

Harrisonburg

Bicycle & Pedestrian Plan | 2017

*Department of Public Works
Department of Planning & Community Development*

Adopted by City Council - April 11, 2017



Acknowledgements

This Bicycle and Pedestrian Plan for the City of Harrisonburg has been prepared by staff of the Department of Public Works, staff of the Department of Planning and Community Development, and the Bicycle and Pedestrian Subcommittee. This plan would not have been possible without the dedicated efforts of these participants, as well as the many citizens and community advocates who participated in public workshops and offered their insight and opinions.

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Contents

I.	<i>Introduction</i>	_____1
II.	<i>Vision, Goals & Objectives</i>	_____4
III.	<i>Plan Process</i>	_____6
IV.	<i>Types of Facilities</i>	_____10
V.	<i>Network & Facility Recommendations</i>	_____17
VI.	<i>Implementation</i>	_____25

Appendices:

- a. Accomplishments Since 2010*
- b. Public Workshop Summary*
- c. Focus Group Summaries*
- d. ActiveTrans Methodology*
- e. GIS and Equity Score Methodology*
- f. Network & Facility Recommendations*



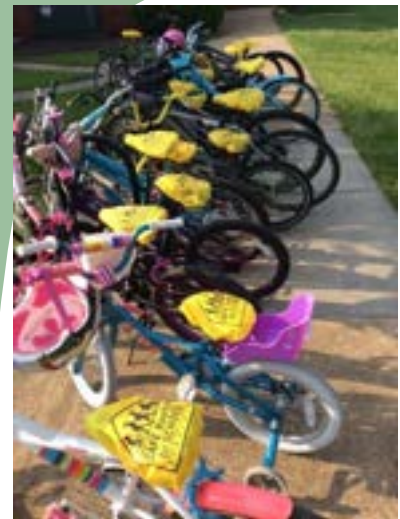
I. Introduction

Purpose

As the City of Harrisonburg strives to be inclusive of all transportation modes, the purpose of this plan is to provide a vision and framework for developing an interconnected bicycle and pedestrian network throughout the community. This plan builds upon the work of the 2010 Bicycle and Pedestrian Plan and prior plans.

Background

As a response to continued growth in Harrisonburg, the City's Bicycle and Pedestrian Plan is meant to encourage a balanced and interconnected transportation system for all modes. Do facilities have logical termini that are safe and accessible? Are we serving the greatest needs with the infrastructure choices we make? How do we phase projects over time and still ensure safety and community goals are met? Who should be investing in the transportation network – public agencies or private development? Whether new construction, retrofitting existing infrastructure, or maintenance, it is important to approach planning for these facilities in a wholistic manner; a concept sometimes referred to as "Complete Streets".

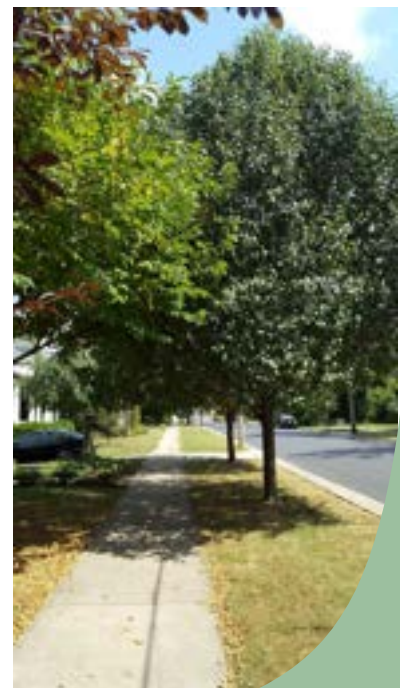


Complete Streets

Complete streets serve communities so that all residents regardless of age, race, culture, ability, and socioeconomic status have access to safe and pleasant means of transportation to residences, places of work, and places of leisure. Complete streets improve street design so that pedestrians, bicyclists, buses, automobiles, and other modes can be adequately accommodated. *(adapted from Smart Growth America)*

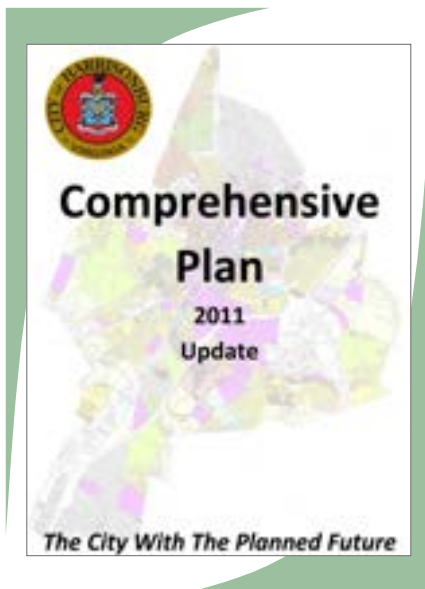
The guiding principles of Complete Streets are:

1. *Equitable Access*
2. *Economic Prosperity*
3. *Safety*
4. *Incorporating Best Practices*



Bicycle and pedestrian facilities were overlooked, for a period of time, as an integral part of the overall transportation network. Many of the oldest neighborhoods in the City provide excellent examples of pedestrian oriented development, since walking was a common mode of transportation before car ownership became the norm. Around mid-century, the approach to neighborhood development shifted to accommodate the motor vehicle, and as a result, neighborhoods throughout the city have wide streets, many of which lack or have substandard sidewalks and minimal bicycle facilities. The rejuvenation of the preference to bike and walk for transportation purposes led the City to begin planning for the integration of bicycle and pedestrian facilities into the transportation network. Efforts began in the early-1990s to consider integration and planning for bicycle facilities. The City's first Bicycle Plan was adopted in 1994, with updates in 1999 and 2005. In the early 2000s, city staff recognized the need to plan for pedestrian facilities in a similar fashion, which led to the adoption of the first Pedestrian Plan in 2005. These planning documents were initially separate tools and focused not only on community need, but implementation. In Fiscal Year 2006, City Council made a commitment to begin translating the plans into reality by appropriating general fund dollars towards bicycle and pedestrian capital infrastructure improvements.

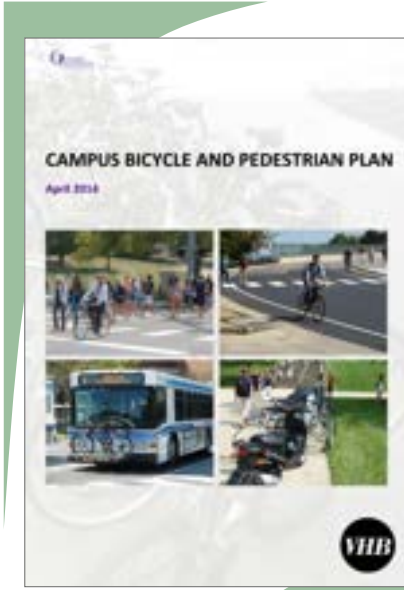
City Council was interested in understanding how the plan was being implemented and as such, Public Works staff began facilitating meetings starting in 2007 with stakeholders and citizens which became the Bicycle and Pedestrian Advisory Group. As the interest in maintaining a closer dialog between city staff, citizen groups, and City Council, the Transportation Safety Commission was charged with advising Council on bicycle and pedestrian matters. The Commission was renamed the Transportation Safety and Advisory Commission and a Bicycle and Pedestrian Subcommittee was formed and tasked with reviewing policies, projects, and recommendations from staff on implementing components of the 2010 Bicycle and Pedestrian Plan.



Relationship to Other Plans

The Bicycle and Pedestrian Plan is referenced as part of the City's Master Transportation Plan – itself a component of the Comprehensive Plan. Annually, the City develops a five-year Capital Improvement Program (CIP), which fiscally constrains the capital needs identified in planning documents. There are many other planning documents that overlap with this particular effort and this plan has attempted to integrate those as best as possible. These include:

- *Harrisonburg Downtown Streetscape Plan*: identifies how sidewalks and streets should be redeveloped in the downtown area to better serve the needs of all users as well as defining hardscape appearance for aesthetic continuity.



- *James Madison University Bicycle and Pedestrian Master Plan*: a campus-wide planning initiative was completed in 2014 to provide tactical planning and to develop a strategic blueprint for the development of an interconnected network on campus but also throughout the greater community.

- *Rockingham County and Harrisonburg-Rockingham Metropolitan Planning Organization (HRMPO) Bicycle Plans*: the City of Harrisonburg is surrounded by Rockingham County and is part of the HRMPO, covering a region including Harrisonburg, Rockingham County and the Towns of Bridgewater, Dayton, and Mount Crawford. The County has adopted a county-wide bicycle and pedestrian plan and the HRMPO is developing a bicycle and pedestrian plan within its urbanized area. Ensuring continuity in bicycle facilities across jurisdictional boundaries better serves the community at-large and provides alternative transportation options to the entire region.

As the community's needs continue to change and evolve, it is recommended that this Plan be reviewed every 5 years to ensure it is achieving the vision, and to make adjustments if necessary.

Accomplishments Since 2010

Since adoption of the 2010 Bicycle and Pedestrian Plan, 22 pedestrian projects, 17 bicycle projects, and 3 shared use path or trail projects have been completed. The City has leveraged \$1.5 million dollars to receive over \$14.5 million dollars in non-locality funding, which includes grants and private developer contributions. Many vital connections were incorporated with larger transportation projects, including the completion of Phase II and Phase III of Erickson Avenue-Stone Spring Road – the City's major east to west connector bypassing the urban core of the city – and the reconstruction of Port Republic Road Phase III, which includes a multiuse path on one side from Peach Grove Avenue eastward into Rockingham County. Safe Routes to Schools grants have been utilized to provide greater connectivity at two elementary schools – Waterman Elementary and Stone Spring Elementary. During this time period, Phase I-A and I-B of the Bluestone Trail were completed, which is the first off-road multi-use path in the city that is intended for both transportation and recreation, serving not only recreational users at Purcell Park, which it passes through, but also providing an alternative to vehicular traffic connecting Stone Spring Road with the James Madison University campus. Additional bicycle and pedestrian projects are included in the City's Capital Improvement Program or other planning documents for future construction. A complete list of accomplishments since 2010 can be found in the Appendix.

II: Vision, Goals, & Objectives

The City of Harrisonburg has made great strides to become a renowned bicycle and pedestrian community thanks to the efforts of City government, advocacy organizations, individual citizens, and others. These efforts to expand transportation choice in the city come with a variety of benefits:

- Bicycle tourism is an economic generator responsible for \$13.6 million dollars in annual revenue and 184 jobs within the Central Shenandoah Valley. (*Central Shenandoah PDC, 2015*)
- Greater mobility can enhance workforce development by allowing low income and other households without cars access to employment, and can contribute to the City's competitiveness in attracting a younger workforce that increasingly seeks alternative modes of transportation.
- Bicycling and walking can give greater independence to children, teenagers, older adults, and people with disabilities who cannot drive, helping them get to school and other activities without help from a parent or caregiver.
- Walking and bicycling are active methods of transportation that can have a variety of health benefits.
- When used for transportation, bicycling and walking can remove some automobile trips from City streets, resulting in reduced traffic congestion.

To support being a more bicycling and pedestrian friendly community, the City, working together with citizens and the Bicycle and Pedestrian Subcommittee, proposes the following vision, goals, and objectives to guide future decision making. While many of the following goals and objectives apply to various city departments, these goals are shared by a host of city citizens and groups, who can also work to advance the cause of pedestrian and bicycle safety and convenience in Harrisonburg.

Vision Statement:

The City of Harrisonburg will be a place where pedestrians and cyclists can access a connected network of bicycle and pedestrian infrastructure to safely and conveniently reach all areas of the city for school, work, play, and other daily needs.

Goal 1 To develop and maintain a network of streets and paths that are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

Objective 1.1. Develop and improve the City's bicycle and pedestrian transportation system.

Objective 1.2. Develop a bicycle and pedestrian network that is convenient and comfortable to encourage citizens to bike and walk more frequently.

Objective 1.3. Implement operational safety measures for all modes of travel.

Goal 2 To use education and encouragement to promote safe walking and bicycling as a form of transportation and recreation.

Objective 2.1. Promote and encourage bicycling and walking as a healthy, safe, and sustainable form of transportation and recreation.

Objective 2.2. Educate city staff and citizens on bicycle and pedestrian laws, etiquette, and safe practices.

Objective 2.3. Recognize the efforts of the City, local businesses, and local organizations for their efforts to promote bicycling and walking in the City.

Objective 2.4. Continually evaluate the state of the city's bicycle and pedestrian infrastructure and programs, and plan for ongoing improvement.

III: Plan Process

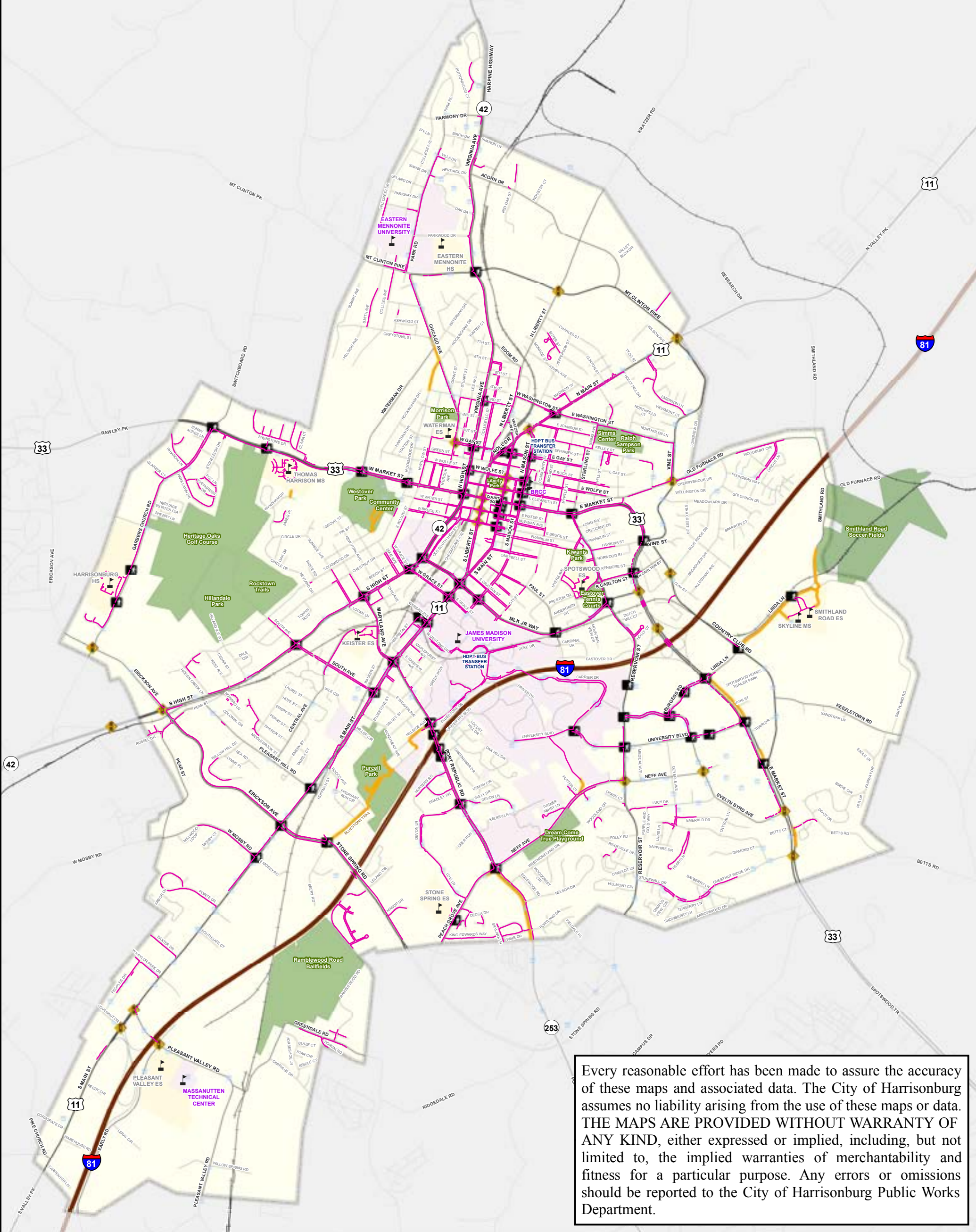
Existing Facilities

The City of Harrisonburg's existing bicycle and pedestrian networks are shown on the following maps. The bicycle network consists of on-road bicycle lanes, shared use paths, streets marked with sharrows, and neighborhood streets with low vehicle speeds and volumes. The pedestrian network consists of sidewalks and shared use paths, enhanced with crosswalks and pedestrian signals in many cases.

Existing System Observations:

- Recent road projects near the fringe of the City have incorporated bicycle and pedestrian improvements, while some segments are still missing from the traditional urban core where it is more difficult to integrate and develop dedicated bicycle and pedestrian infrastructure.
- Interstate 81 presents a barrier running through the middle of the city, with minimal opportunities to cross.
- At-grade rail crossings can pose a challenge for bicyclists, particularly those who are less experienced.
- Some neighborhoods lack sidewalks on one or both sides of the street.
- Wider streets/highways that have greater distances between traffic signals pose challenges for pedestrians that may desire to cross.











