops	**Bus 1**	**Bus 2**	**Bus 3**	**Bus 3**	**Bus 1**	**Bus 2**	**Bus 1 (1)**
Martha Jefferson	n.s.	n.s.	n.s.	n.s.	3:00	5:30	n.s
Downtown Charlottesville - Greyhound	n.s.	n.s.	n.s	**2:15**	3:15	**5:45**	eb
Downtown Charlottesville - Amtrak	n.s.	n.s	n.s	**2:17**	3:17	5:47	**7:40**
University of Virginia Medical Center, Charlottesville	n.s.		n.s.	2:19	3:19	5:49	7:42
University of Virginia - University Drive, Charlottesville	n.s.	7:00	8:45	2:21	3:21	5:51	7:44
Waynesboro transit hub	n.s.	7:40	9:25	3:01	n.s.	6:31	n.s.
Waynesboro Park and Ride	n.s.	n.s	n.s.	n.s.	4:01	6:41	8:24
Augusta Health - Fishersville	n.s.	7:55	n.s.	n.s.	n.s.	n.s.	n.s.
Staunton Park and Ride	7:30	n.s.	n.s.	3:15	4:13	6:53	8:36
Staunton Transit Center	7:40	8:15	9:50	n.s.	n.s.	n.s.	8:46
Weyers Cave Park and Ride	n.s.	n.s.	n.s.	3:33	4:31	7:11	n.s.
Harrisonburg Park and Ride	n.s.	n.s.	n.s.	3:47	4:55	7:25	n.s.
JMU- Godwin	8:15	9:00	10:35	3:52	5:00	7:30	n.s.
Harrisonburg	**Short Break**	**Short Break**	**Short Break**	**Service End**	**Short Break**	**Service End**	**Service End**

Bold Yellow shading denotes connection with Greyhound and **Bold Green** denotes connection with Amtrak service within 2 hours.

n.s.: no service

(1) There is a southbound Amtrak (NE Regional train) arrival at 7:23 p.m., which is why the schedule is delayed for this trip.

The full travel corridor, with the schedule listed above, will require about 23 revenue hours per weekday, for an annual total of 5,865 revenue hours. These hours may fluctuate up or down as the service schedule is refined. In addition, trips that show a linkage to Greyhound or Amtrak are based on current schedules, which may change in the future. It will be important for the proposed service to be responsive to intercity bus and rail schedule changes to the extent feasible, while meeting base commuter needs. For reference, Charlottesville Amtrak and Greyhound schedules were provided in Chapter 1 (page 1-59).

Annual revenue service miles based on this schedule will be about 193,300. This schedule includes five morning and four afternoon trips in the peak direction and three morning and two afternoon trips in the non-peak direction (depending upon the stop). Three vehicles would be needed for service, plus one spare.

As discussed above, the hours and miles could be reduced if the service to the Martha Jefferson/State Farm area is not included.

Purposes of the Service

As designed, the inter-regional service will provide:

- A public transportation connection between two major state universities – James Madison University and the University of Virginia.
- Commuter bus service for residents of the Shenandoah Valley who work in Charlottesville, including those who work hospital shifts at UVA Hospital (7:00 a.m. to 3:00 p.m. and 7:00 a.m. to 7:00 p.m.) and those who work a more traditional office schedule.
- Commuter bus service between Waynesboro, Staunton, and JMU.
- A connection between Augusta Health, UVA Hospital, and possibly Sentara Martha Jefferson Hospital.
- A public transportation option for area residents who do not drive to access medical appointments in Charlottesville.
- A meaningful connection to both Greyhound and Amtrak. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection (within two hours) to Greyhound is important, as it could allow for one-hundred percent federal funding for the trips that provide this connection. There may also be funding options through the Amtrak Thruway program.

Service Considerations

As the service plan is finalized, it will be important to consider the following service characteristics:

- Riders are sensitive to travel time - there is a need to limit stops to provide express service.
- Riders desire amenities- for example, guaranteed ride home, Wi-Fi, comfortable seats, lighting, and power outlets. A guaranteed ride home program is already in place through the Thomas Jefferson Planning District Commission.
- There is a need for at least one stop in a non-urbanized area to access federal Section 5311 rural transit funding (Weyers Cave).
- The service is designed to serve three markets (commuters, intercity travelers, and day-trippers), so schedules will need to balance the needs of all three.
- The service should be uniquely branded to reflect its mission.

Ridership

The ridership estimate for full corridor service, with bi-directional service is 44,620 annual passenger trips. This estimate considers commuters, intercity bus passengers, and passengers travelling for medical, shopping, and leisure for the full corridor. This demand will be a bit lower if the Martha Jefferson/State Farm area is not included. This ridership estimate is also based on a fully established route, which will likely take about 18 months to build. First year ridership is likely to be about half of this total.

The fully-established demand (full route) equates to 175 passenger trips per service day. With 13 one-way vehicle trips per service day, the average load per vehicle would be between 13 and 14 passengers. It is likely that this load would not be spread evenly, with significantly more ridership experienced on the trips that serve the peak commute direction during peak hours. It is possible that vehicles with 25-30 seats would be needed for peak trips.

Vehicles

For the initial implementation of service, it is recommended that a 28-passenger "truck-bus" style be used. These smaller vehicles are used for similar intercity-connector services in other parts of the country and are significantly less expensive than full-size coaches. They can be equipped with comfortable seats, lighting, Wi-Fi, power, and luggage storage. A restroom would not be an option for these smaller vehicles. As service matures and ridership grows in the future, a coach bus could be added for the trips that may need the capacity.

Greyhound Connector Vehicle Example

Amtrak Thruway Vehicle Example

Guidance from DRPT indicates that state financial participation in capital equipment is likely to be lower over the next several years, as DRPT works to develop a capital funding source to replace the capital revenue bonds that recently expired. Given the reduced availability of state capital funds, and the untested demand for service, it is recommended that vehicles be leased for the start-up of service or provided through a turn-key contractor.

Fares

For financial planning purposes, a fare of $5.00 each way between Harrisonburg/Weyers Cave and Charlottesville; and $4.00 each way between Staunton/Waynesboro and Charlottesville is proposed. We have reduced this figure to an average fare of $3.00 per passenger trip to develop a financial estimate, assuming that multi-trip discounts may be offered. A lower fare was also suggested by committee members for trips that travel between Harrisonburg and Staunton.

Operating and Capital Costs and Funding Options

Operating and Capital Costs

Operating cost estimates have been developed based on a regional provider operating the service using leased vehicles. The cost estimate is based on $2.58 per revenue mile, which was referenced from the low end of costs from the Virginia Intercity Bus Plan and adjusted for inflation (3% per year, 2013 to 2017). This cost estimate is considered to be the fully-allocated cost of providing service and includes the cost of the vehicles. These costs are estimated in Table 3-2.

Table 3-2: Operating and Capital Cost Estimate

	Estimated Annual Operating Parameters				
Service	**Service Hours**	**Revenue Miles**	**Operating Costs**	**Estimated Annual Ridership[1]**	**Cost Per Trip**
Full corridor, bi-directional service, leased vehicles	5,865	193,300	$498,714	44,620	$11.18

(1) Based on a mature system, after the initial start-up period.

A more detailed, line item budget will need to be developed by the service provider prior to submitting a grant application to DRPT.

Revenue and Funding

Fare revenue for the service has been estimated based on ridership of 44,620, with a $3.00 net fare per trip, for an annual fare revenue estimate of $ 133,860. Given that this ridership level will likely need at least 18 months to fully develop, first and second year fare revenue estimates have also been calculated in order to arrive at reasonable estimates for the need for federal, state, and local funding assistance. These funding estimates are based on the traditional funding splits that have been used by DRPT for rural programs. Table 3-3 provides these estimates.

Table 3-3: Revenue and Funding Estimates

		Estimated Funding Splits			
Implementation Year	**Annual Operating Costs**	**Farebox Revenue**	**Federal S.5311**	**State Assistance**	**Local Assistance**
Year 1	$498,714	$66,930	$215,892	$69,085	$146,807
Year 2	$508,688	$88,347	$210,171	$67,255	$142,916
Year 3	$523,949	$133,860	$195,044	$62,414	$132,630

Notes: Assumes 3% inflation per year. Federal participation assumed to be 50% of the net deficit and state participation estimated to be 16% of the net deficit.

If federal and state funds are available to help implement the service, the local match requirement is estimated to be $146,807 for the first year, with lower amounts in years two and three as ridership and fare revenue increase.

In addition, the current schedule provides several opportunities to connect in a meaningful way to current Greyhound schedules that service Charlottesville. This may provide an option for service to be considered for Greyhound's rural connection program, which assists in

paying the local match for intercity bus service. This could result in these trips being funded with one-hundred percent federal funds. Additional discussions with Greyhound should be pursued prior to the grant application process. There is also an Amtrak Thruway program, which should be pursued.

Other sources of local match that could be pursued include:

- University of Virginia
- James Madison University
- City of Harrisonburg
- Rockingham County
- Augusta County
- City of Staunton
- City of Waynesboro
- Medical centers served (UVA Hospital, Augusta Health, and Sentara Martha Jefferson)

PARK AND RIDE NEEDS

An important consideration for the implementation of service will be the specific stop locations. As noted by survey participants and stakeholders, there is a need for additional and better quality park and ride lots through the corridor. In addition to the lots described below, there were several suggestions to serve the Mount Crawford park and ride lot. This was considered, however, the location is close to Harrisonburg on the border of the urbanized area and would be difficult to serve with a bus. While not included initially, it may be a possible stop for the future should service develop and grow.

Harrisonburg Park and Ride

A park and ride lot in Harrisonburg will be needed as close as possible to JMU, while still allowing quick access to I-81. Field research indicated there currently is a JMU lot (Lot R11) adjacent to the I-81 Exit 245 interchange. This lot is shown in Figures 3-2 and 3-3. This lot would be a good choice for the inter-regional bus stop as it already has a shelter, it is served by HDPT, and there is a traffic light at the entrance. Permission from JMU will be needed in order for this lot to be used for a commuter park and ride lot. Field research indicated the lot is lightly used currently.

Discussions with stakeholders from Harrisonburg indicated that the Exit 245 interchange is scheduled to be re-configured, at which time some of the land used by this lot will no longer be available; however, a smaller park and ride lot is a part of the VDOT plan.

Figure 3-2: Aerial View of JMU's Lot R11

Figure 3-3: Photo of JMU's Lot R11

Weyers Cave Park and Ride

Currently there is not a public park and ride lot in Weyers Cave. Stakeholder input indicated there is a fenced gravel lot that has been used in the past as an informal park and ride lot, located along Weyers Cave Road at Exist 235 of I-81 (VA Route 256). An aerial view of the proposed site is provided in Figure 3-4. This location was identified in VDOT's Park and Ride Investment Strategy (2013). The project sheet published by VDOT for this location described the construction of a new twenty space lot and estimated the cost to be $200,000.[1]

This location would be ideal, as it is very close to the interchange with I-81. Augusta County recently submitted a Smart Scale grant application to widen Weyers Cave Road and the project includes the construction of a 50-60 space lot at Exit 235.

Prior to the development of a dedicated park and ride lot, additional park and ride options could include the businesses adjacent to the intersection of Weyers Cave Road and Route 11, or Blue Ridge Community College. The inclusion of a park and ride service location that is located outside an urbanized area is important from a federal funding perspective. Weyers Cave is in Augusta County.

Figure 3-4: Potential Location for Weyers Cave Park and Ride Lot

[1] Virginia Department of Transportation, Park and Ride Investment Strategy, 2013. Project sheets published at: http://www.virginiadot.org/travel/parkride/investment_strategies.asp.

Staunton Park and Ride

An important issue for any service that involves the Staunton area is the siting of a park and ride location. To minimize the time for commuters, a park and ride site in the Staunton area will need to be as close as possible to I-81.

The City of Staunton is currently working with a developer on a plan for a significant project, Staunton Crossing, which is near the interchange of U.S. 250 and I-81. The city has submitted a Smart Scale application to VDOT for road improvements and a park and ride lot along VA Route 1426, which is adjacent to the Staunton Crossing development. This area would be a good location for an inter-regional stop.

The following are excerpts from a City of Staunton press release dated October 22, 2015, which describes the development:

"Staunton Crossing is the 278-acre former site of Western State Hospital (WSH). The City and Staunton's Economic Development Authority (EDA) entered into an agreement with the Virginia Department of Behavioral Health and Developmental Services and the Virginia Department of General Services to purchase the acreage for redevelopment in 2009. The new WSH was not yet constructed on its new site at the time of the agreement. Once the existing hospital was vacated in October 2013, the City was able to begin tangible preparations at Staunton Crossing for new development. The property is owned by the EDA and features nearby interstate access to both I-81 and I-64 and a mile of interstate frontage. Long range development plans allow for a wide variety of uses, including retail, hospitality and light industrial."

"'Working with Staunton's Economic Development Authority (EDA), the land is under contract by Staunton Crossing Partners, LLC. An agreement between the EDA and Staunton Crossing Partners, LLC sets the purchase price at $1.25 million. The developer intends to locate a mix of retail and commercial businesses on the site, utilizing its proximity to the intersections of Interstates 81 and 64 and U.S. Route 250."

If inter-regional service were to be implemented prior to the development of a dedicated park and ride lot, some of the large retailers along Route 250 could be approached to see if a portion of an existing retail parking lot could be used for a park and ride lot and inter-regional bus stop.

Waynesboro Park and Ride

There were a number of comments provided by park and ride users that suggested a need for improvements for the Waynesboro park and ride lot. These improvements should include the following: bus stop, shelter, and turn-around location; improved paving and striping; lighting; signage; and trash removal. The need for improvements for the Waynesboro park and ride lot

was included in the VDOT Park and Ride Investment Strategy.[2] The project sheet describes the project as a park and ride lot expansion, to include the addition of twenty spaces, as well as upgraded paving and lighting.

The CSPDC has recently submitted a Smart Scale application to improve the Waynesboro park and ride lot. This application requested funding to complete the following improvements:[3]

- The addition of 55 spaces
- The addition of a bus stop, shelter(s), and a bus zone/pull off
- Lot resurfacing and striping
- Parking lot lighting
- An electric vehicle charging station
- Improved pedestrian access to adjacent shopping and dining locations
- Landscaping and buffering

The total grant request was $2,197,261.

AMENITIES

Potential riders indicated that most important amenity would be a guaranteed ride home, followed by Wi-Fi, lighting, and power outlets. It should be noted that guaranteed ride home is already available in the corridor for car and vanpoolers through the regional Rideshare program.

ADDITIONAL SERVICE CONSIDERATIONS

The service design endorsed by the committee was presented to the Staunton-Augusta-Waynesboro MPO, Charlottesville-Albemarle MPO, and Harrisonburg-Rockingham MPO. Board members of these organizations were generally very supportive of the conceptual service design and offered a number of comments, including:

- Requests for service to also stop at area airports – including smaller regional airports and Charlottesville airport. Airport service is not currently included largely because of the extra time and miles associated with serving the airports relative to the number of riders likely to use such a service. In addition, CAT has studied the concept of Charlottesville Airport service independently and has not found enough demand to warrant service at this time.

[2] [2] Virginia Department of Transportation, Park and Ride Investment Strategy, 2013. Project sheets published at: http://www.virginiadot.org/travel/parkride/investment_strategies.asp.

[3] CSPDC, information provided 10/10/2016.

- Connecting to Amtrak was viewed favorably.
- First mile and last mile options will be important. The plan recognizes this, with connections planned to BRITE, CAT, and HDPT.
- The guaranteed ride home program operated by Thomas Jefferson Planning District Commission may need to be expanded if the inter-regional bus is implemented.
- When looking at grant opportunities that include an air quality component, it may be helpful to quantify the reduction in emissions that is gained by taking approximately eighty cars off of the corridor each weekday. It should be noted that Charlottesville currently records good air quality so this may not be a relevant point for this service.
- It may be feasible to have the buses' mid-day break at the CAT transit facility in Charlottesville.

IMPLEMENTATION

Regional Stakeholder Committee

In order to ensure that the interests of all of the regional stakeholders continue to be considered, and that the momentum for implementing service continues to move forward, it is recommended that some version of the existing study committee be formalized.

The committee will be tasked with helping with the organizational decision-making, the development of local match, and the direction with regard to future service initiatives. At a minimum this group should include the public transit providers in the corridor, each jurisdiction served / participating as a funding partner, DRPT, CSPDC, TJPDC, the MPOs, UVA, JMU, and any other local funding partners.

Identify Local Funding

An important critical role for the study committee over the next several months will be to help in the effort to secure the local match funding for the service. Committee members who represent major institutions or localities should be tasked with approaching the appropriate decision makers within their institutions/jurisdictions to help determine the level of financial support that may be available. The service administrator should take the lead with potential Greyhound Connector and/or Amtrak Thruway funding.

Oversight and Service Provision

Through the study process to date, discussions have taken place regarding how the service would be administered and provided. The advantages and disadvantages of the options were outlined in Chapter 2. There are still multiple options under consideration, any of which could be successful and would be allowable under DRPT/FTA regulations. These are discussed below.

CSPDC as the Administrator

One option is for the CSPDC to apply for the grant and conduct a procurement process to hire a turn-key operator to provide the service. This option is similar to the process used by the CSPDC for the implementation of the local transit service, BRITE. Under this option the CSPDC would continue its role as lead planning agency for the effort, and would lead the efforts to secure local match and provide the organizational structure for the steering committee.

JAUNT as the Administrator

The second option is for JAUNT to apply for the grant and operate service directly. Under this option, the lead planning and organizational efforts would also shift to JAUNT, as the grantee, as well as the responsibility for securing and collecting the local match, and coordinating the steering committee.

This model of operation would be similar to the Smart Way Bus, where Valley Metro operates a service that originates in Blacksburg Transit's operating area and brings passengers to the Valley Metro service area.

Joint Application

At the May 2017 steering committee meeting there was discussion of the CSPDC and JAUNT submitting a joint grant application for the service. Under this option, the CSPDC would continue its role as lead planning agency and JAUNT would assume the role of service provider. This option is currently being further investigated to see if it is feasible.