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Existing Pedestrian Facilities

Facility Type

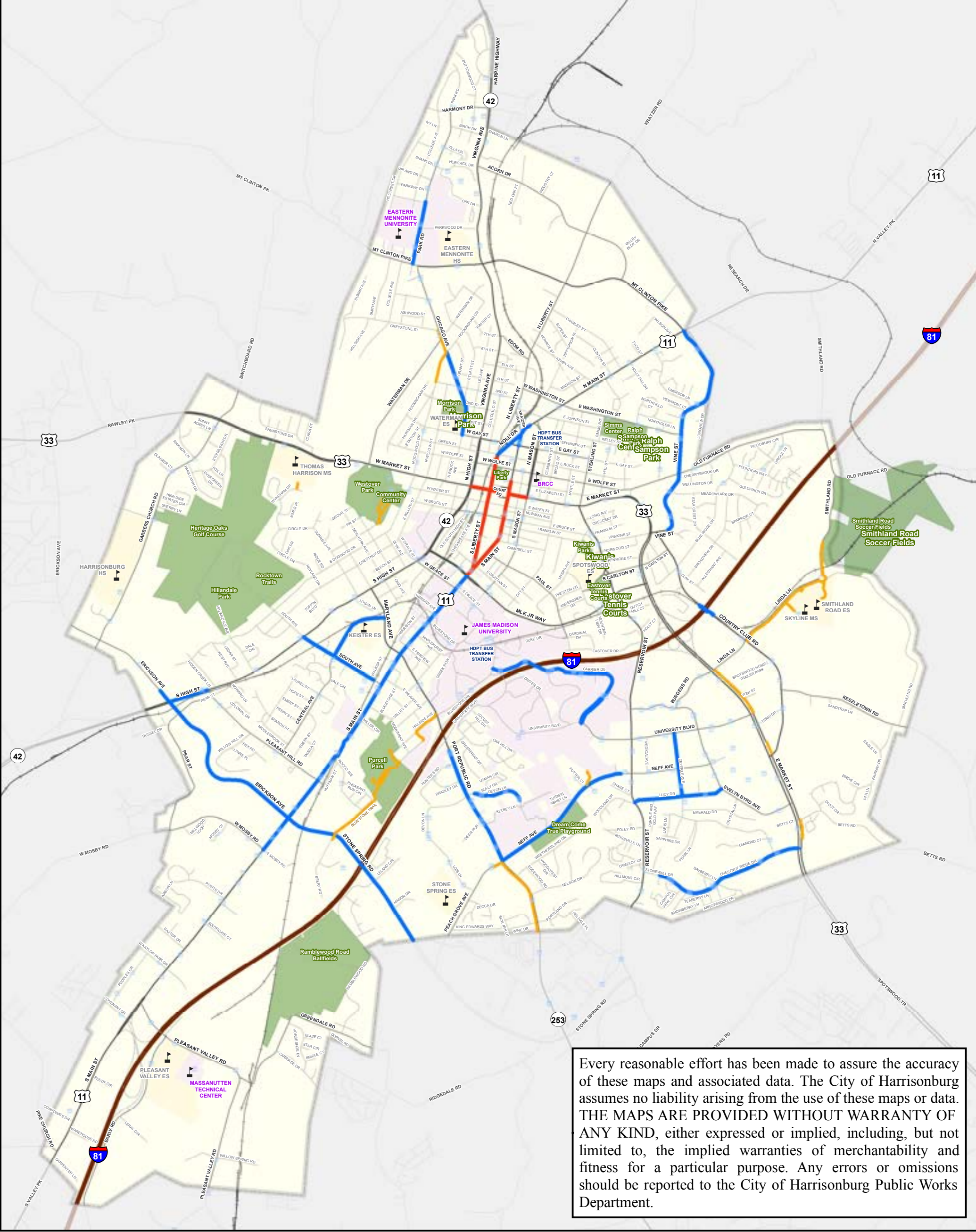
-  Sidewalk
-  Shared Use Path
-  Traffic Signal with Crosswalk Signal
-  Traffic Signal without Crosswalk Signal
-  School
-  Transit Bus Stop



0 0.25 0.5
Miles

1 in = 1 miles



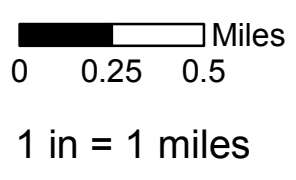


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Existing Bicycle Facilities

Facility Type

- Bicycle Lanes
- Shared Lane Markings
- Shared Use Path
- Transit Bus Stop



Public Involvement

The process of updating Harrisonburg's Bicycle and Pedestrian Plan has relied on a host of participants whose opinions and expertise inform this plan to continue to promote and plan for walking and bicycling in the city. While the primary responsibility for creating and updating the Bicycle and Pedestrian Plan resides with the City's Department of Public Works, the development of this update has been steered by an appointed group of citizens, the Bicycle and Pedestrian Subcommittee, to represent the needs, desires, and opinions of Harrisonburg residents. The Subcommittee acts as an advisory panel to the Transportation Safety and Advisory Commission, which is a City Council appointed body.

While the input of citizens is reflected in the goals and projects found in this plan, the public can also play a role in bringing the plan to reality by working individually, or with community groups, to implement the plan's goals, strategies, and programs.

Stakeholders

The Harrisonburg community has been wonderfully active in its advocacy and outreach for cyclists and pedestrians. City agencies, along with community organizations and citizens, collaborate on bicycle and pedestrian education, promotion, and planning efforts. A sample of the many departments and organizations who participated in the forums and focus groups leading up to this plan are listed below. Many of these groups offer ways for citizens to become more involved in bicycle and pedestrian issues and advocacy in the city.

Participating Agencies and Organizations:

<i>Central Shenandoah Planning District Commission</i>	<i>Harrisonburg-Rockingham Community</i>
<i>Church World Service Harrisonburg</i>	<i>Services Board</i>
<i>Eastern Mennonite University</i>	<i>Harrisonburg-Rockingham Chamber of Commerce</i>
<i>Funkhouser Realty</i>	<i>The Hills of Harrisonburg Management</i>
<i>Harrisonburg City Public Schools</i>	<i>James Madison University</i>
<i>Harrisonburg Department of Economic Development</i>	<i>Matchbox Realty</i>
<i>Harrisonburg Department of Public Transportation</i>	<i>Pheasant Run Townhomes Management</i>
<i>Harrisonburg Fire Department</i>	<i>Sentara RMH Community Health</i>
<i>Harrisonburg Parks & Recreation Department</i>	<i>Shenandoah Bicycle Company</i>
<i>Harrisonburg Planning & Community</i>	<i>Shenandoah Valley Partnership</i>
<i>Development Department</i>	<i>Valley Associates for Independent Living</i>
<i>Harrisonburg Police Department</i>	<i>Valley Mall Management</i>
<i>Harrisonburg Public Works Department</i>	<i>Virginia Mennonite Retirement Community</i>
	<i>Valley Program for Aging Services</i>

Public Input

The City of Harrisonburg has made great strides to become a top bicycle and pedestrian community thanks to the efforts of City government, advocacy organizations, students, citizens, and others. For this reason, the city has incorporated steps to be sure that a variety of voices had the opportunity to shape this plan.

- **2013:** The Harrisonburg Rockingham Metropolitan Planning Organization conducted an online mapping exercise (Wikimap), allowing residents to pinpoint areas of opportunity and concern for pedestrians and cyclists. This mapping exercise received 361 unique entries for Harrisonburg and Rockingham County.
- **December 2014 – April 2015:** James Madison University students conducted a series of 10 forums with community organizations, gathering community input on walking and bicycling routes, safety issues, and desirable walking and bicycling destinations.
- **May 19th, 2015:** The Department of Public Works hosted a bicycle and pedestrian forum at Thomas Harrison Middle School. The forum was attended by community members, city staff, and members of the Bicycle and Pedestrian Subcommittee, and focused on participants' vision for biking and walking in general, and for specific areas of the city.
- **Fall 2015:** The Department of Public Works held a series of focus group work sessions, organized around individual topics and sets of knowledgeable citizens, to discuss the future of Harrisonburg's bicycle and pedestrian network in greater detail. Focus groups included:
 - ◇ Safe Routes to School, Youth and Families
 - ◇ Transportation Disadvantaged and Traditionally Underrepresented
 - ◇ Institutions: Higher Education and Retirement Communities
 - ◇ Business and Economic Vitality
 - ◇ Housing Providers: Real Estate Development and Property Management



Workshop Notes and Ideas.

- A Pedestrian Checklist survey was circulated to allow pedestrians to rate individual walking trips, as well as to offer feedback on safety, crossings, facilities, and connections to transit. This feedback was delivered directly to the Department of Public Works.
- Other public comments were received throughout the input period, and were cataloged for inclusion in this plan and other city efforts.

Many public comments touched on similar themes, including the need for connectivity throughout the entire City, the importance of safety in encouraging walking or bicycling, the need to provide accessibility for all users, and the special importance of serving children and schools. (More information about public events and focus groups can be found in the Appendix of this plan.)



The Process of Creating This Plan

The process of creating the Bicycle and Pedestrian Plan involves a series of inputs, drafts, reviews, and approvals by City staff, citizens, and elected leaders. This process was designed to ensure that the plan faithfully represents the vision of the community, and has the full support of City leadership. The plan process has included:

- A public input to establish a vision and to propose infrastructure projects.
- Analysis and prioritization of proposed projects using the ActiveTrans Priority Tool.
- An initial draft of the 2017 Bicycle and Pedestrian Plan.
- A review and update of the draft plan by City staff and the Bicycle and Pedestrian Subcommittee.
- An open house and public comments on the draft plan.
- A staff update of the plan to incorporate public comments.
- A consideration of the plan by the Planning Commission and Transportation Safety Advisory Commission.
- An adoption of the 2017 Bicycle and Pedestrian Plan by City Council.



IV. Types of Facilities

A variety of physical improvements could be built to help enable movement by bicycling or walking. As the city continues to provide new and updated transportation infrastructure, it should, where practical, provide facilities that serve a variety of transportation network users, including bicyclists and pedestrians in addition to motorists. This section outlines the specific types of facilities and infrastructure, from very simple to more complex, which can continue being built in Harrisonburg to achieve our bicycle and pedestrian goals.

Bicycle Segments

Bicycle Lanes

A bicycle lane marks out an on-street travel lane for the exclusive use of bicyclists, with pavement striping and signage. Striped bicycle lanes should be a minimum of four feet wide (excluding the gutter) on streets with a curb and gutter, or five feet wide on streets without a curb and gutter. A designated buffer space may also be striped on the pavement to further separate the bike lane from adjacent traffic, if space allows. Bicycle lanes should be designed to avoid obstructions such as storm drains, and should function with the acknowledgement that bicyclists may leave the bicycle lane to make left turns, pass other cyclists, or avoid obstacles or debris in the lane.

Generally, bicycle lanes carry bicyclists in the same direction as adjacent vehicle traffic along both sides of the street, although contra-flow lanes are sometimes used, allowing two-way bicycle traffic on streets that are one-way for automobile traffic. Bicycle lanes are typically necessary on streets with a posted speed limit over 25 miles per hour, or with Average Daily Traffic (ADT) greater than 3,000 vehicles per day. On quieter streets, bicycle lanes may not be necessary at all.

Shared Lane Markings

While marked bicycle lanes are best, in some locations there is simply no room. In these places, shared lane markings, known as “sharrows,” may be used to notify drivers that a high volume of bicyclists in the roadway should be anticipated. Sharrows are typically appropriate for streets with speed limits of 35 mph or less.



Bicycle Lane.



Buffered bicycle lane.



Sharrow.



Sidewalk.



Continental style crosswalk.

While routes where bicyclists share space with automobiles may not be comfortable for some novice bicyclists, such routes can serve more advanced bicyclists and can make important connections within the overall bicycle network.

Climbing Lanes

For roads with a steep hill and only enough width for a bicycle lane on one side of the street, a climbing lane may be appropriate. Climbing lanes are bicycle lanes for the uphill direction only, with a shared lane marking for the downhill direction. This treatment allows vehicles to pass safely in the travel lane while allowing bicyclists safe clearance as their speeds slow going up the hill.

Other Bicycle Treatments

Additional treatments can be found in the National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide, and may be considered, when and where they are warranted.

Pedestrian Segments

Sidewalks

Sidewalks are the City's main form of pedestrian access, and exist along many city streets. Harrisonburg maintains approximately 84 miles of sidewalks. Since 2009, the City's Design and Construction Standards Manual (DCSM) requires that sidewalks be built on both sides of all new public streets and along the street frontage of all developing properties. New sidewalks should have a minimum width of five feet to allow two people to walk side by side and convenient access for all users, including those using wheelchairs or other mobility aids. The City's standard sidewalk design calls for a landscaped buffer strip of two to five feet between the street and sidewalk. These buffers provide additional safety and comfort for pedestrians, and where a buffer of four feet or more is available, can allow for tree planting. Approval for sidewalks without a buffer strip is available in certain conditions. Sidewalks should be constructed according to the guidance of this Plan, the City's DCSM, AASHTO guides, and ADA standards. These guidelines and standards should also be followed when constructing all sidewalk elements, including curb ramps and street crossings.

Pedestrian Intersections

Intersections are the greatest safety risk within the transportation network. In order to protect pedestrians, as well as motorists and bicyclists, intersection facilities should be designed for safety, visibility, and efficiency for users of all abilities. At every intersection in the city, pedestrians have a legal right to cross, whether or not crosswalks or signals are present, unless specifically signed otherwise.

Crosswalks

Crosswalk markings are added to intersections to clearly identify to pedestrians where they should cross, and identify to motorists where pedestrians will cross. Increased visibility and awareness provide greater pedestrian safety. Crossings in the City are to be marked with “continental-style” crosswalks featuring a series of large, bold stripes perpendicular to the path of crossing pedestrians. Crosswalks placed mid-block rather than at street intersections are not the norm, but may be used in special conditions, and with adequate study.

Pedestrian Signals

Electronic signals can be installed at signalized intersections to organize safe crossing for pedestrians. All existing Harrisonburg pedestrian signals are actuated signals, where pedestrians must press a button to activate a pedestrian signal sequence. Pedestrian signals in the City are typically concurrent, meaning motorists may turn across pedestrians’ paths after yielding to pedestrians. In this scenario, pedestrians usually have more crossing opportunities and less time to wait for a signal.

Curb Extensions

Curb extensions are physical extensions of a sidewalk that increase the visibility of pedestrians for motorists and shorten the pedestrian crossing distance. Curb extensions also serve to slow vehicle speeds, further improving pedestrian safety. Curb extensions are appropriate at crossing locations along areas with on-street parking. They can also include landscaping such as grass, trees, or small plants.

Pedestrian Refuge Islands

Refuge islands are raised islands in the center of the street, at intersections or midblock, to help protect crossing pedestrians from



Continental style crosswalk with Pedestrian Signal.



Curb Extension (photo rendering).



Pedestrian Refuge Island.

motor vehicles. Pedestrian refuge islands allow pedestrians an opportunity to deal with one direction of traffic at a time. They also enable pedestrians to stop halfway across the street to wait for a gap in traffic before crossing the second half of the street.

Right-Turn Slip-Lanes

At many arterial street intersections, pedestrians have difficulty crossing due to right-turn vehicular movements and long crossing distances. Well-designed right-turn slip lanes provide pedestrian crossing islands within the intersection and a right-turn lane that is designed to optimize the right-turning motorist's view of pedestrians and other vehicles. The triangular island should have a "tail" pointing to approaching traffic. Pedestrians are able to cross the right-turn lane and wait on the crossing island for their walk signal. An additional advantage to the right-turn slip-lane is the crosswalk is located in an area where the driver is still looking ahead.

Shared Use Paths

Shared use paths are wide, paved routes for the exclusive use of bicyclists and pedestrians, and are completely separate from regular city streets and automobile routes, though they may run parallel to streets. These paths can provide recreational opportunities as well as serve as important connections and commuting routes. Shared use paths are sometimes located along utility easements or former railroad rights-of-way, and offer a measure of quiet and safety that is often very popular, especially with novice users and children who may be uncomfortable sharing space with vehicle traffic. Shared use paths should be between 10 and 12 feet in width, should be paved, and should be separated by at least five feet when parallel to any roadway. Where space and right-of-way are available, shared use paths have the greatest potential to increase the number of pedestrian and bicycle trips in the city. The safety benefits of shared use paths go far beyond those offered by any other potential improvement type and should be seen as a major focus of the bicycle and pedestrian system.



The Bluestone Trail is a successful 1-mile shared-use path connecting JMU, Port Republic Road, Purcell Park, and Stone Spring Road.



HDPT transit bus.



Bus stop shelter.



HDPT bus with bicycle rack.

Other Facilities

Public Transit

Although not specifically bicycle or pedestrian facilities, public transit routes and facilities must be considered when planning the bicycle and pedestrian network. The Harrisonburg Department of Public Transportation (HDPT) operates a system of transit buses, school buses, and paratransit operations for persons with disabilities. The system also serves the transit needs of James Madison University.

All HDPT transit buses are equipped with bicycle racks, and HDPT and the Department of Public Works continue to coordinate the installation of bus shelters, benches and other amenities with new road and sidewalk projects. HDPT has also been working to identify suitable locations in or around downtown on which to construct a dedicated transit transfer location. This transfer location could contain bicycle and pedestrian accommodations, a taxi stand, and a location for the launching of intercity bus operations that may serve Harrisonburg at a future date. In effect, it could serve as a hub for a wide variety of transportation operations.

Bicycle Parking

Bicyclists will need safe and secure places to leave their bikes when they reach their destination. This will usually mean securely mounted bicycle racks to which riders can lock or chain their bikes. Where possible, bicycle parking should also be covered to protect bicycles and riders from the elements.

Currently, the City's Design and Construction Standards Manual (DCSM) requires bike racks to be installed at new developments with 15 or greater car parking spaces at a rate of one bicycle space per 25 car parking spaces, with a minimum of four bicycle spaces. The City itself can present a positive example for the provision of bicycle parking by providing ample bicycle parking at its many buildings, parks, schools, and other public facilities.



Covered bicycle parking.

Bike Boxes

Bike boxes are designated areas at the front of a traffic lane at a signalized intersection that provide bicyclists with a way to get ahead of queuing traffic during the red signal phase. The area is painted on the pavement, and works as an extension of the bicycle lane to enhance bicyclist visibility and safety at the intersection, where vehicles making left turns present a major safety hazard to cyclists.



Bike box.

Bicycle Repair Stations

Bicycle repair stations include air pumps and common bicycle repair tools included in a compact pylon to be mounted in public places. They may be installed in public parks, along shared use paths, or in coordination with bicycle parking to allow bicyclists a convenient way to make repairs or adjustments during their journey.



Bicycle repair station.

Wayfinding

Wayfinding refers to signs, maps, pavement markings, and other methods that help users of the transportation system find their way. Signs are a key component of the bicycle and pedestrian system. Bicycle route signs point bicyclists to major regional or cross-city routes, which may or may not always include bicycle lanes. Directional signage helps point bicyclists or pedestrians to important destinations such as the downtown. The City’s previous bicycle plans have committed to following the guidance of AASHTO’s Bicycle Guide for route signage, which encourages the use of directional signage with a description of frequented destinations.



Directional signs point out important destinations.



Bike lane signs complement pavement markings.

The Importance of Shade

Sidewalks, shared use paths, and bicycle lanes that are shaded by trees can provide much more comfortable and attractive conditions for users. Trees provide beauty as well as relief from sun and hot Virginia summers. As the City considers future projects of all types, efforts should be made to incorporate trees that can provide a shade canopy, among other benefits.



V. Network and Facility Recommendations

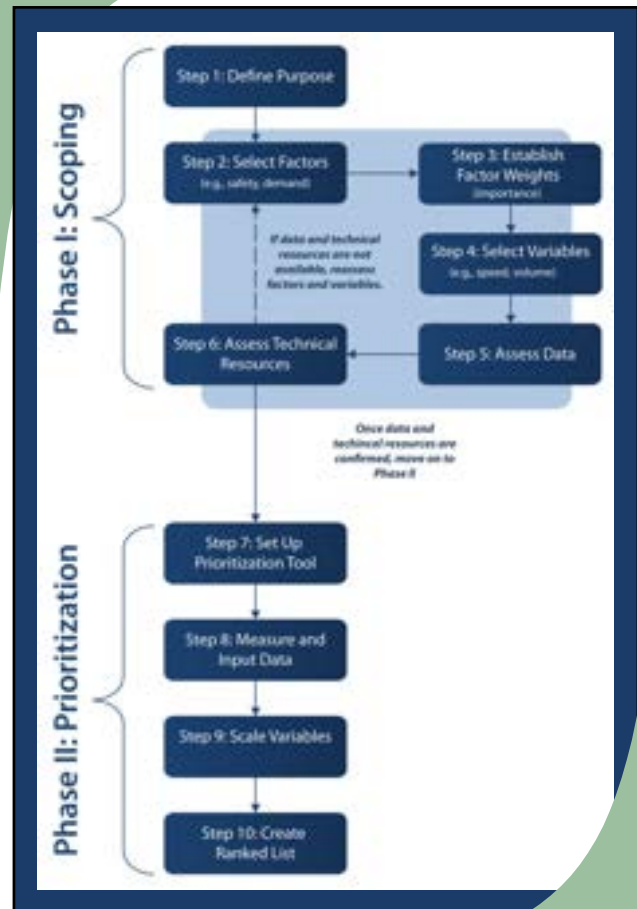
The ActiveTrans Priority Tool

The ActiveTrans Priority Tool was used to prioritize the individual bicycle and pedestrian projects contained in the 2017 Bicycle and Pedestrian Plan. With many needs and limited resources, this method provided an impartial and data-driven way to rank potential projects, raising low-impact projects, urgent safety priorities, and proposals of greatest community need to the top of the list (for more information about the ActiveTrans Priority Tool, see www.pedbikeinfo.org/planning/tools_apt.cfm).

The ActiveTrans model has been used successfully in a number of communities, and is customizable to fit the unique characteristics of a community and the priorities of its residents and leaders. The model was calibrated for use in Harrisonburg based on input from the Bicycle and Pedestrian Subcommittee and city staff. More detail about the methodology used in the ActiveTrans analysis can be found in the Appendix.

The model considered four types of proposed projects:

- **Pedestrian Segments**
These are sidewalks.
- **Pedestrian Intersections**
Where new or existing segments cross streets with vehicular traffic.
- **Bicycle Segments**
These are on-road bicycle facilities like bike lanes.
- **Shared Use Paths**
Off-street paths and trails for both pedestrians and bicyclists.



ActiveTrans Priority Tool: Major Factors

The variables included in the ActiveTrans analysis were divided into five main factors containing variables from public desires to physical measurements and assessments of safety. Because these variables can be so different, each category was weighted differently. Each category started with a weight from 1 to 10 to determine how much impact on the final results each group of variables had.

- **Stakeholder Input**

Ideas for new potential bicycle or pedestrian infrastructure projects based on public input about needs, desires, and existing problem areas, as well as projects already proposed in the 2010 Bicycle and Pedestrian Plan, the 2011 Comprehensive Plan, or the City's Capital Improvements Program.

Category Weight: 3

- **Constraints**

Physical and other issues that will determine how complex or expensive a proposed project would be to build, including the need to move utilities or purchase land, and whether a project could be divided into several phases to help ease constraints.

Category Weight: 10

- **Existing Conditions**

Conditions on the ground at the location of potential projects that can help determine both the complexity of projects and how vital the need for them is. Variables include speed, road width, traffic volumes, and intersection features.

Category Weight: 10

- **Connectivity**

With the goal of building up a city-wide network of bicycle and pedestrian facilities that make it possible to travel anywhere in the City without the need for a car, assessing projects based on the importance of their place within the overall network.

Category Weight: 6

- **Equity**

Assessing areas of highest activity and highest needs to promote improvements where they will be useful to the greatest number of City residents, especially for underserved population segments for whom driving may not be an option.

Category Weight: 6

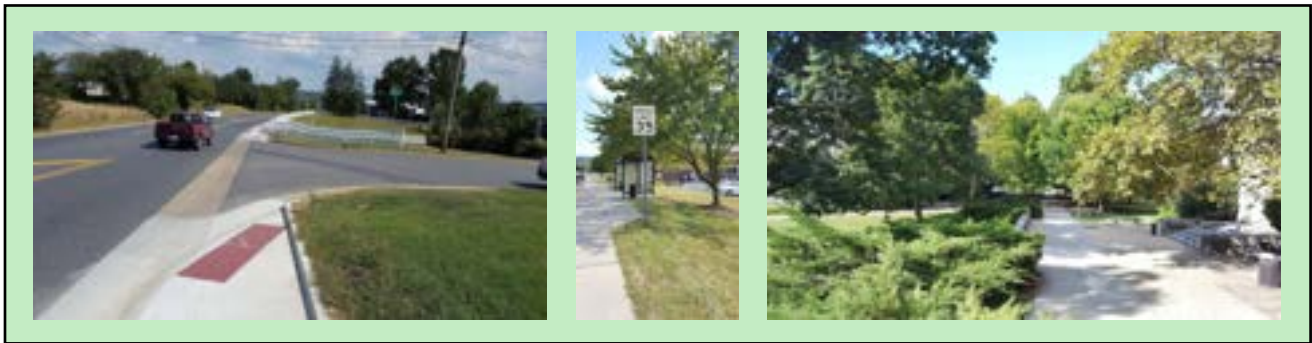
Network and Facility Recommendations

Using the broad range of projects and improvements suggested by staff, citizens, and groups during the public input process, the ActiveTrans Priority Tool was used to prioritize these projects based on the factors discussed in this document. The results of this ActiveTrans analysis in each of the four infrastructure categories - Pedestrian Segments, Pedestrian Intersections, Bicycle Segments, and Shared Use Paths – are included in the following charts. More detail on ActiveTrans methodology can be found in the Appendix.

Projects in each infrastructure category will be evaluated at the time of implementation to determine the exact scope and details of the project, but typical improvements for each category are as follows:

- **Pedestrian Segments** - the addition of sidewalks
- **Pedestrian Intersections** - adding crosswalks, pedestrian signals, or curb ramps
- **Bicycle Segments** - the addition of on-street bicycle lanes
- **Shared Use Paths** - adding new off-street paths for both pedestrian and bicycle use

In reviewing these charts, it is important to note that the ActiveTrans analysis is only one factor in determining what projects the City should undertake, and when. The Implementation Strategies section describes the various ways that the bicycle and pedestrian network evolves, and how this plan is used.



PEDESTRIAN SEGMENTS - ActiveTrans Priority Rank

Map ID	Project Name / Location	Score
PS-1	Virginia Ave-Mt Clinton Pk-North City Limits	242.2
PS-2	Erickson Ave-Garbers Church Rd-Erickson Ave Phase I Terminus	238.1
PS-3	E Market St-MLK Jr Way-Linda Ln	227.8
PS-4	S Main St-Mosby Rd-South City Limits	220.1
PS-5	Peach Gove Ave-King Edwards Way-Stone Spring Rd	216.5
PS-6	N Main St- Charles St-North City Limits	208.1
PS-7	Reservoir St-MLK Jr Way-Evelyn Byrd Ave	195.4
PS-8	Port Republic rd-Forest Hill Rd-Bluestone Dr	192.8
PS-9	Port Republic Rd-S Main st-Bluestone Dr	183.4
PS-10	Country Club Rd-Vine St-E Market St	179.1
PS-11	S High St-Maryland Ave-Erickson Ave	167.2
PS-12	Garbers Church Rd-Heritage Center Way-Park Lawn	164.8
PS-13	Reservoir St- Holly Ct-S Carlton St	163.3
PS-14	Portland Dr-Port Republic-End	162.2
PS-15	Chicago Ave-Mt. clinton Pike-Rockingham Dr	158.8
PS-16	University Blvd-Reservoir St-E Market St	157.7
PS-17	W Rock St-N High St-Green Street	155.3
PS-18	Ramblewood Rd-East of Mineral Springs Rd to South of Stone Spring Road	153.7
PS-19	Mt. Clinton Pike-CollegeAve-Virginia Ave	150.8
PS-20	Reservoir St-Myers Ave-S Carlton St	141.3
PS-21	E Gay St-Myrtle St-Summit St	137.7
PS-22	W Gay St-Rockingham Dr-Chicago Ave	137.6
PS-23	Sterling St-E Elizabeth St-Effinger St	136.4
PS-24	Maryland Ave-S High St-Central Ave	135.2
PS-25	Lee Ave-W Gay St-7th St	134.4
PS-26	Reservoir St-Neff Ave-South City Limits	132.2
PS-27	Evelyn Byrd Ave-University Blvd-E Market St	131.0
PS-28	Vine St-N main St-E Market St	130.7
PS-29	MLK Jr Way-Mountain View Dr-Ott St	130.4
PS-30	S High St-Rockingham Square Shopping Center-Erickson Ave	128.2
PS-31	Central Ave-Pleasant Hill Rd- South Ave	127.7
PS-32	Rockingham Dr-Chicago Ave-Taliaferro Dr	127.2
PS-34	Pleasant Valley road-S Main St-South City Limits	126.0
PS-35	Norwood St-Reservoir St-Hawkins-St	124.4
PS-36	Hillside Ave-Greystone St-End	124.4
PS-37	Maryland Ave-Chesnut Dr-S Dogwood Dr	120.0
PS-38	Neff Ave-Reservoir St-Valley Mall	115.4
PS-39	Blue Ridge Dr-Old Furnace Rd-Country Club Rd	114.3

PEDESTRIAN SEGMENTS (continued) - ActiveTrans Priority Rank

Map ID	Project Name / Location	Score
PS-40	E Bruce St-S Mason St-Federal St	113.9
PS-41	N Main St-N Mason St-Charles St	113.5
PS-42	Pleasant Hill Rd (entire length)	108.1
PS-43	W Rock St-N High St-N Liberty St	107.8
PS-44	W Mosby Rd-S Main St-Millwood Loop	105.2
PS-45	S Dogwood Dr-W Market St-Hidden Creek Ln	104.6
PS-46	E Wolfe St-Sterling St-Vine St	104.3
PS-47	Ott St-Franklin St-E Water St	104.1
PS-48	South Ave-RR Tracks Closest to S High St	100.8
PS-49	Park Rd-Mt Clinton Pk-Harmony Dr	98.9
PS-50	Waterman Dr-W Market St-Chicago Ave	97.1
PS-51	Mountain View dr-S Carlton St-Myers Ave	96.5
PS-52	Myers Ave-Paul St-Mountain View Dr	94.9
PS-53	Harkins St-Reservoir St-E Market St	94.4
PS-54	Paul St-MLK Jr Way-Duke Dr	93.2
PS-55	Mountain View Dr-MLK Jr Way-S Carlton St	93.1
PS-56	W Wolfe St-N High St-N liberty St	90.7
PS-57	Reservoir St- Long Ave-Myers Ave	89.9
PS-58	Greystone St-Smith Ave-Chicago Ave	88.8
PS-59	Ott St- E Grattan St-Franklin St	88.2
PS-60	Sterling St-E Market St-E Elizabeth St	85.8
PS-61	Pear St-Erikson Ave-Pleasant Hill Rd	80.5
PS-62	Paul St-Myers Ave-MLK Jr Way	80.1
PS-63	Stuart St-Taliaferro Dr-3rd St	78.2
PS-64	N Willow St-W Gay St-2nd St	75.6
PS-65	3rd St-Stuart St-N Dogwood Dr	75.5
PS-66	Smith Ave-Existing Sidewalk-Mt. Clinton Pike	74.4
PS-67	Greystone St (entire length)	73.8
PS-68	Jefferson St-Charles St-W Washington St	69.4
PS-69	Pear St-W Mosby Rd-Ruby Dr	66.9
PS-70	Central Ave-Greystone St-Shenandoah St	62.1
PS-71	Shenandoah St-College Ave-Chicago Ave	62.1
PS-72	S Willow St-W Market St-JMU Entrance	60.5
PS-73	Effinger St-Sterling St-Broad St	59.4
PS-74	Myrtle St-E Washington St-Kelley St	57.2
PS-75	Mt Clinton Pk-West City Limits-Chicago ave	48.8
PS-76	Kelley St-Simms Ave-Hill St	41.7
PS-77	Parkwood Dr-Virginia Ave-Park Rd	34.0

PEDESTRIAN INTERSECTIONS - *ActiveTrans Priority Rank*

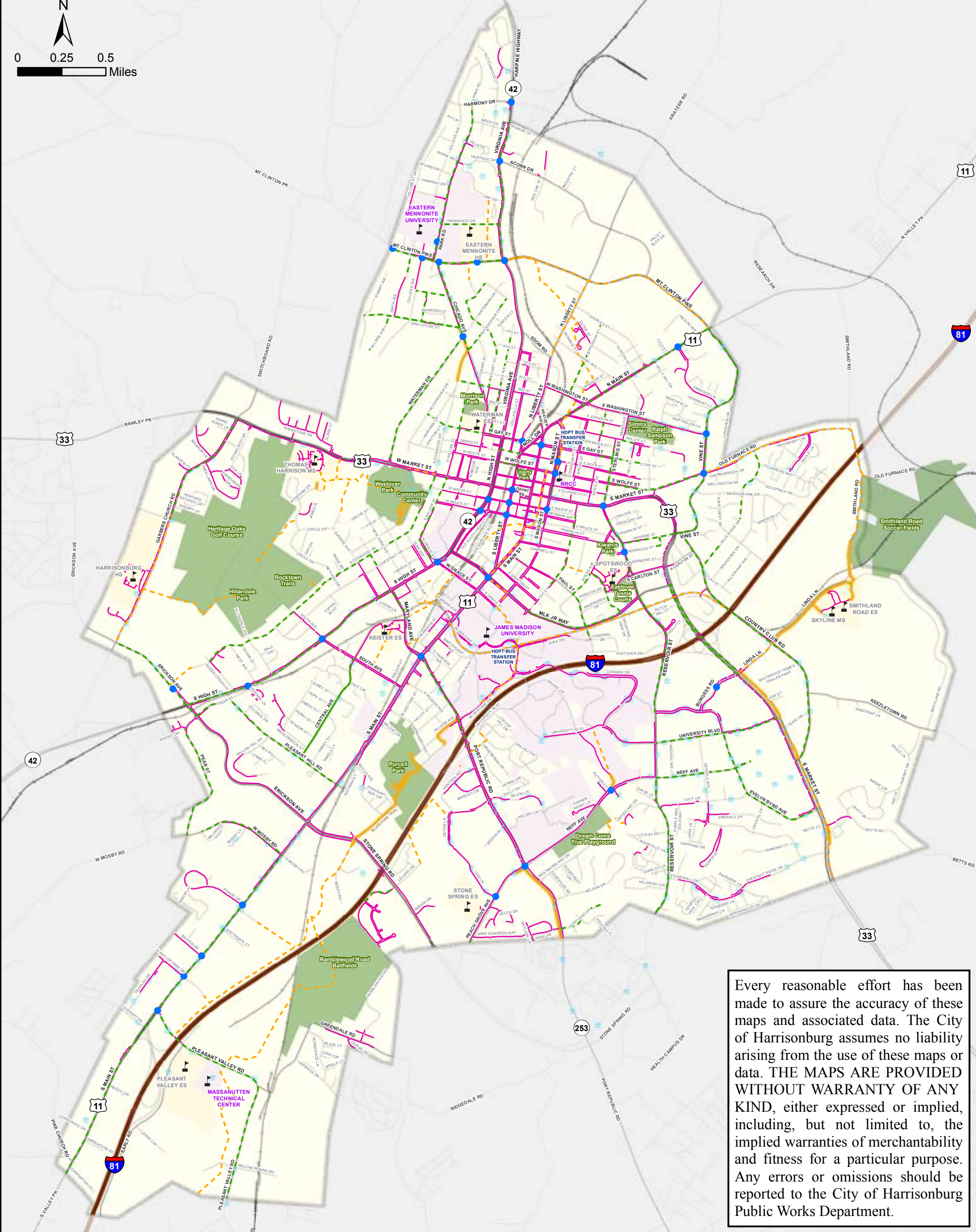
Map ID	Project Name / Location	Score
PI-1	Port Republic Rd & S Main St	240.5
PI-2	N Main St & Gay St	209.9
PI-3	Peach Grove Ave & Lois Ln	196.2
PI-4	S Main St & Pointe Dr	190.8
PI-5	S High St & W Water St	185.1
PI-6	S High St & Pear St	184.0
PI-7	S Liberty St & W Water St	181.5
PI-8	S Main St & Pleasant Valley Rd	179.2
PI-9	S High St & W Bruce St	177.5
PI-10	N Mason St & E Wolfe St	177.2
PI-11	N Mason St & E Rock St	174.6
PI-12	S Liberty St & W Bruce St	172.9
PI-13	S Mason St & E Water St	170.7
PI-14	Virginia Ave & Mt Clinton Pk	164.3
PI-15	N Liberty St & W Market St	158.7
PI-16	E Market St & Reservoir St/Sterling St	158.3
PI-17	Port Republic Rd & Neff Ave	158.2
PI-18	Chicago Ave & Waterman Dr	153.8
PI-19	N Main St & Emerson Ln	148.3
PI-20	S High St & W Grace St	147.8
PI-21	N Liberty St & W Gay St	145.0
PI-22	Reservoir St & Norwood St	142.0
PI-23	S High St & South Ave	140.8
PI-24	S Main St & Baxter Dr	134.8
PI-25	S Main St & W Kaylor Park Dr	129.2
PI-26	S Main St & MLK Jr Way	126.1
PI-27	Virginia Ave & Harmony Dr	124.7
PI-28	Mt. Clinton Pike at Gift & Thirft	124.2
PI-29	Vine St & E Washington St	121.5
PI-30	Virginia Ave & Acorn Drive	120.6
PI-31	Park Rd & EMU Science Center	117.0
PI-32	Mt Clinton Pk & College Ave	106.0
PI-33	Vine St & Old Furnace Rd	101.0
PI-34	Erickson Ave at Bus Stop for Garbers Crossing	97.6
PI-35	Mt Clinton Pk & Chicago Ave	97.3
PI-36	Neff Ave & Arboretum Trail	96.6
PI-37	Burgess Rd & Harrisonburg Crossing	96.0
PI-38	Mt Clinton Pk & Summit Ave	35.1