Inter-City (Interstate 81) Transit Provider

Under contract to DRPT, an Inter-City provider is projected to begin operating daily transit service in the I-81 corridor, connecting Blacksburg to Union Station in Washington, D.C., with intermediate stops including Staunton and Harrisonburg. There may be potential and efficiencies to operating this Inter-regional service as a connecting "spur" to the Inter-city service. This option should be pursued with the Inter-City provider and DRPT when the contract is awarded for the I-81 service.

Organizational Decision-Making

With guidance from DRPT and the FTA, regional stakeholders will have to come to a consensus with regard to which scenario is best suited for the implementation of the service prior to applying for grant assistance.

Branding and Marketing

Under any organizational scenario, a major branding and marketing effort will be needed to ensure that people will identify the service, know what it does, and be willing to try it for their travel needs. A unique brand will help differentiate the service from the local transit services provided in each jurisdiction. A branding and marketing effort may be eligible for funding under Virginia's Rural Transit Assistance Program (RTAP). Branding and marketing line items should be included in the start-up budget.

Preliminary Implementation Steps

Critical implementation steps upon completion of the feasibility study include the following:

- Continue dialogue with DRPT to help determine if federal and state funds are likely to be available to help fund the service, as well as concurrence from the FTA to ensure that the recommended funding source is appropriate.
- Approach local stakeholders, Greyhound, and Amtrak to discuss the service and determine the level of local match support. This will likely drive the decision with regard to the initial level of service and route. A fact sheet to help with these discussions has been prepared and is included as Appendix D.
- With guidance from DRPT and local stakeholders, reach consensus with regard to which organization(s) will be the grant applicant. In order to prepare for the grant application process (due December 2017 for the FY19 grant cycle), this decision should be reached by October, 2017. The subsequent grant cycle would require submission by December 2018.
- Develop a line-item budget to ensure that the planning estimates are reasonable.
- Further refine the schedule and conduct discussions with area stakeholders regarding the desired level of start-up service. It may be more feasible to start with a lower level of service than has been designed, but this will also affect its usefulness from a rider perspective. Whether or not to serve the Martha Jefferson/State Farm area is also under discussion.
- Develop/plan park and ride lots, including temporary lots for the short-term, as well as longer term permanent lots.

- Develop the grant application.
- Develop a branding and marketing campaign.
- If the service is funded, the grant applicant can begin the implementation process with regard to service start-up. As previously discussed, it is recommended that the stakeholder committee, led by the grant applicant, continue to be involved on an ongoing basis.

Proposed Timeline and 3-Year Budget

The initial three-year service start up assumes the following schedule:

- FY19, service start-up, January 2019, 6 months of the fiscal year
- FY20, 1st full year
- FY21, 2nd full year
- FY22, first 6 months to end of the fiscal year

Table 3-4 provides the three-year preliminary start-up budget assuming the full corridor and schedule. This may change during the implementation process.

Table 3-4: Preliminary Three-Year Budget

		Estimated Funding Splits			
Implementation Year	**Annual Operating Costs**	**Farebox Revenue**	**Federal S.5311**	**State Assistance**	**Local Assistance**
FY19 (1)	$249,357	$33,450	$107,954	$34,545	$73,408
FY20	$513,675	$88,347	$212,664	$68,052	$144,612
FY21	$529,085	$133,860	$197,613	$63,236	$134,377
FY22 (1)	$264,543	$66,930	$98,806	$31,618	$67,188
(1) Six-month budget					

Appendix A

Project Steering Committee

Project Steering Committee Members

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Appendix B

Commuter Survey

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

Harrisonburg Rockingham Metropolitan Planning Organization

Staunton Augusta Waynesboro Metropolitan Planning Organization

If you regularly travel in the I-81/I-64 Corridor between Harrisonburg, Staunton, Waynesboro, and Charlottesville areas of Virginia, please complete this survey regarding the feasibility of public transportation in the corridor. If you do not regularly travel through this corridor, please do not complete a survey.

1. Where do you begin your trip, prior to traveling through the I-81/I-64 corridor between Harrisonburg, Staunton, Waynesboro, and Charlottesville? Please provide the town and zip code: (Example: Staunton/24401)

Town:

Zip Code:

2. What is the location of your final destination when you travel through the I-81/I-64 corridor between Harrisonburg, Staunton, Waynesboro, and Charlottesville? Please provide the nearest landmark, town, and zip code: (Example: University Hospital/Charlottesville/22908)

Landmark:

Town:

Zip Code:

3. What is the primary purpose of your trip when you travel through the I-81/I-64 corridor?

- ◯ Work
- ◯ School/Classes
- ◯ Medical Appointment
- ◯ Other (please specify)
- ◯ Connection to a rail trip
- ◯ Connection to an airline trip
- ◯ Connection to a long distance bus trip
- ◯ Errands/Personal Business

4. How frequently do you travel through the I-81/I-64 corridor?

- [ ] Every weekday (M-F)
- [ ] One weekday per week
- [ ] Every Sunday
- [ ] Four weekdays per week
- [ ] 1-3 weekdays per month
- [ ] Occasional Saturdays or Sundays
- [ ] Three weekdays per week
- [ ] Less than one weekday per month
- [ ] Two weekdays per week
- [ ] Every Saturday

* 5. What mode of transportation do you typically use to travel through the I-81/I-64 corridor?

- ( ) I drive alone
- ( ) Vanpool
- ( ) Carpool
- ( ) I take a bus
- ( ) Other (please specify)

6. When you travel through the corridor, how long do you typically stay at your destination?

- ( ) 1 - 4 hours
- ( ) All-day
- ( ) 5 - 7 hours
- ( ) Overnight for one or more nights

7. About what time in the morning do you typically leave home when you commute through the I-81/I-64 corridor?

- ( ) 5:00 am or earlier
- ( ) 6:31 am to 7:00 am
- ( ) 8:31 am to 9:00 am
- ( ) 5:01 am to 5:30 am
- ( ) 7:01 am to 7:30 am
- ( ) 9:00 am to 9:30 am
- ( ) 5:31 am to 6:00 am
- ( ) 7:31 am to 8:00 am
- ( ) After 9:30 am
- ( ) 6:01 am to 6:30 am
- ( ) 8:01 am to 8:30 am

8. What time do you usually arrive at your final destination in the morning?

- ( ) 5:00 am or earlier
- ( ) 6:31 am to 7:00 am
- ( ) 8:31 am to 9:00 am
- ( ) 5:01 am to 5:30 am
- ( ) 7:01 am to 7:30 am
- ( ) 9:00 am to 9:30 am
- ( ) 5:31 am to 6:00 am
- ( ) 7:31 am to 8:00 am
- ( ) After 9:30 am
- ( ) 6:01 am to 6:30 am
- ( ) 8:01 am to 8:30 am

9. What is your total commute time, from home to your destination?

10. What time do you usually leave your primary daily destination in the afternoon?

- ◯ 2:00 pm or earlier
- ◯ 2:01 pm - 2:30 pm
- ◯ 2:31 pm - 3:00 pm
- ◯ 3:01 pm - 3:30 pm
- ◯ 3:31 pm - 4:00 pm
- ◯ 4:01 pm - 4:30 pm
- ◯ 4:31 pm - 5:00 pm
- ◯ 5:01 pm - 5:30 pm
- ◯ 5:31 pm - 6:00 pm
- ◯ 6:01 pm - 6:30 pm
- ◯ After 6:30 pm

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

Harrisonburg Rockingham Metropolitan Planning Organization

Staunton Augusta Waynesboro Metropolitan Planning Organization

11. Which park and ride lot do you usually use within the I-81/I-64 corridor?

- ◯ Azalea Park
- ◯ East Main Street, Waynesboro
- ◯ Peace Lutheran Church
- ◯ Mauzy
- ◯ US 29 South @ I-64
- ◯ Wal-Mart South Lot
- ◯ Mt. Crawford
- ◯ Mountainside Senior Living (Crozet)
- ◯ Pantops Shopping Center
- ◯ Verona
- ◯ Maple Grove Christian Church
- ◯ Waynesboro
- ◯ Forest Lakes North Health
- ◯ Other (please specify)

12. How frequently do you use the park and ride lot indicated above?

- ☐ Every weekday (M-F)
- ☐ One weekday per week
- ☐ Every Sunday
- ☐ Four weekdays per week
- ☐ 1-3 weekdays per month
- ☐ Occasional Saturdays or Sundays
- ☐ Three weekdays per week
- ☐ Less than one weekday per month
- ☐ Two weekdays per week
- ☐ Every Saturday

13. When you use the park and ride lot, about how long is your car typically parked at the lot?

- ◯ 1 - 4 hours
- ◯ I leave my car overnight
- ◯ 5 - 7 hours
- ◯ My car is not parked at the lot
- ◯ All-day

14. What time do you usually arrive at the park and ride lot in the morning?

- ◯ 5:00 am or earlier
- ◯ 6:31 am to 7:00 am
- ◯ 8:31 am to 9:00 am
- ◯ 5:01 am to 5:30 am
- ◯ 7:01 am to 7:30 am
- ◯ 9:00 am to 9:30 am
- ◯ 5:31 am to 6:00 am
- ◯ 7:31 am to 8:00 am
- ◯ After 9:30 am
- ◯ 6:01 am to 6:30 am
- ◯ 8:01 am to 8:30 am

15. What is the first mode of transportation that you typically use to travel*from* the park and ride lot to your destination?