BICYCLE SEGMENTS - *ActiveTrans* Priority Rank

Map ID	Project Name / Location	Score
BS-1	Early Rd (Pleasant Valley Rd to South City Limits)	239.4
BS-2	Erickson Ave (Garbers Church Rd to Erickson Ave Phase I)	236.4
BS-3	E Market St (Mason St to Reservoir St)	235.0
BS-4	Res. St (Neff Ave to E Market St)	234.3
BS-5	MLK (Mason St to East Market St)	229.7
BS-6	Waterman Dr (W Market St to Chicago Ave)	223.2
BS-7	University Blvd (Carrier Dr to E Market St)	222.4
BS-8	Reservoir St (Neff Ave to South City Limits)	220.3
BS-9	S High (Rockingham Square Shopping Center to Hidden Creek Ln)	220.0
BS-10	N Main St (Wash St to North City Limits)	219.4
BS-11	Erickson Ave (West City Limits to Garbers Church Rd)	217.2
BS-12	E Market St (Reservoir St to Vine St)	216.7
BS-13	S High St (Erickson Ave to South City Limits)	215.5
BS-14	Greendale Rd (entire length)	213.9
BS-15	Evelyn Byrd Ave (Res. St to E Market St)	211.5
BS-16	MLK extended (E Market to Country Club)	196.7
BS-17	Port Republic (Forest Hill to Bluestone Dr)	193.1
BS-18	W Market St (West City Limits to Market Street)	192.2
BS-19	N Liberty St (Harrisonburg City Limit to Mt Clinton Pike)	187.2
BS-20	N Liberty St (Rock St to W Market St)	182.7
BS-21	Keezletown Rd (Country Club Rd to East City Limits)	182.2
BS-22	Pleasant Valley Rd (entire length)	181.6
BS-23	Pear St (Erickson Ave to Pleasant Hill Road)	178.3
BS-24	S Liberty St (West Market to MLK)	169.9
BS-25	Peach Grove Ave (entire length)	166.0
BS-26	Maryland Ave (S High St to S Main St)	166.0
BS-27	Switchboard Rd (W Market St to North City Limits)	163.9
BS-28	Chicago Ave (Mt. Clinton Pike to Rock. Dr)	163.5
BS-29	Devon Ln/Lois Ln (Peach Grove Ave to east of Squire Hill)	150.0
BS-30	Mason St (N Main St to MLK)	139.3
BS-31	Mt Clinton (WCL to Chicago Ave/Park Rd)	137.8
BS-32	N Main St (Wolfe St to Gay St)	128.3
BS-33	Pleasant Hill Rd (entire length)	116.5
BS-34	W Grace St (S High St to S Main St)	115.9
BS-35	S Main St (MLK to Campbell St)	112.8
BS-36	Gay St (Chicago Ave to Broad St)	108.9
BS-37	E Wash St (N Main St to Vine St)	108.9
BS-38	Ramblewood Rd (entire length)	93.3

SHARED USE PATHS - ActiveTrans Priority Rank

Map ID	Project Name / Location	Score
SU-1	Norfolk Southern Rail Line (Country Club-S. Main St.)	229.3
SU-2	Trail Connection: Walnut Ln-MLK Jr Way	195.5
SU-3	Bluestone Trail/Northend Greenway/Mt Clinton Pk: Park Rd-Virginia Ave	187.9
SU-4	Bluestone Trl/Northend Greenway: Downtown (N Main St-Downtown Farmers Market)	185.4
SU-5	Bluestone Trail/Northend Greenway: Downtown (Downtown Farmers Market-MLK Jr Way)	182.7
SU-6	Market St: ECL-University Blvd	180.7
SU-7	Country Club Rd: Vine St-E Market St	180.5
SU-8	Trail Connection: Mt Clinton Pk-Parkwood Dr-VMRC	176.3
SU-9	Old Furnace Rd: Vine St-Smithland Rd	175.2
SU-10	Trail Connection: Devon Ln-Stone Spring Rd	167.3
SU-11	Trail Connection: Roosevelt St-Chesapeake Ave	163.5
SU-12	Bluestone Trail/Northend Greenway Connection: JMU (MLK Jr Way-Port Republic Rd)	162.9
SU-13	Bluestone Trail/Northend Greenway Connection: North End Greenway (Virginia Ave-N Main St)	160.1
SU-14	Trail Connection: S Dogwood Dr-Erickson Ave	160.0
SU-15	Trail Connection: Garbers Church Rd-Hillandale Park	155.4
SU-16	Trail Connection: Devon Ln-Hunters Rd	152.9
SU-17	Mt Clinton Pk: Virginia Ave-N Main St	151.7
SU-18	THMS-Wyndham Dr	151.3
SU-19	Garbers Church Rd: Erickson Ave-heritage Center Way	150.7
SU-20	Trail Connection: Neff Ave-Arboretum Trail-University Blvd	149.7
SU-21	Trail Connection: Chesapeake Ave-Farmers Market	147.7
SU-22	Trail Connection: Maryland Ave-W Fairview Ave	147.7
SU-23	Trail Connection: Warsaw Ave-Ohio Ave/New York Ave	147.1
SU-24	Trail Connection: South Ave- Keister ES	144.3
SU-25	Linda Ln: E Market St-Country Club Rd	139.3
SU-26	Smithland Rd: Old Furnace Rd-SUP at Smithland Soccer Fields	138.4
SU-27	Trail Connection: Bluestone Trail-Boxwood Ct	136.9
SU-28	Trail Connection: Maryland Ave-W Grace St	136.8
SU-29	Trail Connection: Neyland Dr-Cale Trail	136.3
SU-30	W Market St: Dogwood Dr-Westover Park Entrance	134.7
SU-31	Trail Connection: Hunters Rd-Rockingham Hall (JMU)	131.9
SU-32	Trail Connection: Woodleigh Ct Terminus-Mt Clinton Pk	131.9
SU-33	Forest hill Rd: University Blvd-Port Republic Rd	130.1
SU-34	Bluestone Trl/Northend Greenway: Stone Spring Rd - South City Limits (various alignments)	127.9
SU-35	Trail Connection: W Market St-THMS	124.6
SU-36	N Liberty St: Edom Rd-Acorn Dr	117.7
SU-37	Trail Connection: S Dogwood Dr-Rocktown Trails/hillandale Park	117.5
SU-38	Trail Connection: Bluestone Trail-Keylor Park Dr	116.9
SU-39	Trail Connection: Hillandale Park-THMS	109.7
SU-40	Trail Connection: A Dream Come True Playground-Surrounding Neighborhoods	102.5
SU-41	Trail Connection: Bluestone Trail-Ramblewood Park/Greendale Rd	101.9
SU-42	Trail Connection(Cale Trail):Westover Park-THMS	101.9
SU-43	Trail Connection: Ott St-Myers Ave	79.9



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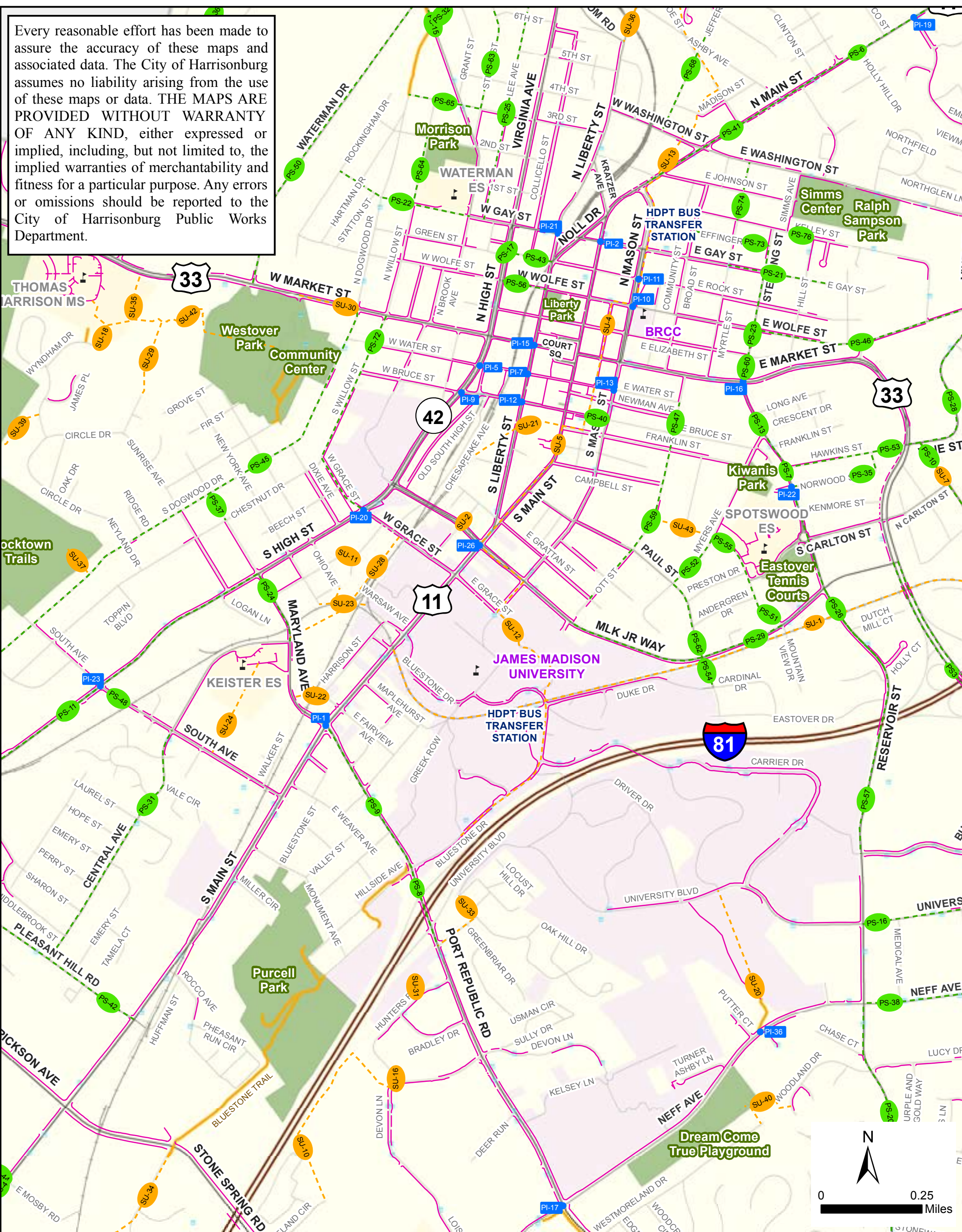
Recommended Pedestrian Facilities

Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop



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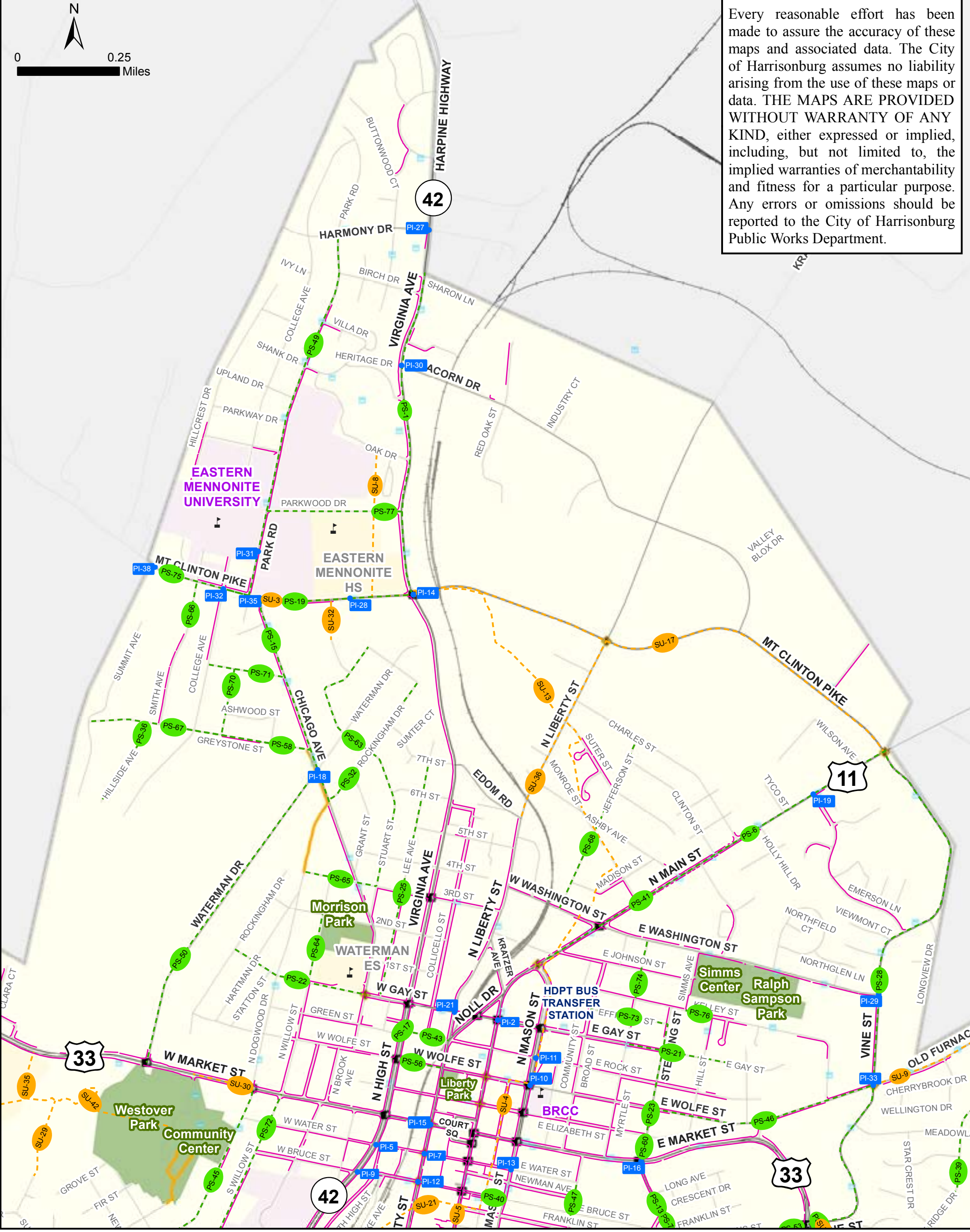
Recommended Pedestrian Facilities: JMU & Downtown

Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop



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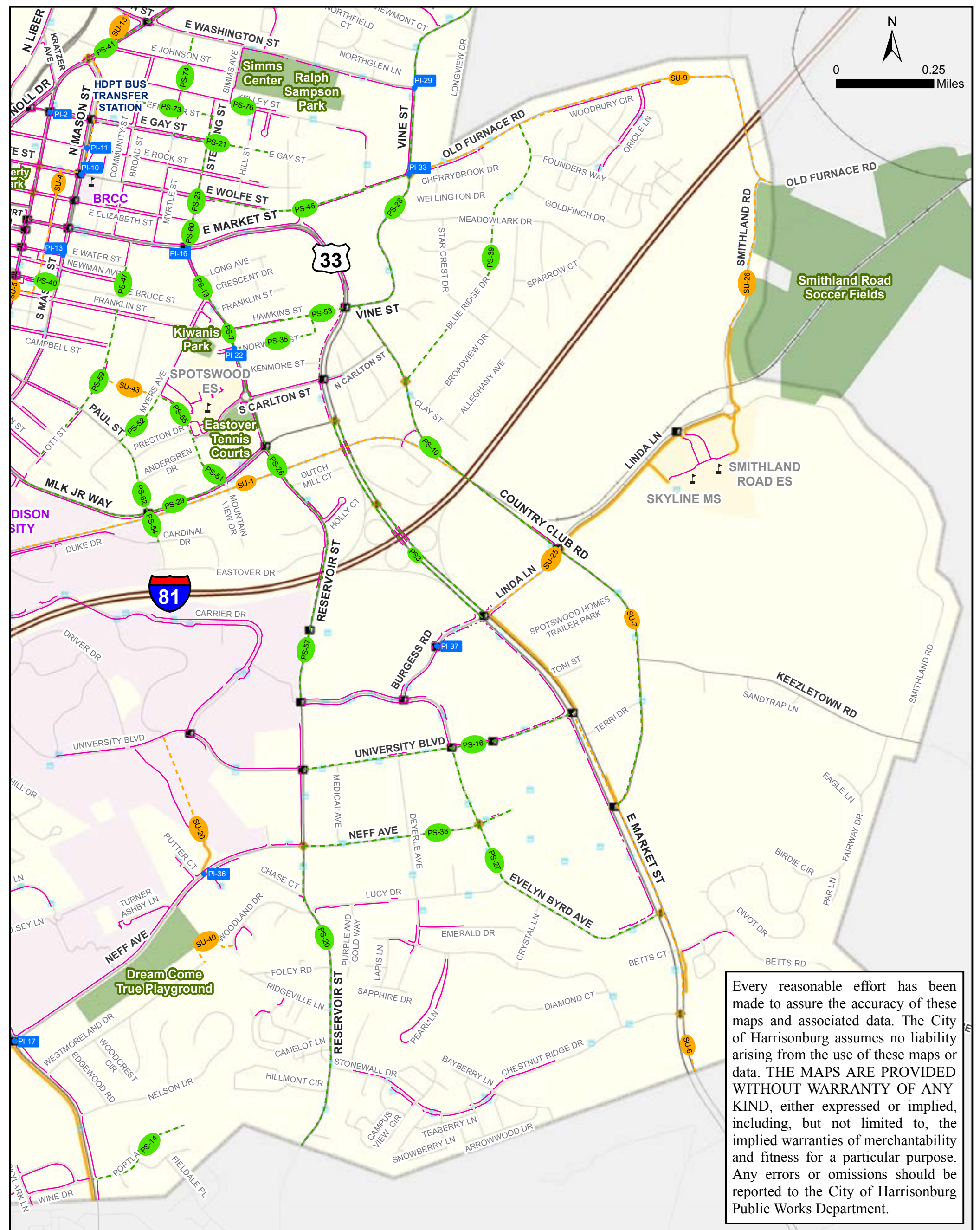


Recommended Pedestrian Facilities: North

Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop



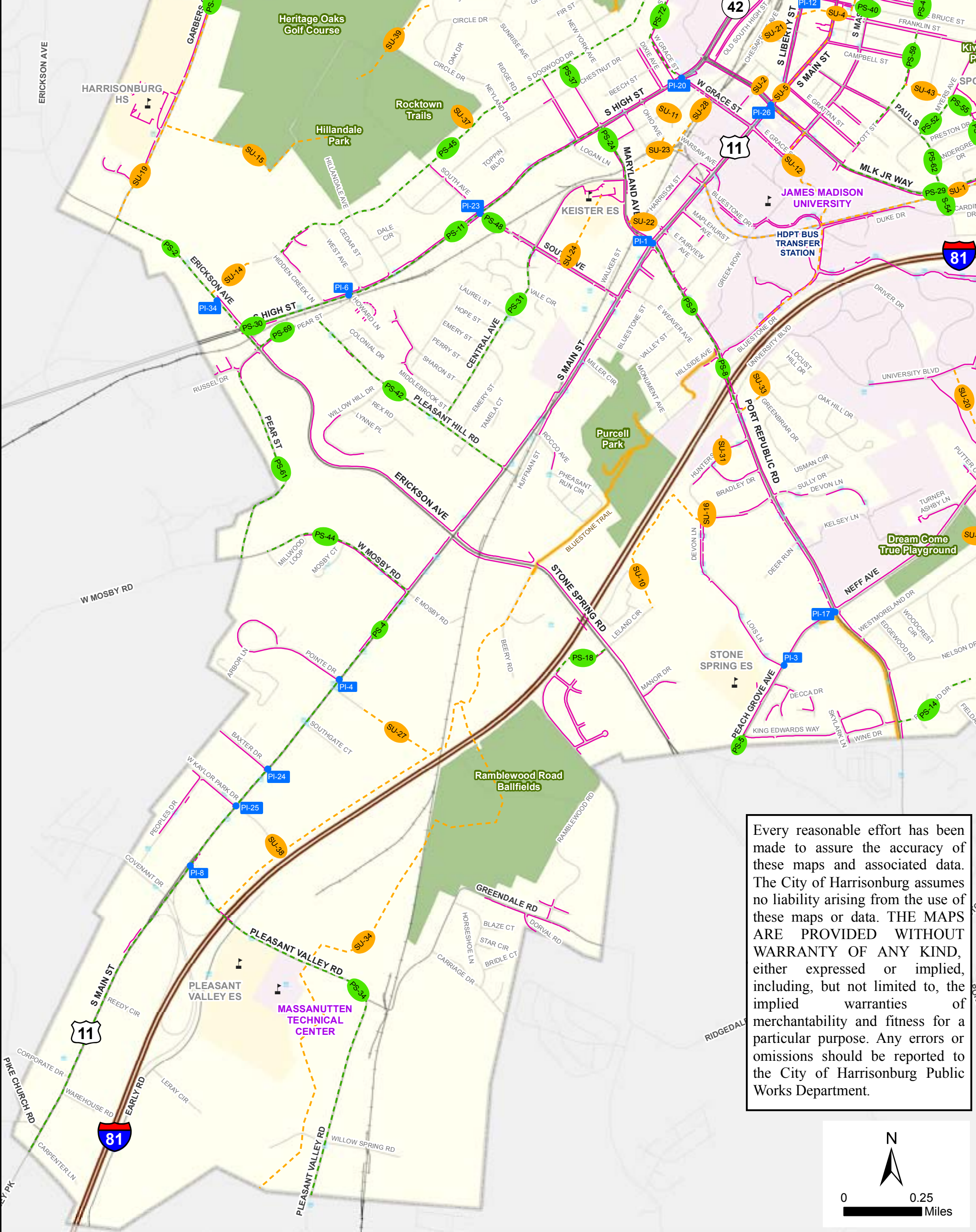


Recommended Pedestrian Facilities: East

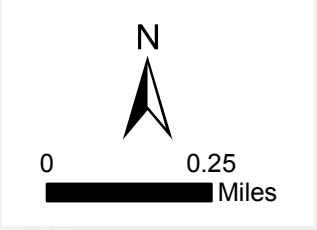
Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop





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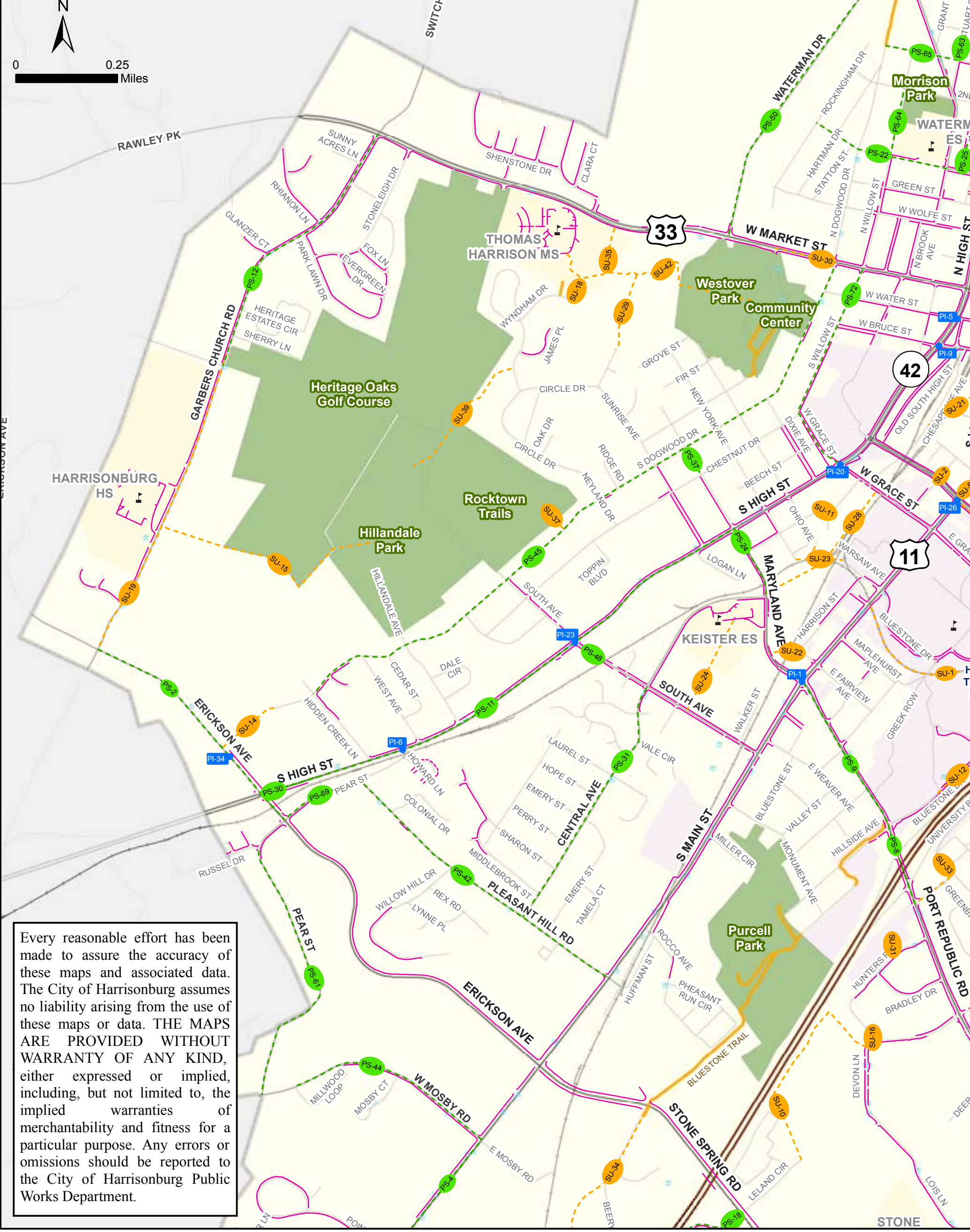
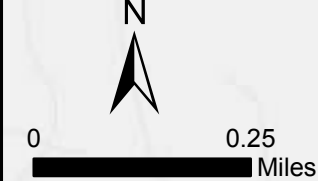


Recommended Pedestrian Facilities: South

Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop





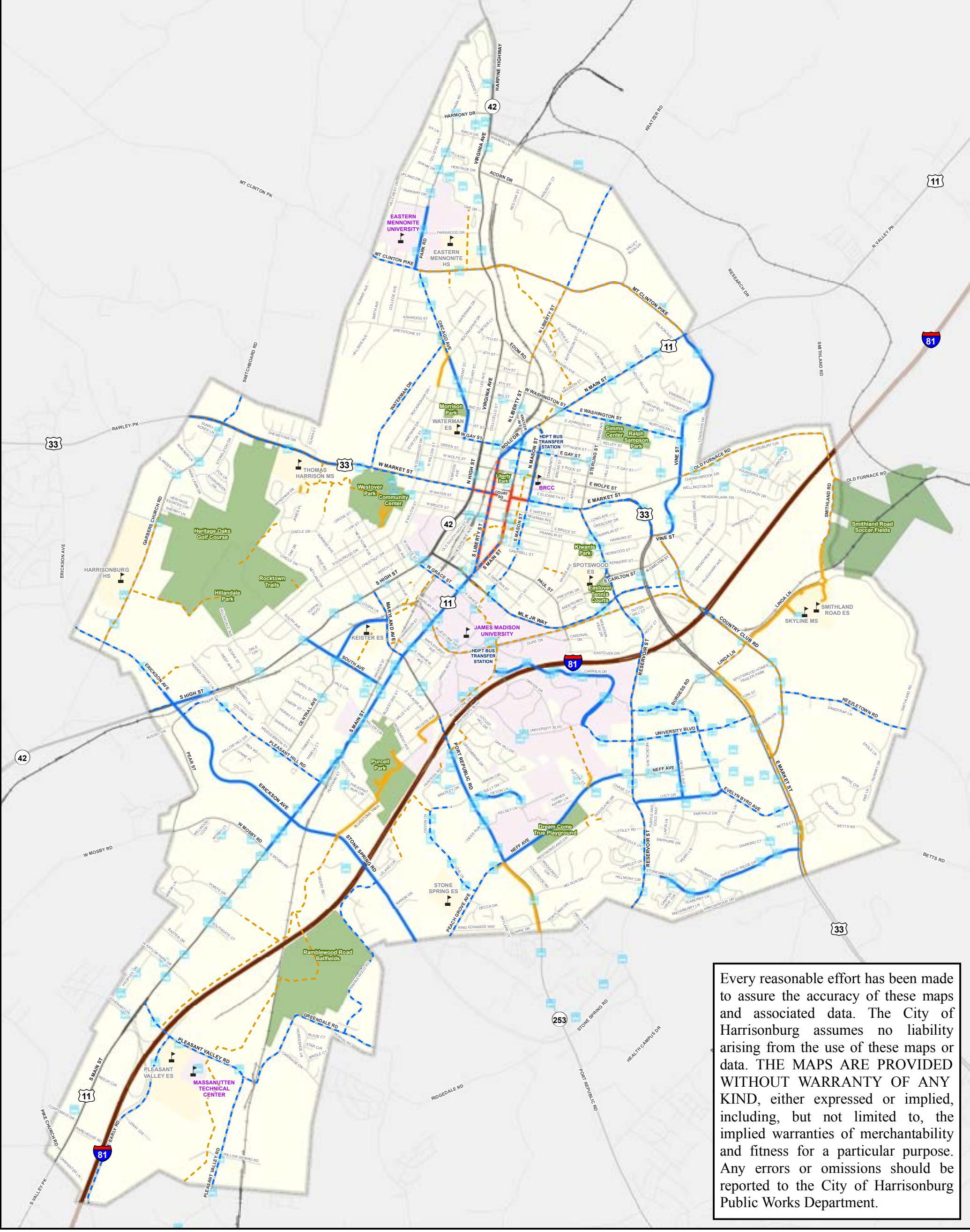
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Recommended Pedestrian Facilities: West

Facility Type

- - - Proposed Pedestrian Improvement Segment
- - - Proposed Shared Use Path
- Proposed Intersection Improvements
- Existing Traffic Signal with Crosswalk Signal
- Existing Traffic Signal without Crosswalk Signal
- Existing Sidewalk
- Existing Shared Use Path
- School
- Transit Bus Stop



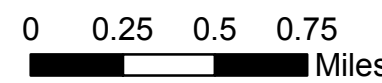


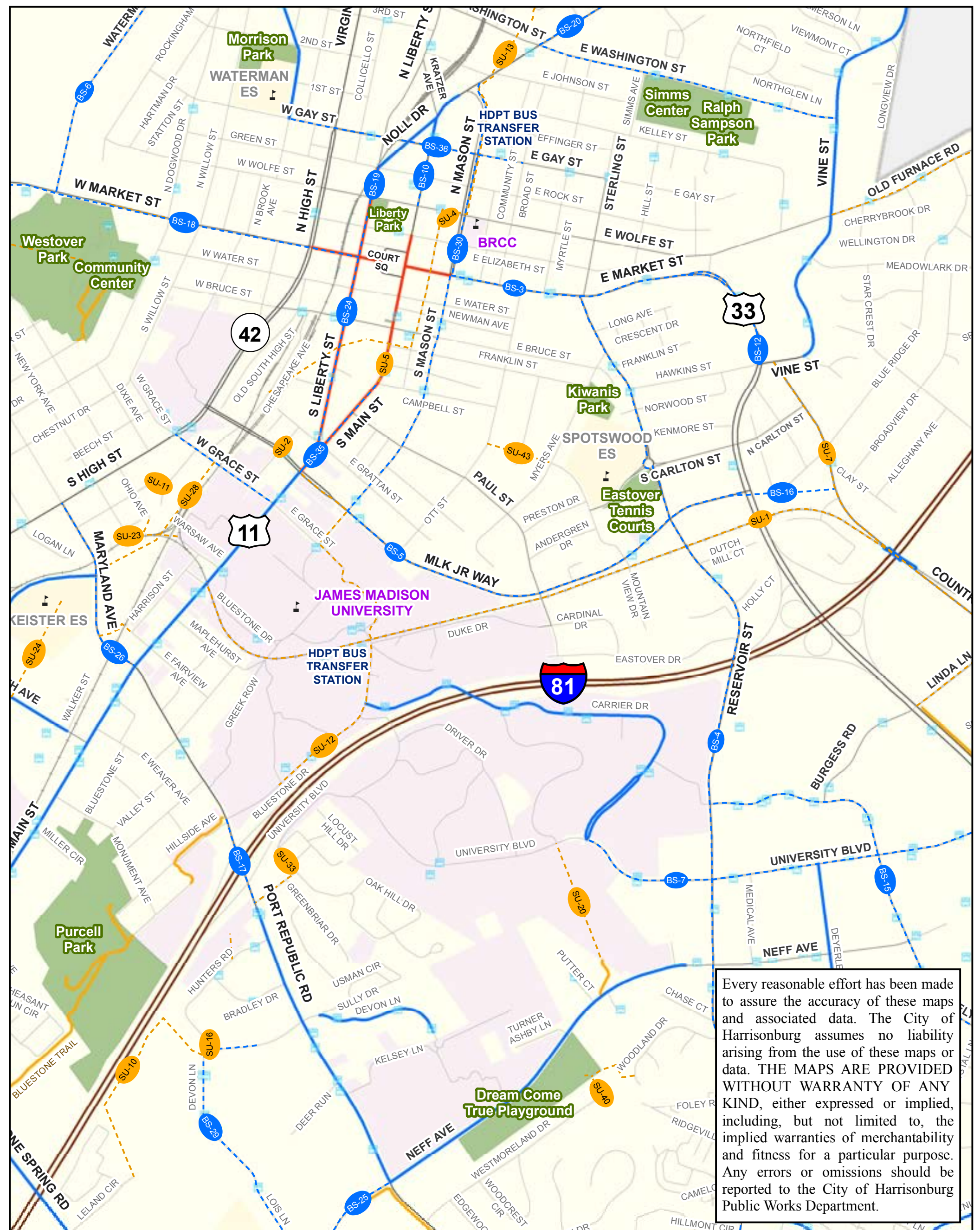
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Recommended Bicycle Facilities

Facility Type

- - - - Proposed Bike Segments
- - - - Proposed Shared Use Path
- Existing Shared Use Path
- Existing Bicycle Lanes
- Existing Shared Lane Markings
- School
- Transit Bus Stop

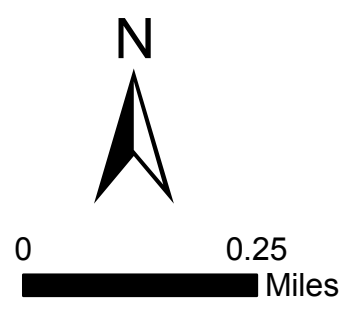




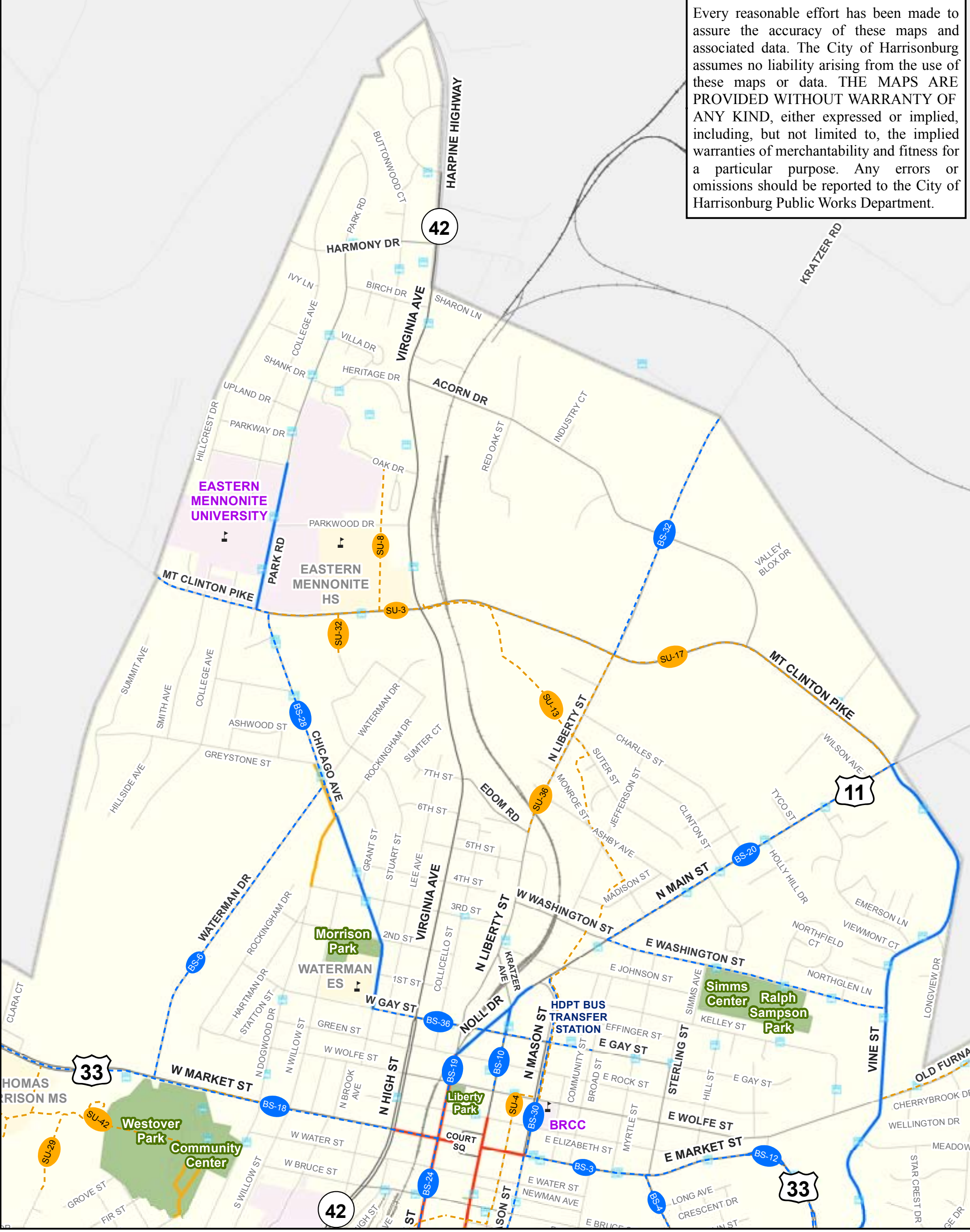
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Recommended Bicycle Facilities: Downtown & JMU