- ◯ Carpool
- ◯ Vanpool
- ◯ Other

Including yourself, how many people typically ride together in the carpool or vanpool?

16. Do you connect to a second or third mode in order to reach your final destination?

- ◯ Yes
- ◯ No

17. If you do connect to a second or third mode to reach your final destination, which modes do you use?

- ☐ Amtrak
- ☐ Greyhound or inter-city bus
- ☐ Taxi
- ☐ Bicycle
- ☐ Local public transit
  Which service?
- ☐ Walk
- ☐ Airlines
- ☐ Other

18. Do you think there is a need for improvements to park and ride facilities in the corridor?

- ◯ Yes
- ◯ No

19. If you think improvements are needed, please indicate what improvements would be useful to you:

- ◯ More parking spaces
- ◯ Better security
- ◯ Better amenities
- ◯ Park and ride lots in other locations
- ◯ Better signage from area roadways to access the lot

Please specify any desired amenities and/or other locations where park and rides would be beneficial:

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

Harrisonburg Rockingham Metropolitan Planning Organization

Staunton Augusta Waynesboro Metropolitan Planning Organization

20. Do you think there is a need to offer commuter/inter-regional bus service in the I-81/I-64 corridor, connecting Harrisonburg to Charlottesville, via Staunton and Waynesboro?

- ◯ Yes
- ◯ No

21. If commuter/inter-regional bus service were to be offered in the I-81/I-64 corridor between Harrisonburg and Charlottesville, also serving Staunton and Waynesboro, would you use the bus service?

- ◯ Yes
- ◯ No
- ◯ Maybe - depends on the details

22. How far would you be willing to travel from your home prior to reaching a bus stop (most likely to be co-located with a park and ride lot)?

- ◯ 5 miles or less
- ◯ 6 - 10 miles
- ◯ 11 - 15 miles
- ◯ 16 - 20 miles
- ◯ 21 miles or farther

23. What fare would you be willing to pay to travel each way via commuter/inter-regional bus between Harrisonburg and Charlottesville?

- ◯ $3.00 or less
- ◯ $3.01 - $4.00
- ◯ $4.01 - $5.00
- ◯ $5.01 - $6.00
- ◯ More than $6.00

24. If a bus service were to be offered, which of the following passenger amenities/commuter services would be the most important to you?

	Most Important		Neutral		Least Important
WiFi onboard the vehicles	◯	◯	◯	◯	◯
Adequate lighting to read	◯	◯	◯	◯	◯
Power outlets onboard the vehicles	◯	◯	◯	◯	◯
Seats that recline	◯	◯	◯	◯	◯
Restrooms onboard the vehicles	◯	◯	◯	◯	◯
Bicycle accommodations	◯	◯	◯	◯	◯
Guaranteed ride home, in the event of an unexpected need to return home early	◯	◯	◯	◯	◯

Other (please specify)

25. If you drive your car to work/school, do you have to pay to park?

- ◯ Yes
- ◯ No
- ◯ Not Applicable

If Yes, how much?

26. If you drive your car to work/school, can you usually find a convenient parking spot?

- ◯ Yes
- ◯ No
- ◯ Not Applicable

27. Does your employer subsidize your cost of either parking at work or taking transit to work?

- ◯ Yes, parking only
- ◯ Yes, transit only
- ◯ Yes, both
- ◯ No
- ◯ Not Applicable

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

Harrisonburg Rockingham Metropolitan Planning Organization

Staunton Augusta Waynesboro Metropolitan Planning Organization

28. Do you generally have a car available for your use?

- ◯ Yes
- ◯ No

29. How would you classify yourself?

- ◯ Caucasian/White
- ◯ African American
- ◯ Asian
- ◯ American Indian/Alaskan Native
- ◯ Native Hawaiian/Pacific Islander
- ◯ Two or more races
- ◯ Other
- ◯ Prefer not to say

30. Is English the primary language spoken in your household?

- ◯ Yes
- ◯ No

If No, what language do you speak at home?

31. You identify as:

- ◯ Male
- ◯ Female

32. Please indicate your age group:

- ◯ Under 17 yrs
- ◯ 18 - 25 yrs
- ◯ 26 - 55 yrs
- ◯ 56 - 64 yrs
- ◯ 65 yrs and older

33. Which best describes your current employment status?

- [ ] Employed, full-time
- [ ] Employed, part-time
- [ ] Retired
- [ ] Student, full-time
- [ ] Student, part-time
- [ ] Homemaker
- [ ] Unemployed
- [ ] Other

34. What is your annual household income level?

- ◯ $14,999 or less
- ◯ $15,000 - $29,999
- ◯ $30,000 - $44,999
- ◯ $45,000 - $59,999
- ◯ $60,000 - $74,999
- ◯ $75,000 or higher

35. Please provide any comments you may have concerning the need to initiate a commuter/inter-regional bus service in the I-81/I-64 corridor, connecting Harrisonburg and Charlottesville.

36. If you would like to be included in a gift card drawing, as well as being on the project email list concerning the progress and outcome of the study, please leave your name and email below:

Name:

Email:

Thank you!

This survey is being conducted by the Central Shenandoah Planning District Commission, in partnership with the three metropolitan planning organizations that serve the cities of Charlottesville, Harrisonburg, Staunton, and Waynesboro, and the counties of Albemarle, Augusta, and Rockingham.

Appendix C

Commuter Survey Comments

Appendix C
Commuter Survey Comments

Appendix C **Commuter Survey Comments**
I think this is really a good idea. Hopefully we will start with a bus then fast train transportation for the future; like Europe.
This may not be directly related to this survey, but commutes would be safer and faster if someone did something to limit trucks to the right hand lane on Afton Mt. and enforced it.
Thank you for initiating this study!!!
Would the service be flexible in that if an emergency happened at work and needed to leave early, that the service would come pick you up?
My need is for nightshift (7pm to 730am)
work night shift
I filled out this survey as myself 3 years ago. At that time, I took a rental with a friend in the Waynesboro area, though my job was in Charlottesville, because I was told there was a ride-share available. But nobody ever got back to me on rideshare, despite my desperate reaching out, until after I had walked away from the job, and then I had to move out from my friend's place (a bit of a fixer-upper I was helping fix up), and she ended up having to sell her property. So it was ruination all around, all on account of not being able to find a better commuting situation.
it would be a good thing but I would need to be sure that it will have a regular schedule
I think that this would be great for people who have to commute this far. I know that my commute would be much more enjoyable if I were to have someone to ride with all the time and it would be convenient. However, I have a family and I would like to be guaranteed to arrive back home in a timely manner and also that I arrive to work on time as well. And probably my biggest concern is how would I get home in the case of an emergency where I would have to leave work early? I now would have to wait for the transit bus to come pick me up from the hospital just to get back to my car to leave from there and then have about an hour drive from there, it can be time consuming.
Very much needed program in our area. I would definitely take advantage of this. There are so many safety issues that would be relieved by minimizing the traffic on the road at rush hour times.
I think this is a great idea! However I work 13 hour night shift at the hospital. The transit would have to be a running late and a grantee ride home if emergency.
I can't speak to Harrisonburg, but I would drive to Waynesboro and use the service 3-4 days per week. I think you should offer a monthly pass for 2-3 days per week or 4-5 days per week fees in addition to someone who only will ride on a rare occasion. I work 7-5p 3 days per week, and I work a 24 hour overnight once weekly. I would want to know I didn't have to wait an hour or longer for a ride in either direction.
I usually walk to work, and I prefer bike to car.
Reasonable rates needed.

I would LOVE to have this as an option! Thanks for considering!
I think it would be a good idea. There is a lot of regular traffic between the independent cities. I think many employees would use it, if it isn't too expensive. I know this is a bus survey, but a reliable train would work too. Thank you to the regional planners for considering these types of solutions instead of new roads.
Should be an option and not something mandatory if you live in that area.
It would be great to have a commuter service between the west side of the mountain to Charlottesville. This would improve safety and less wear and tear on vehicles. It would reduce the volume of traffic on the roads and thereby theoretically decrease the number of accidents and delays and congestion.
It would be a valuable option.
I would only be interested in a commuter bus if the cost is comparable to what it costs me monthly now.
I travel to Charlottesville and work 12 hour night shift, currently pay to stay in c ville rather than commute every day
would it be available only for day shift workers? I work 7pm-730am.
enter exit 91E to Charlottesville and home: 64 west to exit 91
It would save your employees time, and gas money.
I answered this survey related to my work commute from my home in Fishersville to work at UVA Medical Center. However, with 2 daughters in college--one at JMU and one looking to attend Blue Ridge, I would definitely like to see a commuter service. However, service would have to include extended hours (for early/late classes and work schedules) at frequent intervals. Ultimately, I'm not willing to pay to be inconvenienced by long wait times or intermittent service.
I spend so much for gas, I get so tired of driving
I think there is a definitely a need for this - but would want it to be time efficient... my work day is long, so I am not willing to sacrifice much time for the commute if the bus service would add significant added time to my day.
Decent driver training, emphasizing safety.
I think this could be an amazing opportunity for growth in the region allowing people to commute from the valley to Charlottesville. I also believe it could lower the burden/ware and tare placed on personal property for those who commute regularly to Charlottesville.
I do not have a need.