- Facility Type**
- Proposed Bike Segments
 - Proposed Shared Use Path
 - Existing Shared Use Path
 - Existing Bicycle Lanes
 - Existing Shared Lane Markings
 - School
 - Transit Bus Stop



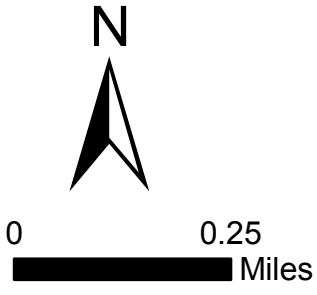
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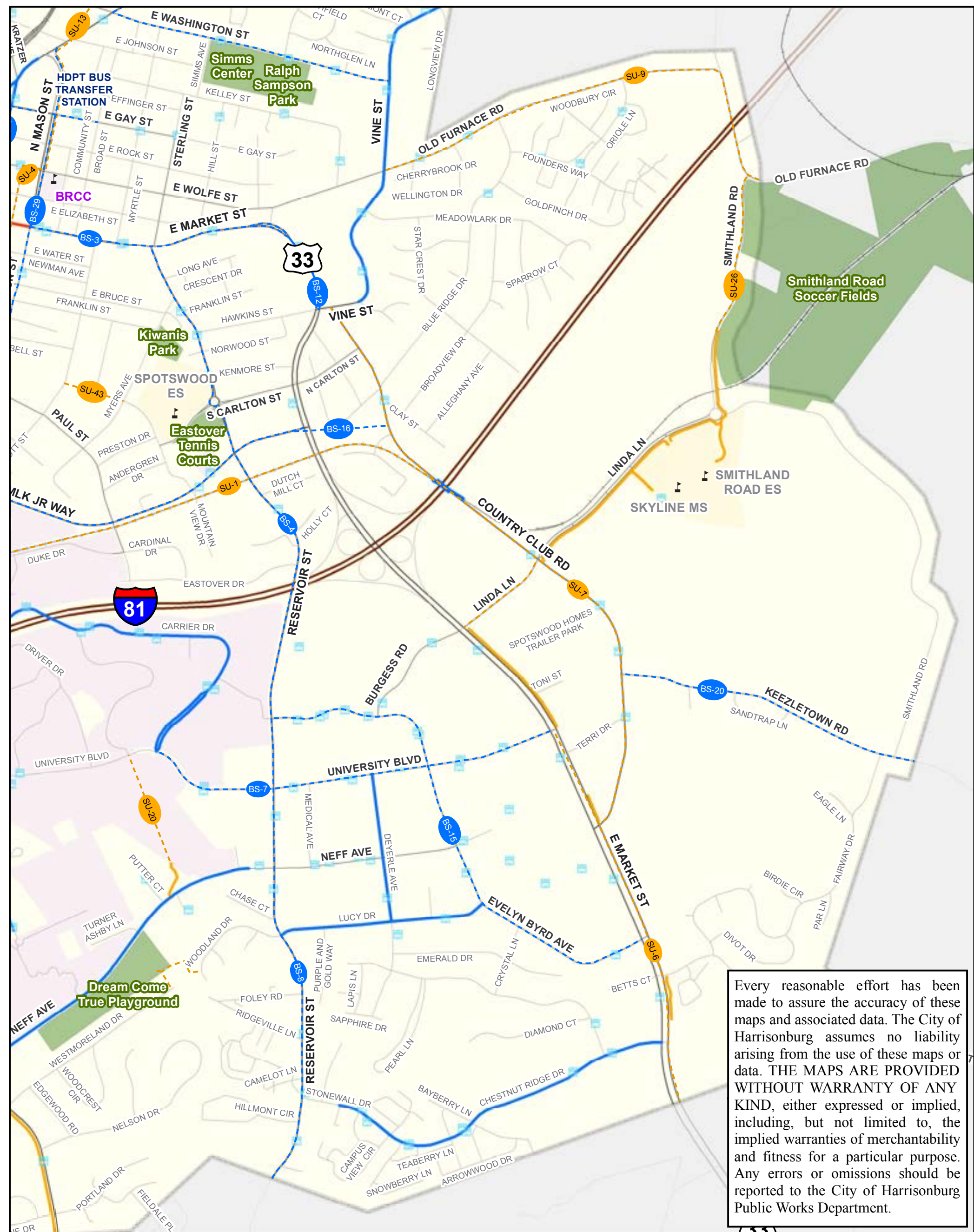


Recommended Bicycle Facilities: North

Facility Type

- - - - Proposed Bike Segments
- - - - Proposed Shared Use Path
- Existing Shared Use Path
- Existing Bicycle Lanes
- Existing Shared Lane Markings
- School
- Transit Bus Stop



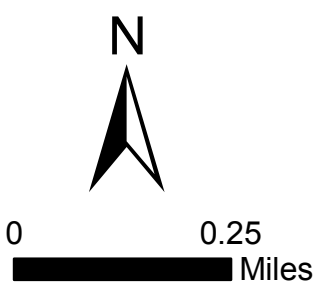


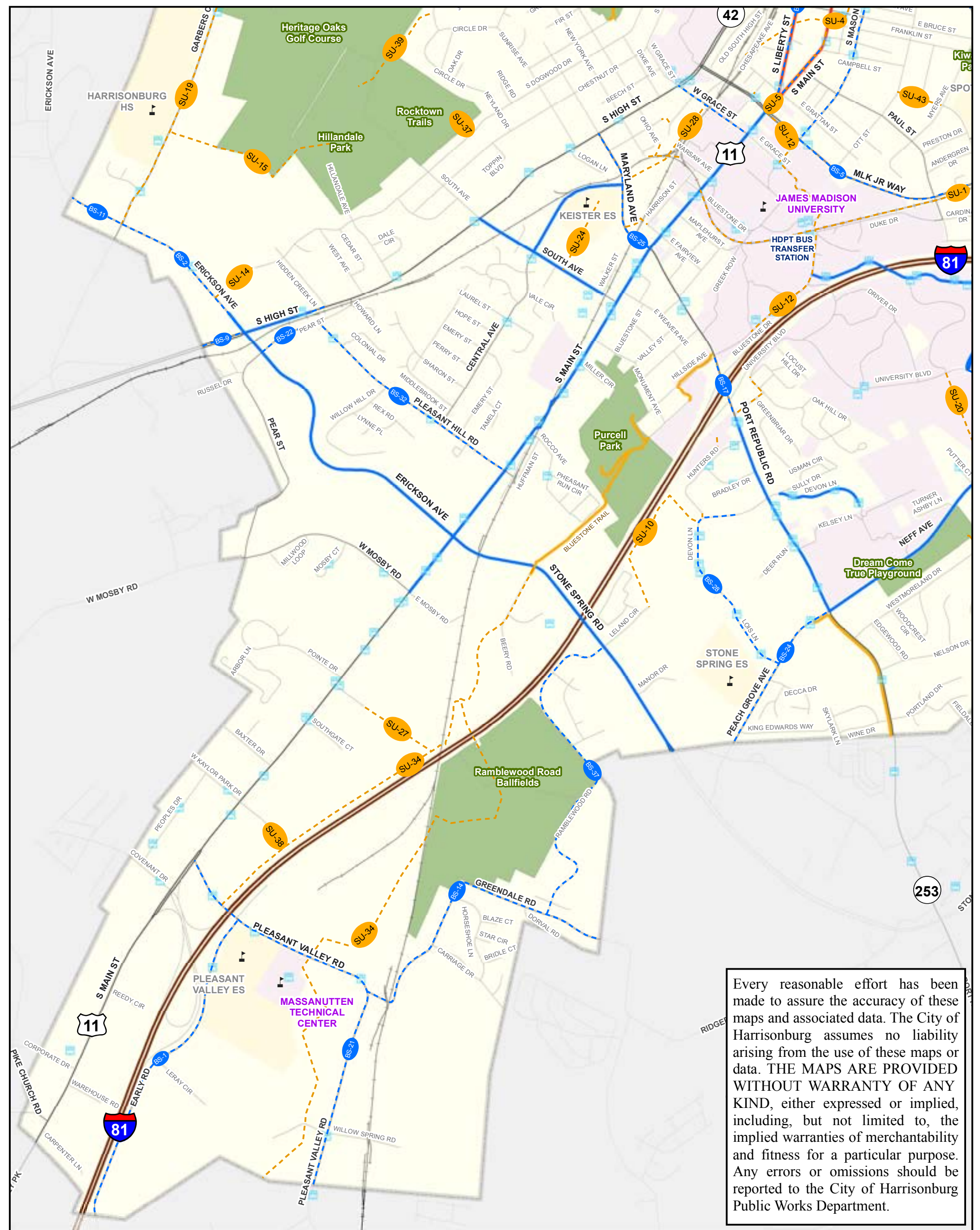
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Recommended Bicycle Facilities: East

Facility Type

- - - Proposed Bike Segments
- - - Proposed Shared Use Path
- Existing Shared Use Path
- Existing Bicycle Lanes
- Existing Shared Lane Markings
- School
- Transit Bus Stop



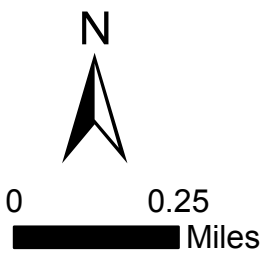


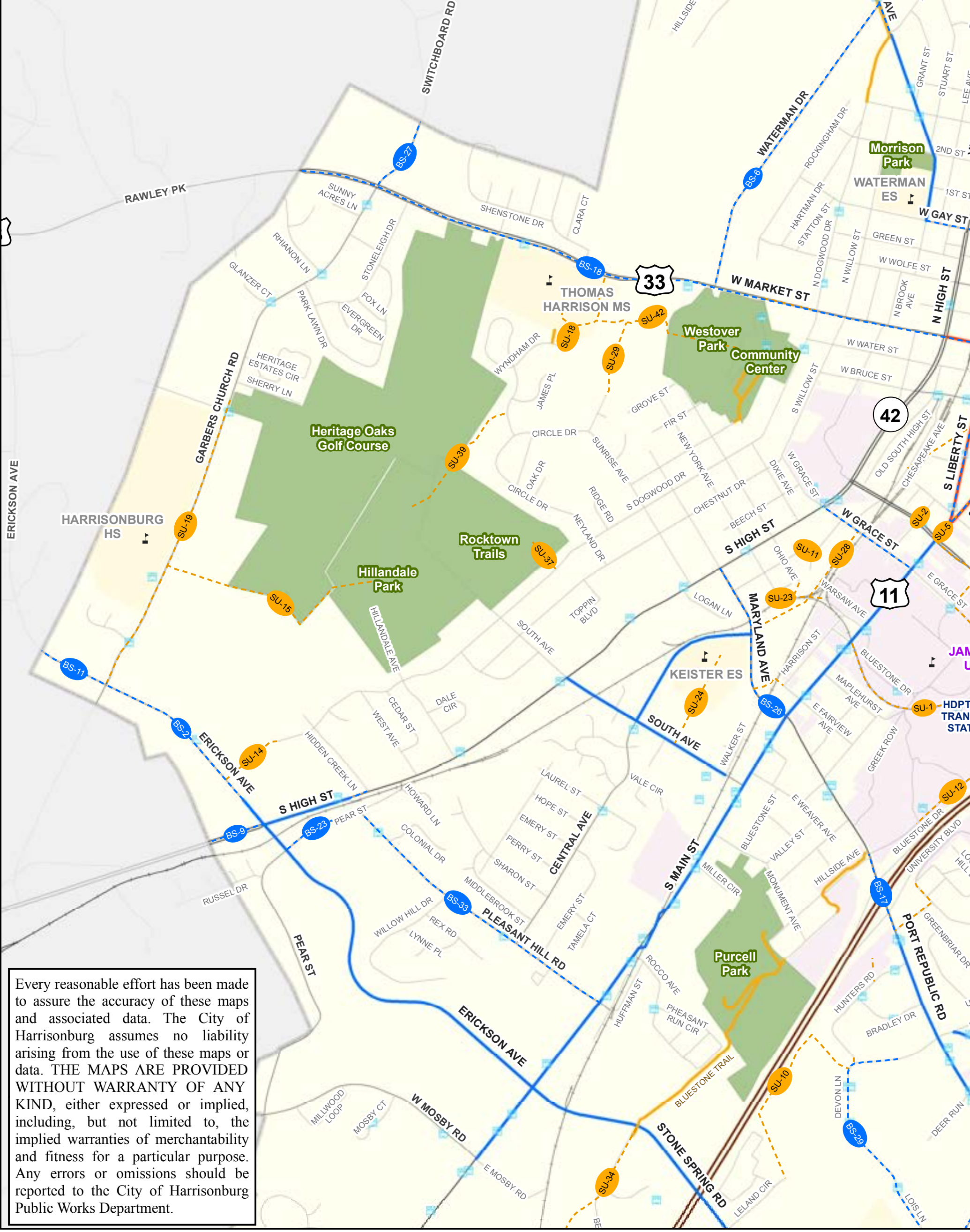
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Recommended Bicycle Facilities: South

Facility Type

- - - - Proposed Bike Segments
- - - - Proposed Shared Use Path
- Existing Shared Use Path
- Existing Bicycle Lanes
- Existing Shared Lane Markings
- School
- Transit Bus Stop



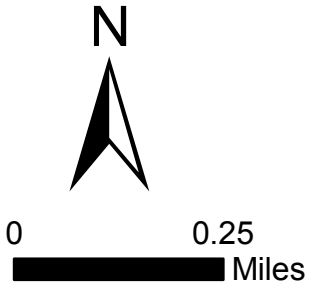


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Recommended Bicycle Facilities: West

Facility Type

- - - - Proposed Bike Segments
- - - - Proposed Shared Use Path
- Existing Shared Use Path
- Existing Bicycle Lanes
- Existing Shared Lane Markings
- School
- Transit Bus Stop



VI. Implementation

The 5 E's

The “5 E's” model is used by the League of American Bicyclists' Bicycle Friendly Community Plan, and by the Pedestrian and Bicycle Information Center's Walk Friendly Program. While Engineering and infrastructure projects often take center stage in local and regional planning discussions, Education, Encouragement, Enforcement, and Evaluation can all play major roles in advancing the cause of bicyclists and pedestrians, improving Harrisonburg and the mobility of its residents.

Engineering

The most visible element of Harrisonburg's bicycle and pedestrian network is the physical infrastructure that makes non-car travel possible, from sidewalks and curb ramps, to bike lanes and shared use paths. Physical facilities are a key determinant in whether people will walk or bicycle. People want a connected network of routes that can get them all the way to their destination safely, conveniently, and comfortably.

It will ultimately fall to City government to construct infrastructure improvements, most of which fall within the right of way of public streets. The City maintains a Design and Construction Standards Manual (DCSM) that details the engineering specifications for public infrastructure projects. These standards apply to sidewalks, curb ramps, signals, and a variety of other improvements. At this time, the City requires sidewalks to be included on all newly constructed streets, sidewalks to be constructed in conjunction with new development or redevelopment with public street frontage, and for development along a proposed shared use path to dedicate right-of-way. The City should also continue to implement its traffic calming program for existing residential streets as an additional way of supporting bicycle and pedestrian safety. In the future design and engineering of improvements, the City should consider not only those infrastructure elements in this plan, but a full range of new and innovative elements included in the resources of the National Association of City Transportation Officials (www.nacto.org).

The City is also responsible for the long-term maintenance of all newly constructed infrastructure. Maintenance funding received by the City from the Virginia Department of Transportation is based on the length of travel lanes for vehicles, only.



Sidewalk and Bicycle Lane.



Bike Rodeo - Waterman Elementary.



Zagster Bike Share.



Bike Blast.

No additional maintenance funds are provided to the City when bicycle and pedestrian facilities are added to the transportation network. Long-term maintenance costs are considered in the planning and development of all new infrastructure projects, and such costs are included among the many factors that determine the type of bicycle and pedestrian accommodations selected.

Education

In many cases, a lack of skills or confidence may keep potential bicyclists and pedestrians from using the City's alternative transportation network. Much of the work of educating potential bicyclists and pedestrians happens at the community level, with bicycle and pedestrian safety education for school children and adults. Communities, businesses, and campuses can offer options for adults looking to improve their biking skills with online tips, presentations, and on-bike training opportunities. Education campaigns should also be used to reinforce traffic laws and teach motorists how to drive safely when bicyclists and pedestrians are present.

Encouragement

Automobiles are the dominant form of transportation in Harrisonburg and in most parts of the country. This means that walking or riding a bike are a major change for most people. City government, community organizations, businesses, universities, and citizens can all play a role in encouraging people to give walking or bicycling a try. This can be done through the celebration of events like National Bike Month or Bike to Work Day, by producing community bike maps to point out safe and convenient routes, or a variety of other measures. Community bike sharing programs may also be used to make bicycles temporarily available to those who do not already own one.