Personally, I believe investing in a light rail service between Staunton and Charlottesville would better accommodate the needs of the community. Stops would be Staunton, Waynesboro, Afton, Crozet, Ivy, Charlottesville. Nonetheless, I am excited at the possibility of a regional commuter network of buses being established. I fear utilization will be the biggest obstacle, due to lack of education on the importance of public transportation --particularly with regards to the environmental impact private automobiles have on the environment. Any bus service will have to be heavily subsidized by the State and local government overseeing its implementation to ensure fares are as close to $0.00 as possible. Fares capped at $3-$4 each way will keep folks driving solo. I'm reminded of conversations I had recently with commuters on the light rail that runs the length of the Utah Valley. ALL passengers I spoke with (roughly 10) did not regularly use the rail due to their common belief (deeply flawed) that it was cheaper to drive a car to and from work every day. Fares were roughly $4-$5 each way, depending on where you initiated and terminated your trip. They, of course, did not account for maintenance, fuel, parking over the course of their daily 2 hour round trip commute. Tax the hell out of all of us, develop common infrastructure, make it widely accessible and as close to free to passengers as possible.
Traffic on the mountain and I81 is terrible and this might also help with pollution...?
there needs to be at least two bus routes. one needs to travel 29 to airport and with stops along the way other needs to circle thru UVA campus and downtown if the bus solution requires multiple transfers once you are in town, it becomes more trouble than its worth
There should be some incentive for this program. If this is going to cost money, I would rather just drive myself. For taking my vehicle off the highway during "rush hour" perhaps, riders get discounted rates.
It must be timely. I would not want to delay my commute by having multiple stops with long waits in between. I would anticipate being able to board in Verona, maybe have 1 additional stop would be ideal.
It is much needed but would need to be reliable and on time. I worry that too many stops would make it much slower than driving.
Excited about the possibility!
The current model of requiring commuters to lease vehicles from a private company and serve as drivers is unpopular. A government-operated shuttle/bus service would make more sense.
It would be of great help in trying to reduce the cost of gasoline and wear and tear on the vehicle. Would definitely be nicer to ride than to drive.
Train service to/from Staunton/Charlottesville would also be wonderful.
This would be a super service as it would be better for the environment , traffic thru-put, and interstate infrastructure wear & tear with fewer cars on the road.
I normally use 33 and 29 or back routes through Earlysville/Free Union. I tried getting people to ride with me across the mountain but with young kids, scheduling has to be flexible.
It's 15-20 years late in coming. There are many questions still to be explored (inclement weather policy/safety, insurance coverage, etc.). With the continuing rise in commuter traffic, couple that with the large increase in truck traffic (particularly westbound in the afternoons/evenings), I am not convinced a large enough fleet of buses and times available are possible.

Reasons to initiate this that come to mind: Reduce amount of traffic, reduce number of vehicle accidents, limit amount of stress a person has (while driving through fog, wind, ice and snow), reduce amount of gasoline and wear and tear on vehicles. Traffic pattern noted when it is close to a holiday has definitely increased.
From Elkton to Charlottesville would work better.
It is needed, if anything else, to connect the Valley with transportation options to larger cities, Amtrak, Charlottesville airport, even a good regional bus service.
I think this would be a great idea
an affordable commuter/bus service would be a wonderful option to those of us who do commute, both for work and school, but also for folks wanting a reliable way for occasional travel between these communities.
I think this is a wonderful idea and I support it! I'm interested to see what comes of it.
I would love to commute with someone or use public transport, but the barrier for me is the timeframe of leaving for work and coming home. My work schedule is variable and I am not always able to leave work at a specific time each day, which makes it hard to ride with anyone who has a set schedule. To make use of public transportation, I would need flexibility in timing of travel. Also, I drive a hybrid vehicle so I use less gas. Cost of transport would have to be low enough to make it financially appealing.
I do think we need a commuter bus service to alleviate the amount of traffic or improvements to 64 across Afton Mountain. Route 250 is the only alternative route and not able to handle the amount of traffic, if there is a problem on "The Mountain."
cost effectiveness, safety, environmentally friendly, stress reduction in parking and catching a bus on time to prevent being tardy
Employer will need to be more flexible with arrival and departure times.
May not use daily, but would use on days that I did not need to travel out 29 North
Commuter bus service would provide a viable option and would be much appreciated.
I think this is an excellent idea. My only concern is that my work hours are erratic 3 days per week. I may have to work until 6:30 pm. There are only 2 days that I work semi-regular hours 8:00-4:30.
So crucial and desperately needed. I work at UVA hospital. Right now we pay Yellow Cab to bring patients to appointments. I would use this option much more as I'm guessing it would be more cost effective
It would have to be affordable and by no means would I accept waiting around for someone who show up late. If you can't get there on time - then that person needs to be late - not the whole bus! If it didn't work that way - then I would drive myself. One minute late is an occurrence.
I think this service is long overdue.
If it lengthens my commute time then I probably wouldn't want to participate.
I would love to have this service
I'm glad to see you exploring this option. Although I'm not sure if I would utilize this service, I think it would help recruit talent from across the mountain.
would love this!
My issue would be with delays either coming or going.
A large portion of people at my workplace commute from Waynesboro/Staunton to Charlottesville. This would greatly reduce the amount of traffic on 64, and hopefully the amount of accidents.

You might also consider using the existing rail line that passes through Crozet and extends to the east of Charlottesville to offer folks from Louisa and points east who commute to downtown Charlottesville the same opportunity to avoid the I-64 crush. Two trains starting in opposite directions each morning and afternoon would serve many of the people you are targeting with the bus. Having CAT meet the train to pick them up at the station and deliver them to their jobsites would complete the commute.
I feel that a commuter/ inter-regional bus service connecting Harrisonburg and Charlottesville is greatly needed and would contribute immensely to the economy and quality of life in the region. This bus service would enable residents of Harrisonburg to get access to regional public transportation through Amtrak. It would enable residents of Harrisonburg to travel to Charlottesville to access medical facilities and educational resources/ libraries unavailable within the city of Harrisonburg. Since moving to Harrisonburg in 2010, I have felt strongly that a public transportation option connecting Harrisonburg to Charlottesville or to Staunton would be the most significant change that could be made to improve my quality of life in the Harrisonburg area. If such a service were available, I would travel to Charlottesville more frequently than I currently do. I feel that a bus service would greatly aid JMU students and faculty. Thank you for conducting this survey.
I think that it is unlikely to be a success unless you offer multiple times for departure to insure that folks can leave at a time that meets their needs.
Please start this service. It is greatly needed for those who cannot drive. Many people depend on Amtrak and Greyhound and they are not available in Harrisonburg. It is a struggle to secure transportation to the station. Cost is also a factor; a cab ride to Charlottesville from Harrisonburg is at least $75+tip (one way), but my train ticket from C'Ville to Philadelphia is cheaper ($73).
The traffic coming from Charlottesville to the west in the afternoon commute has gotten pretty horrendous. I think that anything that could help to alleviate the amount of traffic is a good idea. I64 doesn't seem able to safely handle that amount of traffic, especially with trucks that don't seem to know uphill passing etiquette. The commute from Waynesboro to Cville is the only downside of not living in Cville, where I work. I would take a bus if it didn't add to my overall commute time. I wouldn't bother with a bus, though, if it required transferring to other buses or was too far to get to the park and ride lot. The money saved just wouldn't be great enough to warrant sacrificing time home in the evening.
I frequently need to pick up family at the airport. A bus service coming from the airport to Harrisonburg would be beneficial.
This would be a valuable service for me because I cannot drive at night. It would be great to have a service at CHO, too. But one issue would be how long a trip it would be, with stops in Hburg, Staunton, and Waynesboro, and various stops in Charlottesville.
I believe that having a bus service in that area would be wonderful because I would have ridden the bus my entire freshman year to travel home for my job if it had been available. I also regularly hear people complaining that the only real bus is the Home Rides that's about $40 and that it goes to inconvenient places.
My main concern is where the stops would be and how I would get to work once arriving in Charlottesville. If this were costly or inefficient, that would be my main barrier to using the service.

I don't see how a bus service could work. It is just too far. It would take 2-3 hours each way if you had to stop along the way to pick up passengers and accommodate destinations. You could not have much more than one trip there AM and one trip back PM. It would be better to have rental or loaner small cars for those who need to go there at random times (with drivers for hire?). A train line might work (going each way every hour?), but is there a connecting track from Harrisonburg? (don't know of any). A better limo service might help, too (for airport or train station trips, or hospital connections). I already don't use the bus service in Harrisonburg because it wastes so much of my time (if I miss a bus, I can walk there before another bus comes) and the schedule booklet is unreadable: please tell them to affix route map info on the bus stop sign itself and inside the bus (at eye height, and not in small print many feet above my head). I do not have a cell phone because cannot see or operate that small a screen or device, and a cell phone should definitely not be required to ride a bus. How about exploring in some foreign cities to see how they do it (in Germany, or Switzerland, for example) - we definitely don't know how.
There is an immense need here for frequent, efficient, and affordable public transportation between C-vill, Waynesboro, Staunton, and Harrisonburg--especially between Staunton and Harrisonburg. It is important that it not be prohibitively expensive, nor too slow (with too many stops).
As a commuting student for the next 2 years, I would love to see this! As a community member who travels the 81/64 corridor often, I think it could be a great asset to decreasing traffic on our local highways!
If it could be done cheaply enough it would be a great service.
Many people will be dropping off children at school where they live prior to their commute. That means that there may be a larger number of riders around 8:30 than you might expect. Those with children (like myself) will also require a way to get home quickly in the event of an emergency. I occasionally do errands in Harrisonburg, so I may not ride every day of the week. If the savings in gas money vs. the fare are marginal, more people may opt for the convenience of driving their own car.
It would be great to be able to ride a bus and not have to drive my own car
I think a regional express bus between Staunton and Harrisonburg would be great. I know that there is a bus now but it makes a ton of stops. I am not so cool with that. Also the timing hasn't worked out for my morning commute.
I don't foresee using the service personally, but as I age, it might be more necessary.
I would like to see more availability for the north-end of the corridor - Harrisonburg to Woodstock
Overall I think it is a good idea. My wife, who uses the library over in Charlottesville, might use the service in the summer (she is based in Lynchburg most of the time - works at Lynchburg College, but comes up often on weekends and in the summer). I could see using the to go over for a talk at NRAO in Charlottesville (basically the University) - OR - to catch a airplane ride. I think that if you connect the service to Charlottesville airport and the Shenandoah Airport (Staunton), then it could be very popular with students/faculty.
I work a variety of shifts. Sometimes I need to be at work @ 5am,6, 10, 1:00. Leave at 2, 7, 11pm

This is an interesting idea and I think it should be explored further. With gas prices what they are, I figure I pay less than $10 in gas to drive to and from campus. I would certainly not be willing to pay *more* than that for a bus. However, I like the possibility of being able to do other things while riding a bus (read, grading, and so on) so that time commuting isn't just wasted time. Also, the parking situation on JMU's campus is pretty ridiculous (I work in North Campus). I understand there are decks being built but it is frustrating that students pay less for better or the same parking as I get (the only faculty/staff who get good parking in my area of campus must arrive prior to 7 AM).
I feel this is vital, not just as a commuter route, but as a scheduled route for weekends.
The current bus from Staunton to Harrisonburg is quite convenient on the way UP to H'burg, only. It takes roughly the same amount of time to drive. BUT the trip down takes double the amount of time b/c it uses a different/longer route. If the bus used the same route up and back, I would ride it all the time. It's free to me (JMU), fast and convenient. Except the route home . . .
Would prefer a monthly payment option or a card that pays as you use it...either way the bus would need to be less expensive than what I spend on gas per month. We own only used cars (so no monthly car payment), the only expenses we have for vehicles/transportation are insurance and maintenance, which we would do even if I could take the bus to work. So, the bus fee being low enough is a big factor for me.
My wife and I would only use this occasionally for appointments, but we might go more often if there was an option not to use the car.
This service would be a great contribution to the area. Although I currently travel to Harrisonburg more frequently, it would be nice to be able to take public transit to Charlottesville as well.
This service is critical
Limit stops between Staunton-Harrisonburg and Harrisonburg-Staunton to one or fewer stops between. Use "alternative" fuel vehicle i.e. bio-diesel
As a longtime commuter between Charlottesville and EMU, who has been a part of several carpooling arrangements with JMU and Bridgewater faculty, I would love to see bus service happen in the 64/81 corridor like this! Thanks for raising the possibility with this survey.
With a diverse population offering a safe method for travel in the I-81/I-64 corridor is very important. There is a great need to provide public transportation in this community that is safe and reliable. Public transportation removes cars from crowded highways, gives an alternative mode of transportation to those who want to party and not drive, and provides seniors who do not have a vehicle or should not be driving distances a method to continue to participate in community activities.
This would be wonderful! Recently, I had a flight out of Charlottesville and was going to drive myself but had a relative offer to take me. It was so good that he did because the airport long-term parking lot was full. Now I am reluctant to drive myself to the airport because if I can't find parking, I will miss my flight.
I think it would be an excellent idea, provided there is adequate frequency and it doesn't take too much longer than my current commute.
I wish to have it to CHO airport too.
Given that Harrisonburg has no airports near by, or any transportation system, state or private, to take you out of Harrisonburg to be able to go to bigger cities like NYC. I find this the very least we should have. Ty!

Public Transit MUST BE RELIABLE and REGULAR. You cannot have viable public transit that only runs the route a few times a day. And you CAN NOT have public transit that doesn't show up, runs late, is cancelled, breaks down, etc. I took the Blue Ridge Shuttle for over a year, and it was convenient ... WHEN it ran, but the bus (number 147) was forever breaking down, not showing up, and often ran 15 to 45 minutes late. If public transit is RELIABLE and ALWAYS there AND on time (99.9+% at the very MINIMUM), then people will come to trust it and will ride it. Otherwise, it's not worth the expense.
I think that having bus connecting Harrisonburg and Charlottesville would be beneficial to people who do not have their own transportation. Having a commuter bus service could help people who are unemployed have the opportunity to find employment in a larger city such as Harrisonburg and Charlottesville.
A "shopper shuttle" on Saturdays might be a good idea also. 2-3 options back and forth would be nice. My class schedule changed each semester.
Connection to airport/rail is desirable
Great idea, especially if it includes stops at CHO and the Amtrak stations in Charlottesville and Stanton. I'm not one, but I know a lot of JMU faculty live in Charlottesville and commute to JMU so a stop on campus might also be in demand.
I would use the Charlottesville route more for running errands on the weekend.
I do not necessarily need a commuter bus, but rather an option that allows easier travel other than single occupancy vehicle. It would be nice for people to have access to Cville/Staunton for visits and also gaining access to Amtrak and airports.
Commuting via bus would be great, but it would have to be economically beneficial to me. I already drive a fuel efficient car, therefore paying more than $4-5 per day (round trip) would be the max for me to justify the service financially.
WE NEED THIS DESPERATELY!!!!
what I would really like is an early morning bus to DC (likely drop off at Vienna metro) and return late(r) in the day.
Would love this option
I would use it for convenience, but I believe it is very important for people who do not have transportation.
For it to be viable to me there would have to be at least 2 pickup time options in the morning and 2 return times in the afternoon and ideally 2 return or pickup times around noon time. Best option for fares would be a punch or sweep card that could make it possible to pay for up to 10 trips or something of this sort.
Very much needed for those who can't take up employment because of lack of transport
It would be a great idea, especially if the new Convo gets built and brings in concerts and other performances. You all could piggy back off of John Paul Jones Arena events and have bus tickets for sale that could partner with event ticket sales, so instead of purchasing a "parking permit" with your event ticket you could purchase a "bus ticket". Would cut down on parking/traffic issues for these events.
I see the BRCC Shuttle often and believe it could meet my needs some days, but can't find information on meeting the 'North' bus (parking allowed at BRCC??) and the cost for riding (if I am allowed to ride). Just limited info on website. And not willing to spend the time to investigate

I'm not a regular commuter, but would use this service on occasion.
Thanks for exploring this!
I support it!
It's a good idea. One problem for faculty is that our schedules are so chaotic that without more extensive and varied schedules it is difficult to take advantage of such options.
I've considered this type of arrangement to save money. I have considered using the BRCC/JMU shuttle. Unfortunately, time is a major factor, too. Timing of the buses isn't quite right for me, plus I'd have to get TOO the bus. Going to Harrisonburg wouldn't be bad, but getting home takes too long. I'd love to ditch my expensive parking pass and annoying parking situation at JMU, but I need to run errands on a weekly basis. Plus I like to work out before work, and the buses don't run that early. I also have children that may need me throughout the day; that scares me. Plus, what if I get sick?
none
There are a lot of faculty at JMU wishing to live in Staunton and Charlottesville so this makes a lot of sense. Could help with faculty retention.
Getting to and from the Charlottesville Airport would ALSO be a top priority, as when I travel - 80-90% of the time, it's from that airport
We need regular bus service to Dulles airport and DC metro.
I'm planning on trying the BRCC bus this week, trying to be car free next year. That bus, as I understand it, is free for a JMU faculty person...or so I hope. I want to be able to stop driving to work for next year, and I'd like to commute by bike for 1/2 the trip; my concerns are with the time of travel. Courses for me are typically scheduled in the early evening at work, so my work day starts around 10 and ends around 6 or 7. The BRCC option may be my best option, but I'm afraid it will extend my commute too long because they take a break for an hour in the evening around the time I would like to be on my way home.
This is needed. The Valley has poor internode connectivity, and this would be of benefit too many
this so past due - thanks for starting this conversation
Any fee per way over $2 would be a net no gain at current gas prices.
There is already a free (for JMU faculty and student) bus between Waynesboro, Staunton, and Harrisonburg. Hard to compete with free.
It would also be good for the Cville airport or for shopping trips
we need commuter service from Massanutten to JMU!!
Advance ticket sales. Non-bus station style.
I am really interested in this option as a student wanting to explore the area. I would love to be a able to take a bus from JMU to Staunton to visit black friars and see the area; and I have a lot of friends at UVA that I would like to visit if a bus was put in. Driving can just be such a hassle with parking and such that I often don't go for convenience sake.