Enforcement

Title 46.2, Chapter 8 of the Code of Virginia contains laws covering motorists, bicyclists, and pedestrians in Virginia. All road users should read the Virginia Driver's Manual and be

familiar with their rights and responsibilities, and how to safely and courteously walk, bike, and drive. After education and encouragement campaigns, the City Police Department should follow up with targeted enforcement. A focus on positive enforcement can encourage safe and legal walking and cycling practices.

Evaluation

The City and its citizens will want to know how successful its investments in bicycle and pedestrian infrastructure and programs have been. As routes are added to the bicycle and pedestrian network, and as program and policy tools are added, the City should continue to monitor the network for numbers of riders and walkers, and continue to accept the concerns and suggestions of citizens who have first-hand experience using the City's streets, sidewalks, bike lanes, and paths. In this effort, the City should be comparing its current levels of bicycle and pedestrian participation to previous levels, as well as remaining aware of how other communities are implementing bicycle and pedestrian infrastructure and programs in relation to their resources and fiscal health.



National Walk to School Day.



Bike to Work Day in Harrisonburg.

Implementation Strategies

In order to implement the goals of this bicycle and pedestrian plan, and to continue to advance Harrisonburg as a top bicycle and pedestrian friendly community, Engineering, Education, Encouragement, Enforcement, and Evaluation efforts will all have to work together, including efforts by city government, citizens, community groups, and others. The strategies below are actionable items intended to make progress toward achieving the goals and objectives.

Goal 1 To develop and maintain a network of streets and paths that are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

Objective 1.1 To develop and improve the City's bicycle and pedestrian transportation system.

- Strategy 1.1.1. Adopt, implement, and maintain the City's Bicycle and Pedestrian Plan for bicycle and pedestrian improvements.
- Strategy 1.1.2. Consider adopting a Complete Streets strategy to inform the planning, design, and implementation of transportation projects that serve all users, and consider neighborhood character and context.
- Strategy 1.1.3. Continue to complete infrastructure projects and utilize the Recommended Facilities Lists found in Section V of this plan to guide planning and construction.
- Strategy 1.1.4. Coordinate bicycle and pedestrian facility improvements with the City's Comprehensive Plan, Master Transportation Plan, Downtown Streetscape Plan, Comprehensive Parks and Recreation Master Plan, Harrisonburg-Rockingham Metropolitan Planning Organization's Bicycle and Pedestrian Plan and other local and regional plans.
- Strategy 1.1.5. Secure sidewalk and shared use path improvements, easements, and on-site bicycle parking and storage consistent with the Bicycle and Pedestrian Plan through the development review process.
- Strategy 1.1.6. Coordinate bicycle and pedestrian facility improvements with Rockingham County, the Virginia Department of Transportation, the Harrisonburg-Rockingham Metropolitan Planning Organization, James Madison University, Eastern Mennonite University, and other appropriate organizations.
- Strategy 1.1.7. Collaborate with City departments and citizen organizations to identify grant opportunities and submit applications to fund improvement projects.
- Strategy 1.1.8. Appropriate public funding through the City's Capital Improvement Program to support new bicycle and pedestrian infrastructure projects.

Objective 1.2. To Develop a bicycle and pedestrian network that is convenient and comfortable to encourage citizens to bike and walk more frequently.

- Strategy 1.2.1. Develop bicycle and pedestrian linkages between neighborhoods, shopping centers, recreation facilities, and education centers.
- Strategy 1.2.2. Continue to update the City's Design and Construction Standards Manual (DCSM) to reflect best practices for the design and installation of pedestrian and bicycle infrastructure elements, including sidewalks, bicycle lanes, shared use paths, and associated elements such as bicycle parking.
- Strategy 1.2.3. Install way-finding and route signs and provide maps and internet-based information to guide users through the City's pedestrian and bicycle systems.
- Strategy 1.2.4. Engage partners in planning for sidewalks, walkways, and shared use path amenities, where deemed appropriate.
- Strategy 1.2.5. Evaluate the provision of adequate lighting for on-street and off-street pedestrian and bicycle facilities.

Objective 1.3. To implement operational safety measures for all modes of travel.

- Strategy 1.3.1. Minimize the number of driveways on arterial streets to reduce the potential for bicycle, pedestrian, and vehicle collisions.
- Strategy 1.3.2. Promote the City's Neighborhood Traffic Calming Program and utilize traffic calming measures in planning and construction to reduce speeds on city streets.
- Strategy 1.3.3. Continue enforcing traffic laws, for all modes of travel, such as speeding, failing to make a full stop at red lights and stop signs, failing to yield to pedestrians in crosswalks, failing to use bike lights at night, and many others.
- Strategy 1.3.4. Continue considering surrounding land uses and desired travel patterns for all road users, including bicyclists and pedestrians, when designing new street improvement projects.
- Strategy 1.3.5. Review existing city streets and consider reconfiguring lanes (right-sizing the roadway), where appropriate, to improve operational safety for all modes of transportation.
- Strategy 1.3.6. Consider deployment of pavement markings, warning signage, and/or educational signage in areas of frequent or probable pedestrian/bicycle/vehicle interaction and shared spaces to improve safety for all users.

Goal 2 To use education and encouragement to promote safe walking and bicycling as a form of transportation and recreation.

Objective 2.1. To promote and encourage bicycling and walking as a healthy, safe, and sustainable form of transportation and recreation.

- Strategy 2.1.1. Collaborate with local organizations, schools, and agencies to promote International Walk to School Week/Day, Virginia Bicyclist and Pedestrian Awareness Week, and National Bike to Work Month/Week/Day.
- Strategy 2.1.2. Continue collaborating with community organizations on bicycle and pedestrian events, education, and outreach opportunities.
- Strategy 2.1.3. Continue using positive enforcement to encourage safe and legal practices.
- Strategy 2.1.4. Continue to promote and distribute the Harrisonburg Community Bike Map (www.harrisonburgva.gov/bike-map) as a resource for bicyclists.
- Strategy 2.1.5. Create and publish maps of the City's pedestrian paths and shared use paths, as well as update wayfinding signage that points bicyclists and pedestrians to safe routes and destinations of interest.

Objective 2.2. To educate city staff and citizens on bicycle and pedestrian laws, etiquette, and safe practices.

- Strategy 2.2.1. Encourage local schools to continue teaching bicycle, pedestrian, and motorist safety as part of the curriculum.
- Strategy 2.2.2. Encourage bicyclists and pedestrians to follow safety guidelines as recommended by transportation safety campaigns created by federal, state, and/or local agencies.
- Strategy 2.2.3. Provide training to city staff and law enforcement on bicycle and pedestrian laws and safe practices to keep up with changing laws and best practices for infrastructure.
- Strategy 2.2.4. Promote a "Share the Road" campaign to make motorists more aware of the presence and rights of bicyclists and pedestrians, and share safe driving tips.
- Strategy 2.2.5. Continue including the Police Department in bicycle and pedestrian planning initiatives and educational programs. The police have intimate knowledge of city streets and can be a resource for identifying trouble spots and suggesting upgrades.

Objective 2.3. To recognize the efforts of the City, local businesses, and local organizations for their efforts to promote bicycling and walking in the City.

- Strategy 2.3.1. Continue applying for the League of American Bicyclists' Bicycle Friendly Community designation and improve award from Bronze (2011 and 2015) to Silver.
- Strategy 2.3.2. Encourage local businesses and universities to also apply for Bicycle Friendly Business and University awards from the League of American Bicyclists.
- Strategy 2.3.3. Apply for the Pedestrian and Bicycle Information Center's Walk Friendly Communities designation for the city.

Objective 2.4. To continually evaluate the state of the City's bicycle and pedestrian infrastructure and programs, and plan for ongoing improvement.

- Strategy 2.4.1. Develop a program for data collection that produces both quantitative and qualitative data about the use of bicycle and pedestrian facilities in the City. Make this data publicly available, and analyze to inform future bicycle and pedestrian planning.
- Strategy 2.4.2. Review the Bicycle and Pedestrian plan every 5 years; reevaluate proposed projects and add new projects as necessary.

Funding

The largest obstacle to many infrastructure projects is funding. A complete and connected network of bicycle and pedestrian infrastructure is a costly endeavor. The cost of long-term maintenance of such facilities must also be absorbed by the City government as additional maintenance funding from VDOT is not provided for additions to the bicycle and pedestrian infrastructure. The funding of transportation projects can involve a complex mix of state transportation funds, grant funds, and local capital improvement funds, and privately raised funds, all working together to accomplish the project. Citizens and community organizations are also encouraged to partner with the City to apply for grants for new bicycle and pedestrian infrastructure.

City Capital Improvement Program

The City's Capital Improvement Program (CIP) is its long-range effort to plan for funding necessary improvements of all types. The plan is reviewed by the Planning Commission and approved annually by City Council. It includes all types of public facilities, equipment, and utilities, not just those that involve transportation. The CIP includes only those projects with an estimated cost of at least \$50,000, which will include many, but not necessarily all, pedestrian and bicycle infrastructure projects.

State Transportation Funding

As a Virginia city, Harrisonburg maintains its own street system, but is eligible to receive funding from various state sources. Highway Maintenance Account Funds are provided for maintenance activities on existing facilities, while the state Revenue Sharing Program can fund construction and improvement projects. While these funds typically focus on automobile infrastructure, sidewalks, intersection improvements, or bike lanes may also be included in these projects. The City requires that sidewalks be included on both sides of any new street, and that sidewalks be built as part of the frontage of any new development or redevelopment project.

State Smart Scale Program

This state program provides funding for projects that incorporate bicycle and pedestrian facilities as well as those that construct these facilities as stand-alone projects. Smart Scale is used to distribute more than half of all federal and state transportation construction funds in the Commonwealth through a performance-based scoring system. Projects involving bicycle and pedestrian facilities are awarded points through the prioritization process not available to projects that do not include them. This effectively results in bicycle and pedestrian facility based projects scoring well and having higher probability of being funded.

Other Sources

Aside from direct City funding and state transportation funding, a variety of grant programs from federal, state, local, and non-profit sources can help with the City's bicycle and pedestrian efforts. The Transportation Alternatives Program (TAP) is a federally-funded effort to combine several programs that used to be considered separate stand-alone programs, including the Transportation Enhancement (TE) program and Safe Routes to Schools program. The TAP program funding is available for a wide variety of projects. With respect to bicycle

and pedestrian infrastructure, it can be used to fund the development of safe routes to schools bicycle/pedestrian network improvements or other types of improvements to the bicycle and pedestrian network. Virginia's Highway Safety Improvement Program also contains a Bicycle-Pedestrian Safety Program that may fund improvements that help reduce injuries or fatalities among bicyclists and pedestrians. Community Development Block Grant (CDBG) funds available to the City through the Department of Housing and Urban Development are primarily intended to benefit low and moderate income households, and can be used for a variety of public infrastructure projects. State Recreational Access grants are available to help improve access to state or locally owned recreation and historic sites. Other grants and funding opportunities are also available from non-profit groups that value pedestrian and bicycle transportation, or from groups simply dedicated to improving Harrisonburg.

Private Development

New bicycle and pedestrian infrastructure need not only come from government channels. In many cases, new developments, redevelopment, and real estate projects must build sidewalks, shared use paths, bicycle parking, or other improvements, either as a part of the City's approval process, or developers can do so because they feel that this infrastructure will appeal to their customers. Existing businesses may also agree to sponsor infrastructure projects such as paths or transit stops in exchange for recognition such as signage.

Non-Profit Fundraising

Local community groups or other organizations with an interest in promoting bicycling and walking, or simply with an interest in improving the city, may be willing to raise and donate funds to support local projects. Grants may also be available from larger non-profit foundations or organizations.

Conclusion

As the City of Harrisonburg strives to be inclusive of all transportation modes, this plan offers both broad strategies and specific projects to continue the City's work of establishing an interconnected network of bicycle and pedestrian connections throughout the community. It will take the ongoing work of both City government and local residents to make Harrisonburg a more walkable and bikeable city.

To get involved or to offer your input on biking and walking in Harrisonburg, contact the City's Department of Public Works at:

540-434-5928, or
publicworks@harrisonburgva.gov

You can also stay up to date with a variety of City news and projects online:

The City communicates biking and walking initiatives and news at:

<https://www.harrisonburgva.gov/biking-and-walking>

To stay up-to-date on current infrastructure improvements, see:

<https://www.harrisonburgva.gov/transportation-projects>



Appendices

- A. *Accomplishments Since 2010***
- B. *Public Workshop Summary***
- C. *Focus Group Summaries***
- D. *ActiveTrans Methodology***
- E. *GIS and Equity Score Methodology***
- F. *Network & Facility Recommendations***



Appendix A:

Accomplishments Since 2010



Pedestrian Infrastructure Projects 2010-2015

* Does not include sidewalk reconstruction projects

Year Completed	Project Name	Project Description	Funding Source(s)	Grant Funding Source Amount	General Fund Amount*
1 2010	Port Republic Road Phase 3	New sidewalks (and shared use path) between Peach Grove Avenue to city limits	VDOT Transportation Enhancement*	\$ 213,205	\$ 53,203
2 2011	East Market Street Sidewalks Ph II	New sidewalks constructed on the north side of East Market Street from Linda Lane to University Boulevard. New pedestrian signals and crosswalks installed at Linda Lane/ Burgess Rd & East Market St.	VDOT Highway Safety Improvement Program (HSP)	\$ 111,561	\$ -
3 2012	East Market Street Sidewalks Ph III	New sidewalks constructed on the south side of East Market Street from University Boulevard to Evelyn Byrd Ave. New pedestrian signals and crosswalks installed at University Boulevard & East	VDOT Highway Safety Improvement Program (HSP)	\$ 239,139	\$ -
4 2012	University Boulevard Sidewalks & Pedestrian Signal	New sidewalks constructed on the north side of University Boulevard between East Market St to Evelyn Byrd Avenue. New pedestrian and crosswalks signal installed existing traffic signal.	City General Fund	\$ -	\$ 204,825
5 2012	Green Street sidewalks	New sidewalk constructed on north side Green Street from High St towards Chicago Avenue (constructed with sidewalk reconstruction on other portions of Green St)	Community Development Block Grant	\$ 74,139	\$ -
6 2013	Gay Street Sidewalks	New sidewalks constructed on north side of E Gay St from Sterling St to Summit St.	Community Development Block Grant	\$ 91,790	\$ -
7 2013	South Main Street Median at JMU	Between Grace St to Bluestone Dr.	James Madison University	\$ 307,836	\$ -
8 2013	New Pedestrian Signals & Upgraded Accessible Pedestrian Signals	Audible, sensory communication at various signals, ex. W Market St & N High St, W Market St & Waterman Dr, Virginia Ave & Gay St, Virginia Ave & Wolfe St	City General Fund	\$ -	\$ 28,000
9 2014	East Market Street Sidewalks Ph IV	New sidewalks constructed on south side of East Market St from Carlton St to 400' north of Hawkins St. New pedestrian signals and crosswalks installed at East Market St & Hawkins/ Vine St, and East Market St/ Carlton St	VDOT Highway Safety Improvement Program (HSP)	\$ 368,898	\$ -
10 2014	Waterman Elementary School Safe Routes to School Project	New sidewalks constructed in various sections of Virginia Ave between 1st St to 5th St, along the south side of 3rd St between Collicello St to Stuart St, along the east side of Stuart St between 3rd St to Chicago Avenue, and along the west side of Chicago Avenue between Rockingham Drive to 2nd St. New pedestrian signal and crosswalk added at 3rd St & Virginia Ave.	VDOT Safe Routes to School* & Community Development Block Grant	\$ 477,202	\$ -
11 2014	Stone Spring Road Phase III new sidewalks	New sidewalks on north side between Route 42 and 11	VDOT Capital Projects Revenue Bond	\$ 5,176,454	\$ -
12 2014	Wolfe Street sidewalks	New sidewalks on south side between Broad St and Mason St	City General Fund	\$ -	\$ 36,000
13 2014	Downtown Streetscape Phase II	Sidewalk reconstruction and new pedestrian signals on Main St between Bruce St and Court Square	VDOT Transportation Enhancement*	\$ 879,268	\$ 219,817
14 2014	Main St & Mosby Rd Pedestrian Signal	New pedestrian signal and crosswalks installed at existing traffic	City General Fund	\$ -	\$ 156,000
15 2014	Main St & Pleasant Hill Rd Pedestrian Signal	New pedestrian signal and crosswalks installed at existing traffic	City General Fund	\$ -	\$ 156,000
16 2014	Neff Avenue pedestrian crossing	At Sunchase/ Aboretum Trail	City General Fund	\$ -	\$ -
17 2014	Old Town ADA ramps and crossing enhancements	ADA curb ramps and new marked crosswalks and pedestrian warning signs added on S Mason St, and at intersections of Paul St/ Ott St and Franklin St/ Myers Ave	City General Fund	\$ -	\$ 20,000

Bicycle Infrastructure Projects 2010-2015

Year Completed	Project Name	Project Description	Funding Source(s)	Grant Funding Source Amount	General Fund Amount*
1	2010 Central Avenue bike lanes	New bike lanes added on existing pavement from Maryland Avenue to South Avenue	City General Fund	\$ -	\$ 3,500
2	2010 South Main Street bike lanes	New bike lanes added on existing pavement from Martin Luther King Jr Way to Pleasant Hill Road	City General Fund	\$ -	\$ 7,000
3	2010 Park Road bike lanes	New bike lanes added on existing pavement from Mt. Clinton Pike to W Dogwood Dr	City General Fund	\$ -	\$ 2,000
4	2010 Vine Street bike lanes Pt I	New bike lanes stripped on existing pavement from N Main St to E Washington St	City General Fund	\$ -	\$ 4,000
5	2010 Main St sharrow	New sharrow from Campbell to Wolfe St	City General Fund	\$ -	\$ 5,000
6	2011 South Avenue bike lanes	New bike lanes added on existing pavement from RR tracks near South Main Street to RR tracks near South High Street	City General Fund	\$ -	\$ 2,000
7	2011 Lucy Drive bike lanes	New bike lanes added on existing pavement from Reservoir Street to Evelyn Byrd Ave	City General Fund	\$ -	\$ 2,500
8	2011 N Dogwood Dr, S Dogwood Dr & Hidden Creek sharrow - won't be reinstalled	New sharrow from W Market St to Rockingham Dr trail, Hidden Creek to W Market St, and Dogwood Dr to High St	City General Fund	\$ -	\$ 7,500
9	2011 S Main St sharrow	New sharrow from Martin Luther King Jr Way to Campbell St	City General Fund	\$ -	\$ 3,000
10	2011 Park Road & Birch Dr sharrow - won't be reinstalled	New sharrow from W Dogwood Dr to Birch Dr, and Park Rd to Virginia Ave	City General Fund	\$ -	\$ 5,000
11	2012 Vine St bike lanes Pt II	New bike lanes stripped from E Washington St to Country Club Road	City General Fund	\$ -	\$ 1,700
12	2012 Noll Drive bike lanes	New bike lanes added on existing pavement from N Main St to Liberty St/ Rock St	City General Fund	\$ -	\$ 1,500
13	2013 Liberty Street Sharrow	New sharrow added on Rock St to Martin Luther King Jr Way	City General Fund	\$ -	\$ 7,500
14	2014 Stone Spring Road Phase III new bike lanes	New bike lanes between Route 42 and 11	VDOT Capital Projects Revenue Bond	\$ 5,176,454	
15	2014 Vine Street bike lanes Pt III	New bike lanes striped on existing pavement between Old Furnace Rd to E Market St	City General Fund	\$ -	\$ 1,700
16	2015 Chicago Avenue bike lanes	New bike lanes added on existing pavement and widened roadway between Gay Street to Waterman Drive	City General Fund	\$ -	\$ 3,000
17	2015 N Main Street bike lanes	New bike lanes added on existing pavement between Kratzer Avenue to N Mason St	City General Fund	\$ -	\$ 750
				\$ 5,176,454	\$ 57,650

*General Fund values presented only include the cost of materials and/or contractor for construction. Values do not include staff time to administer the project, for in-house engineering design, surveying by city, right of way negotiations by city, or use of city forces to construct or install projects.