The level of service on I-81 & I-64 is extremely good, even in the peak hours. The value of an interstate commuter bus is very low, as it will require a minimum of two transfers. Segment travel times include: 10 minutes walk time to a bus stop near my home; 10 minute wait for a local bus to pick me up; 10 minutes travel time to the park and ride, 10 minutes wait at the park & ride, 25 minute travel time (includes 1 additional passenger pick stop on the way), 10 minute wait at the destination park and ride for a local bus; and lastly, a 10 minute ride to my final near destination, plus a 10 minute walk to my work from there. Total travel time door to door, provided there are no breakdowns on any of the 3 links; is approximately 90 minutes. This includes standing in the rain for over 30 minutes on bad weather days. Total travel time by car 30 minutes with no wait times, no bad weather. Its a no brainer. Going green always seems to work well for someone else, which really means for someone else who has no other option. Ridership is always historically low for any bus. The only way this would work is for significant mainline travel times/distance (i.e. 1+ hour on the freeway), say to DC before I would be comfortable with allowing all the other lost time links.
If it is feasible, please consider extending it to Richmond!!!!!
Would need to have easy access bus stops available
The biggest detraction for me will be the number of stops between pickup & drop-off points. If my 20 minute journey becomes a 40+ minute journey then my interest level will be minimal.
Time it would take; would I make an 8am in Harrisonburg if I took the bus from Staunton?
Friends and I are trying to get a bus from Harrisonburg to C'ville this week, only to learn there are no bus companies in the Burg! The timing of this survey was too perfect not to offer my input
I would be absolutely thrilled to have this service available. I would love to have more convenient and affordable options to travel between Charlottesville and Harrisonburg.
It would be great to have a service to the airport. Often I've rented cars for the trip, which can be very expensive. But there aren't too many other options
Harrisonburg to Washington DC would be so much more beneficial in my opinion
I think this would be enormously helpful to many residents. The lack of public transit here is the main reason I am likely to move away from the area.
The idea of a vanpool was floated not too long ago, and while intriguing, the self-organization and byzantine logistics led me to discontinue research and pursuit of such a venture. Something like this could be very beneficial, most people won't likely use it every day, but I think there would be enough ridership to make it worthwhile!
There is definitely a need for more commuter options, however, if the bus times did not match my hours, I would not use it. I think this has been the problem in the past when looking into this service. Too many variable hours. Hope you can work something out!! We used to use a Vanpool from Vride, but too many of our carpoolers dropped out, so it was too expensive for just 4-5 of us to continue. Now 4 of us just carpool in car. I would feel safer in a bigger vehicle with a safe driver.
A bus line in this corridor would provide greater access for residents to get sustainable jobs and take advantage of opportunities in nearby cities. There is already an immediate need with great potential for long-term benefit. My survey answers reflect my current situation. If there was a bus line to nearby cities readily available, it would influence my patterns including greater potential for me to seek education and employment opportunities in these areas. This bus line would also have positive environmental impact in an area in which the beauty of the landscape is prized by tourists and residents.
Not sure if it would affect me

I feel it would be safer for those commuting to have fewer cars on the road. I feel it would open up more opportunities for individuals to attend secondary education and vocational training (BRCC, Valley Vo Tech, Massanutten Tech, UVA, JMU Piedmont) as well as open doors for people to expand their job search beyond the community closest to where they live.
We also need a way to get to DC airport
I love this idea! Interstate 81 is a crap-shoot, daily. Please add Lexington to your survey locations!!!
In going to UVA for treatments requiring sedation, I would like to have a way of getting there without having to rely on friends or family. I have to go sometimes 1-2 times per month to 1 time every 2-3 months depending on my health situation.
With the amount of tractor trailers and traffic at prime traveling times and the high volume of accidents that occur because of it, I don't think adding buses will make 81 anymore efficient or safe for that matter for those of us who drive personal cars to work/school.
Airport access would be great.
This would be very nice, but the price for usage would have to be competitive with my current fuel expenses (plus a margin for reduced wear and tear/need for maintenance on my vehicle). Excited to see how this turns out!
This would be a draw for young people to seek jobs and relocate to the area without needing to purchase a car. It would also be a benefit for the independence of seniors and others who are unable to drive.
I believe this would be a good thing for commuters and students, i.e. BRCC and other schools.
1 - Cost - To attract those with an available vehicle, there needs to be supporting evidence demonstrating that the public transit service will be less expensive than their usual SOV trip. 2 - Time - As someone with a vehicle available, I would want the public transit service to take no more than 10 minutes longer than my typical drive time.
The number of large trucks on !-81 is scary. Most importantly, there are more job opportunities in Charlottesville and Harrisonburg, but they are not open to many folks in Staunton and Waynesboro due to a lack of transportation.
Very great idea. People need thus to survive, to keep a job, to be independent
I am particularly interested in this project as I am nearing retirement and Cville is a transportation Hub to DC, Richmond and other areas. This would be great for get-aways on weekends, etc. where you didn't want your car etc.
How about a train, or a light rail that goes up the mountain and has stops in these areas. That could be faster if we used a train or light rail in these areas.
Much needed service.
A bus line between the Valley and Charlottesville would be immeasurably helpful. A lot of the ones who would use this service are in the low-no income bracket so price and a set schedule would be very important for them. It would be advantageous for work as well as pleasure travel. My preschool aged son would LOVE to be able to ride a bus to Harrisonburg or Charlottesville to visit some of his favorite spots. The interest level would increase with a set bus route and schedule, multiple stops, all 7 days a week, and pick-ups on the hour every hour to many locations. This would entail a lot of coordination between current bus options and the addition of this option. If it was quick and easy to use, I believe it could do the Valley a huge service.
Not applicable to me
This is not only convenient for me but a significant addition to the region.

The current shuttle offered by BRCC has the potential to be a nice solution, but taking it would double the time involved in my commute and I still wouldn't get to work on time. I understand that you can't meet everyone's needs in terms of pick up and drop off, but a solution that arrives in Harrisonburg prior to 8:00 and leaves shortly after 5:00 is the ideal option in my opinion.
If this were to be successful then another line to Blacksburg might be worth adding
Traffic has been getting worse. The bus would reduce the number of vehicles on the road. This is also an important environmental step. Sharing the ride would allow MW to get work done on the drive to and from PVCC. This would make me less stressed at home and at work.
Would enjoy a less stressed drive to/from work
There are a lot of neighbors and friends I know without transportation with a strong desire to travel to Charlottesville for one reason or another.
Any help driving over the mountain to Charlottesville, or in the traffic driving to Harrisonburg, is always welcome for a busy, retired person! Thanks for considering it. What a wonderful enhancement to our communities it would provide.
Would be very useful in allowing members of one community to access the services/restaurants/stores available in other communities.
It would be worthwhile to consider a commuter rail system possibly supplemented by bus routes as this would remove more vehicles from the highway and in the event of traffic jams, would remain insulated from those (often lengthy) delays.
The traffic on I-81/ I-64 is so heavy. There is a desperate need for something like this in our area. If nothing else we should be thinking about adding a 3rd lane. 1-81 is clogged up with tractor trailers all the time. I would/could definitely use the extra 2 hours of sleep as well. :) Thanks for considering this service!
I feel that having additional public transportation options available would increase career and educational opportunities for many people in our region who may have limitations on driving a personal vehicle for whatever reason. Also, increased access to healthcare options could improve health outcomes in our area as well.
Lots of visitors coming to Staunton or through Staunton need transportation to either Harrisonburg or Charlottesville.
The service must be reliable and have stops scheduled at predictable intervals. Parking areas must be safe and well-lit, with clean shelters to wait for the bus. I understand that transportation for commuters is first priority, but evening and weekend service would be appreciated.
I work for the Department of Blind and there is a need for this due to the fact that blind or vision impaired employees cannot drive and would benefit from this service. We would also be able to hire more blind or vision impaired employees at Virginia Industries for the Blind located in Charlottesville, VA in the Belmont area.
We really need some kind of transportation to this area!
Reducing the traffic in these areas would be wonderful.
regular 2 hour interval service would be great! Hburg/Staunton/cville/Staunton.....
Bus service from Staunton to Charlottesville (as an example) is long overdue.
This is extremely important.

Please consider the nurses who work night shifts at UVA, for example I leave Harrisonburg at 530pm and leave Charlottesville the next morning at 730am. I know there are many of us!
The challenge is that caroling takes more time and few people want that.
It would be necessary to have 2-3 departure times at the minimum to make this work. That is likely 2-3 buses, with split shifts.
Would love to go shopping at the indoor mall
I think it's a great idea. I regularly travel Harrisonburg-Staunton but would also use a Staunton-Waynesboro-Charlottesville connection on weekends if it were available.
Concerning? None. In Europe, inter-regional bus service is very well implemented and saves a lot of money to the households and has a positive impact to the environment. Also implement a membership for those who will use the intercity transportation daily or weekly vs occasionally users. IMO the intercity transportation will help our region to develop and attract more business, will reduce the traffic on interstates plus will reduce the carbon print what we leave in atmosphere.
The current service offered by Virginia Regional Transit between Staunton and Harrisonburg, is great but service is only provided hourly. If it were provided every half hour, I would use it almost daily.
I feel there is a great need for this service, and depending on details, which shouldn't be an issue for my work schedule, I would definitely take part in this service. Paying a few dollars for commuting costs is far less than the cost of gas, and wear/tear on a vehicle...not to mention less stress having to navigate traffic. Hope this takes off!
About time!
I think a bus would probably help cut down on traffic on the interstate.
It is annoying in 2016 to see the term "race" still being used. I thought that term was discredited as being scientifically vacuous long ago. Else I do support a bus service to Charlottesville. While my survey indicates going there for medical purposes, with a bus service would probably go for other reasons also.
Although travel to University Hospital is my primary reason for wanting bus service, a close second and possibly more important is transportation to the Amtrak and Greyhound stations to make travel connections out of the area.
Would also like to have commuter service to the US29 shopping area north of the university in Charlottesville, from Harrisonburg and Dayton.
I have a family member who lives in Charlottesville and I have no way of visiting him because neither of us drives a car. I sometimes have doctor’s appointments at UVA Hospital and have to try to find someone who is willing to drive to Charlottesville.
I personally only need to get between Staunton and Harrisonburg, although if there were a bus available I might take it from Staunton to Charlottesville on the weekend or to catch a flight from the airport.
While I regularly commute to Harrisonburg from Staunton, we also often go to Charlottesville. Additionally, we often catch the morning train from C'ville to Washington and the evening train home. We would use the bus for these journeys to Charlottesville and pay more for them than for the bus to H'burg.
Harrisonburg-DC commuter bus is even more important
I would appreciate this service and would personally use it to get to airports or train stations in Washington DC or Charlottesville, but I also (and perhaps more) want to see it available for the international students I work with so they can get transportation out of Harrisonburg to go to these locations since they don't own vehicles, as well as for other community residents who don't have easy access to transportation in and out of town.

Oh dear... I was disappointed when I got into this to see it is not talking about commuting to DC. Should have read more carefully. We run short education program in Harrisonburg. Getting folks to and from is a big problem.
Very nice, however wouldn't use that often. Would use when making the trip. Makes sense when concerned about the carbon footprint.
Excellent alternative for UVA students and also for patients who need to get to UVA Medical Center, especially older people.
I would love to have a bus connecting Harrisonburg to Charlottesville for me personally and all of the parents visiting JMU and students attending JMU.
We desperately need bus service everywhere we can get it even if it has to be heavily subsidized. I belong to the category of drivers who have significantly diminished vision and lots of aches and pains that keep my neck and arms from being agile enough to drive a car safely. Many of my friends dependent on cars take meds that interfere with good reaction time and judgement. WE ARE AN OLD NATION and many of us shouldn't be driving.
This service has been needed for years. It's long overdue. Please make it happen.
I would love a bus service to and from Waynesboro and Charlottesville

Appendix D

I-81/I-64 Inter-Regional Service Fact Sheet

I-81/I-64 Inter-Regional Public Transportation Proposal

Public bus service connecting Harrisonburg, Staunton, Waynesboro, and Charlottesville

Background

- The need for inter-regional transit service between the Shenandoah Valley and Charlottesville has been discussed for many years and has been identified in various transportation planning documents.
- With funding assistance from the MPOs in the study area (Harrisonburg-Rockingham; Staunton-Augusta-Waynesboro; and Charlottesville-Albemarle), the Central Shenandoah Planning District Commission (CSPDC) led the development of a transit feasibility study and service plan.
- The study was conducted between February 2016 and May 2017, with input and guidance from a stakeholder committee made up of representatives from the following agencies: each of the three MPOs; CSPDC; Thomas Jefferson Planning District Commission (TJPDC); James Madison University (JMU); University of Virginia (UVA); BRITE; Charlottesville Area Transit (CAT); Harrisonburg Department of Public Transportation (HDPT); JAUNT; the Virginia Department of Rail and Public Transportation (DRPT); and others.

Public Survey Highlights

- Over 600 survey respondents
- Current travelers through the corridor reported the following trip purposes: work (63%); errands (11%); medical (6%); school (5%) and rail/air travel (4% each).
- 96% reported a need for service; 40% would use; 56% might use.
- Features such as a guaranteed ride home program, Wi-Fi, and affordable fares were valued by respondents.
- **"***I feel that a commuter/inter-regional bus service connecting Harrisonburg and Charlottesville is greatly needed and would contribute immensely to the quality of life in the region."*

I-81/I-64 Inter-Regional Public Transportation Proposal

Public bus service connecting Harrisonburg, Staunton, Waynesboro, and Charlottesville

Employment Travel Highlights

- 1,257 commuters from Central Shenandoah service corridor to downtown Charlottesville and UVA Medical.
    - There are currently 705 UVA employees who live in Waynesboro, Staunton, or Harrisonburg. Additional UVA employees live within the broader corridor.
- 237 commuters from Central Shenandoah service corridor to Sentara Martha Jefferson Hospital and Pantops.
- 556 commuters from downtown Charlottesville and service corridor to Harrisonburg (JMU and downtown).

Major Institutions and Jurisdictions in Service Corridor

- James Madison University
- Sentara Rockingham Memorial Hospital
- Blue Ridge Community College
- Augusta Health
- University of Virginia
- University of Virginia Medical Center
- Sentara Martha Jefferson Hospital
    - Harrisonburg City
    - Rockingham County
    - Staunton City
    - Augusta County
    - Waynesboro City
    - Albemarle County
    - Charlottesville City

Service Concept

- Implement a public transportation link between Harrisonburg and Charlottesville to serve a variety of trip needs including work, education, access to Greyhound and Amtrak, and access to medical care.
- As designed the service will:
    - Connect James Madison University and the University of Virginia.
    - Provide an alternative travel option for people who do not drive or choose not to drive through the corridor and over Afton Mountain.
    - Offer direct connections to and from Greyhound and Amtrak service in Charlottesville.
- Projected demand at full implementation: 44,620 annual passenger trips (175 daily)

I-81/I-64 Inter-Regional Public Transportation Proposal

Public bus service connecting Harrisonburg, Staunton, Waynesboro, and Charlottesville

Level of Service and Fares

- Monday through Friday, 5:50 a.m. to 8:45 p.m.
- Six eastbound trips; seven westbound trips each weekday.
- Distance-based fares: $5.00 between Harrisonburg and Charlottesville; $4.00 between Staunton/Waynesboro and Charlottesville; and $3.00 within the Shenandoah Valley.

Vehicles Required

- Three buses in service and one spare
- 28-passenger capacity buses for start-up
- Leased or contractor-owned

Bus Type Example

Park and Ride Lot Needs

- Harrisonburg – I-81, Exit 245
- Weyers Cave – I-81, Exit 235
- Staunton – I-81, Exit 222
- Waynesboro – I-64, Exit 94
    - Improvements planned through Smart Scale grant

Proposed Implementation Timeline and 3-Year Budget

- Three-year service start-up proposed, beginning in January, 2019
- FY19, service start-up, January 2019, 6 months of the fiscal year
- FY20, 1st full year
- FY21, 2nd full year
- FY22, first 6 months to end of the fiscal year

		Estimated Funding Splits			
Implementation Year	**Annual Operating Costs**	**Farebox Revenue**	**Federal S.5311**	**State Assistance**	**Local Assistance**
FY19 (1)	$249,357	$33,450	$107,954	$34,545	$73,408
FY20	$513,675	$88,347	$212,664	$68,052	$144,612
FY21	$529,085	$133,860	$197,613	$63,236	$134,377
FY22 (1)	$264,543	$66,930	$98,806	$31,618	$67,188

(1) Six-month budget

I-81/I-64 Inter-Regional Public Transportation Proposal

Public bus service connecting Harrisonburg, Staunton, Waynesboro, and Charlottesville

Proposed Local Match and Commitment

If ten local funding partners share the responsibility to provide local match for the proposed three-year start-up, **each** would pay the following:

- FY19: $7,341
- FY20: $14,461
- FY21: $13,438
- FY22: $6,719

The service would then be evaluated to determine if it is successful and should continue, at which time the local funding commitments would be re-evaluated.

Preliminary Implementation Tasks

- Continued dialogue with DRPT with regard to grant applicant, organizational structure, and availability of federal and state funding
- Dialogue with Greyhound and Amtrak to learn about the availability of funding based on service connections
- Development of local match through discussions with major institutions served and local jurisdictions in the corridor
- Identification of park and ride lots
- Development of branding and marketing campaign
- Fine-tuning of level of service and bus stops
- Development of grant application(s) (applications due December 15, 2017 for FY 2019)

Proposed Service Corridor and Stops