Pedestrian Infrastructure Projects 2010-2015

* Does not include sidewalk reconstruction projects

Year Completed	Project Name	Project Description	Funding Source(s)	Grant Funding Source Amount	General Fund Amount*
18 2014	Port Republic Rd & Bluestone Dr pedestrian signal	New pedestrian signal and crosswalks installed at existing traffic signal as part of Bluestone Trail project.	James Madison University	\$ 15,000	
19 2014	Bruce Strett & Liberty Street Pedestrian Improvements	Sidewalk widening and decorative patterns on associated with Ice House development	City General Fund & Developer	\$ 70,582	\$ 44,452
20 2015	Stone Spring Elementary School Safe Routes to School Project	New sidewalk on east side of Peach Grove Avenue between King Edwards Way and Decca Dr. New traffic and pedestrian signal at school entrance.	VDOT Safe Routes to School*	\$ 226,188	\$ -
21 2015	Path between Wyndham Drive and Thomas Harrison Middle School	New paved pedestrian access	City General Fund	\$ -	\$ 5,000
22 2016	Virginia Avenue & Mt Clinton Pike Pedestrian Signals	New pedestrian signal and crosswalks installed at existing traffic signal.	City General Fund		\$ 6,500
23	2016 West Mosby St sidewalk	New pedestrian sidewalk installed between Millwood Loop and Main Street	Community Development Block Grant	\$ 176,570.00	\$ -
Total				\$ 8,427,832	\$ 929,797

* Former VDOT Transportation Enhancement and VDOT Safe Routes to School Grants are now included in the VDOT Transportation Alternatives Program (TAP).

*General Fund values presented only include the cost of materials and/or contractor for construction. Values do not include staff time to administer the project, for in-house engineering design, surveying by city, right of way negotiations by city, or use of city forces to construct or install projects.

Path-Trail Infrastructure Projects 2010-2015

Year Completed	Project Name	Project Description	Funding Source(s)	Grant Funding Source Amount	General Fund Amount*
1	Port Republic Road Phase 3	Shared use path between Peach Grove Avenue to city limits	VDOT Transportation Enhancement*	\$ 213,205	\$ 53,203
2	Bluestone Trail Project Phase 1A & 1B	Shared use path between Stone Spring Road to Port Republic Road	DCR Land & Water Conservation Fund, VDOT Revenue Sharing Program, James Madison University, City General Funds	\$ 886,894	\$ 536,208
3	Geronimo Trail at Hillendale Park	Natural surface path provides pedestrian and bicycle connection between Circle Drive and Rocktown Trails at	City General Funds & Community Organization	Parks and Recreation Project	
				\$ 1,100,099	\$ 589,411

*General Fund values presented only include the cost of materials and/or contractor for construction. Values do not include staff time to administer the project, for in-house engineering design, surveying by city, or use of city forces to construct or install projects.

Appendix B:

Public Workshop Summary



Bicycle and Pedestrian Plan Public Workshop

City of Harrisonburg Public Works

May 19, 2015

At Thomas Harrison Middle School

On May 19, 2015, over 30 citizens, 4 Bicycle & Pedestrian Subcommittee members, and 6 city staff participated in the Bicycle & Pedestrian Plan Workshop. The Workshop was facilitated by the JMU Institute for Constructive Advocacy and Dialogue.

VISIONING EXERCISE

The Workshop began with a visioning exercise where participants were asked to respond to various prompts.

According to the citizens gathered, a good bike and pedestrian network in the City of Harrisonburg includes:

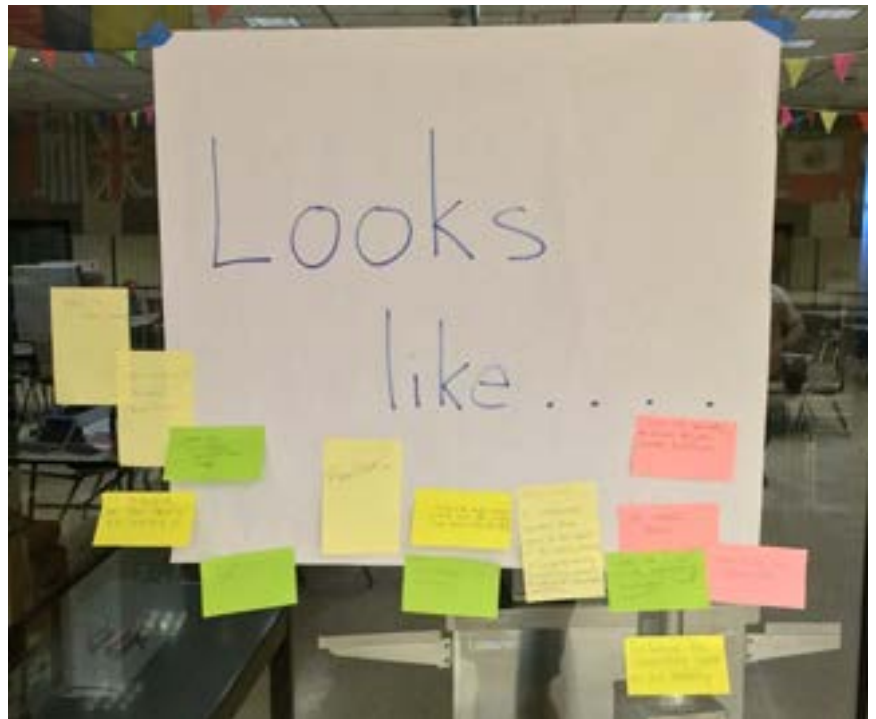
- Safe, multimodal options to all citizens
- As many bike and walkways as possible that are separate from cars and trucks
- Bike Lanes
- Shared use path network
- Sidewalks on every street in the city
- Connections from residential neighborhoods to popular destinations
- Something more substantial than Sharrows
- Complete and accessible paths
- Support along the network to cater to the users (once the network is well-establish) – pump stations, showers, lockers, bike maintenance
- Spending tax dollars to show a preference for self-transportation over motors
- Shared and exclusive facilities
- A complete multi-use path network that connects all major residential areas to schools serving those areas
- Bike/ped facilities to allow transit to all points of the city
- The Northend Greenway that connects with the JMU trail
- All sections of the city limits
- Goals: i.e. increase trips taken by bike by x%, increase kids walking/biking to school by x%



- Out of the box ideas: Encourages creative and can-do process like those of Portland, Madison, Missoula, etc.
- Follow through on laws/policies
- Clear sidewalks
- Following rules of the road (all parties)
- Educational campaign everyone knows their rights and expectations, not just those who walk or bike
- Multiple connections to and through downtown, particularly the Greenway
- Interconnectivity to JMU and the outlying region
- A sidewalk plan (i.e. a schedule to add them, independent of or at least in concert with the paving schedule)
- A plan to connect to other major destinations
- Efforts to reduce JMU student car traffic (to make streets safer for everyone)
- Safe connections between people (homes) and places
- Continued focus on making schools priority hubs for installing bike-ped infrastructure

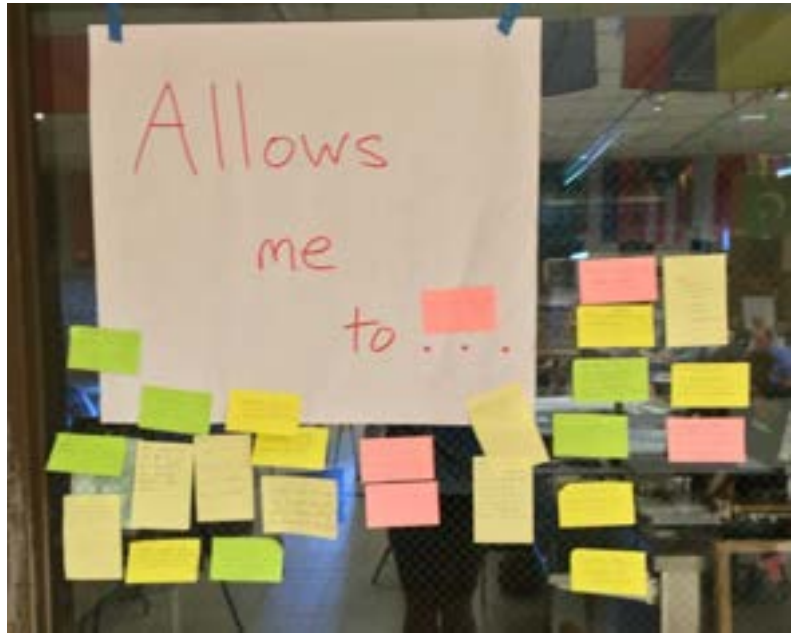
A good bike and pedestrian network in the City of Harrisonburg looks like:

- Freedom!
- Has shade trees
- A part of the topography, landscape, road layout
- Inviting (landscaping)
- A linear park
- A wheel with the center being downtown
- And reflects the beauty all around us
- Comfortable, clean, inviting
- A connected system that caters to the needs of the users around (i.e., paths leading to university in student/faculty/staff concentrated communities)
- Separation of bike/ped clearly from traffic
- An enhancement to community value as an amenity
- Wide (about 8 ft.) dedicated bike lanes
- Connecting trails separate from traffic leading to downtown and other shopping areas



A good bike and pedestrian network in the City of Harrisonburg allows:

- Mobility beyond car ownership
- Safe movement across the city to various destinations (shopping, restaurants, library)
- Foot traffic to local businesses
- Safe movement to schools
- Access to children
- Safe riding
- Sharing by bikers and walkers (wide enough)
- Residents to safely reach parks and playgrounds
- People to get to any park by bike on a safe/comfortable route
- Me to bike and walk comfortably to most of the places I go
- Me to visit with and see my neighbors more often
- Travel by bike safely around town with my family
- Me to ride with my children to school or ride to work or to the store without traveling on a road with a speed limit greater than 25 mph
- Children to ride and walk safely to school
- Everyone to connect to neighborhoods, downtown, parks, schools, businesses in a safe and enjoyable way
- Connections between residential neighborhoods with downtown, restaurants, shopping destinations
- Provides a safe and convenient route regardless of the starting point and destination
- Safely connects nodes (clusters of people and important places)
- Me to use my bike to get across town safely
- City and interstate crossing with minimal interaction with cars
- Me to get to home and work safely and smoothly
- Safety riding between any two points in the city
- Moving across/through the city on mode of people's choice
- Making bus connections in concert with bike-ped infrastructure
- Going from mode to mode seamlessly (bus, car, walk, skate, bike)
- Biking without fearing traffic
- Connects people with places they want to go (parks, schools, employment, groceries, churches)



A good bike and pedestrian network in the City of Harrisonburg is:

- Supportive of cyclists commuting to/from work
- Connections between multiple modes of transportation and connects housing to shopping
- Supportive of cyclists shopping
- Prioritized in an effective manner to maximize the benefit of the project and the funding opportunity
- A primary way to increase the quality of civic-life getting people interacting with each other
- Innovative and progressive
- A comprehensive transportation network
- Fun and healthy
- A way to connect neighborhoods and build community
- Safe in order to encourage everyone to use it
- Complete streets with cars, busses, bikes, feet and wheelchairs and strollers
- Safe, enjoyable and convenient
- Safe for all users
- Safe and separated from busy roadways
- Safe and comfortable to use by kids
- Accessible to all neighborhoods and to people of all abilities
- So safe and beautiful people choose to walk and ride a bike rather than drive a car
- Inclusive of all city neighborhoods and provides everyone the opportunity to walk and bike
- Long overdue
- Makes infrastructure happen sooner
- Fully implemented within 10 years
- Developed in a more quick time frame (2-5 years – 50% installed)
- Accessible to all citizens who wish to use it
- Accessible from most major neighborhoods in the city
- Accessible to all members of the community (even those who aren't able to advocate for themselves)
- Has bikes easily accessible to those without one
- Safe for all levels of riders, not just the fit and fearless
- Has all ages on bicycles



The plan itself is:

- Short and concise
- Is simple and easy to understand

Prioritizing key “visions” of a Bike Ped Plan

After dot voting on the most critical aspects of a plan, the following emerged as vital:

- Timely implementation
- Accessible to all users
- Enables connectivity
- Promotes Safety
- Oriented to kids being able to bike and walk to school safely



QUADRANT DISCUSSIONS

During this session, tables were set up with maps and flip charts for each of the four quadrants in the City – northwest, northeast, southwest, and southeast. Participants were asked to break out into different groups and were allowed to move freely between tables. One facilitator was stationed at table, taking notes of the group discussions. Participants were also encouraged to draw their ideas on the maps.

Sample prompts:

- “In order for people in this area of the city to walk and bike more often, safely, and efficiently for leisure and transit, this area needs . . . ” (consider both built/engineering needs as well as awareness/education needs)
- “Where, in the vicinity of this area, do bike/pedestrian/transit bus infrastructures come together or could potentially come together? How do we improve facilities and eliminate gaps at these points? (e.g. – pedestrian crossings, bus stops, shared sidewalk space, etc...)”
- “How might this area connect with areas being reviewed by other groups? How do we improve connectivity and eliminate gaps at these points between other sections of the City?”

Facilitators asked groups recommend priorities for the needs identified: 1st, 2nd, or 3rd level priority (1st priority is the highest priority).

Italicized items were drawn by participants on map, but were not captured on flip charts. Category of need recommendations were not made.

Northeast Quadrant

Recommended Priority	Need Statement	Bike/Ped
An overarching theme of the discussion of needs in this group was access to schools and other destinations from nearby neighborhoods, particularly for those who walk and bike by necessity rather than by choice.		
1	A plan that addresses everyone's needs, focusing on those who may not be bikers/pedestrians by choice.	Both
1	Seeing the connection between these populations and schools, and therefore prioritizing access and safety at these (potential) hubs	Both
2	The provision of continuous paths/lanes that do not force people to jump streets	Both
	<i>Connect Mt. Clinton Pike via Vine St to Smithland Soccer Complex, sidewalks/bike lanes or shared use path?</i>	Both
	<i>Sidewalks on Vine Street from N Main St to E Market St</i>	Ped
	<i>Sidewalks and traffic calming on Blue Ridge Dr; it's a good alternative to Vine St.</i>	Both
	<i>Sidewalks and shared use path on Country Club Rd to connect residents to schools and businesses</i>	Both
	<i>Many gaps along Route 33 between Carlton St to Linda Ln (over interstate)/ High demand area, but lacks bike and ped infrastructure</i>	Both
	<i>Crossing at Reservoir St and Sterling St is unsafe</i>	Both
	<i>Northeast Neighborhood experiences high speeds, drivers not stopping at stop signs</i>	Both
	Main St intersections downtown, drivers turn right without looking	Ped
	<i>Extend Linda Ln shared use path along Smithland Rd from Smithland Soccer Complex to existing sidewalk on Old Furnace Rd near Oriole Ln</i>	Both
	<i>Sidewalks on Old Furnace Rd on either side of Blue Ridge Dr to connect to existing sidewalk</i>	Ped
	<i>Sidewalks on Blue Ridge Dr</i>	Ped
	<i>Sidewalks and crossing(s) on Reservoir St from E Market St to Evelyn Byrd Ave</i>	Ped
	<i>Pedestrian lights on traffic signals downtown</i>	Ped

- Safety
 - Safety was tied to the ideas of accessibility and efficiency throughout different conversations
 - Sidewalks and continuous lanes are seen as ways to ensure safety
 - Schools offer the ability to provide good points to plan around

- Paths provided should be multiuse, have good lighting, and offer a speedy way to travel.
 - Education should be provided for everyone (i.e. bikers *and* pedestrians)
- Current Barriers
 - Lack of connection points (both to other areas, and the need to jump across roads, etc)
 - A lack of continuous paths/lanes
 - A lack of lighting
 - Narrow sidewalks
 - Country Club Rd
 - Vine St
- Opportunities
 - More reliable transit in the NE quadrant
 - Utilizing police who are in communities to identify needs/points of connection
 - The ability to connect neighborhoods with JMU and EMU

Northwest Quadrant

Recommended Priority	Need Statement	Bike/Ped
An overarching theme of the discussion of needs in this group was about connecting schools and neighborhoods and making biking and walking safe and compelling. More sidewalks are a key concern in some of the residential neighborhoods to enable this to happen safely.		
1	Sidewalk and handicapped access from 33 to Thomas Harrison MS	Ped
1	Bike/ped improvements on Waterman Dr between Chicago Avenue and W Market St, <i>bike access to Thomas Harris MS</i>	Both
1	Prioritize Chicago Ave as a key connector	Both
1	Sidewalks west of Waterman ES (Particularly W Gay St west of N Willow St)	Ped
2	Sidewalks on Lee Ave, <i>Stuart St, and residential area to the north</i>	Ped
2	Pedestrian marking from west to Waterman Dr	
2	Bike/ped improvements on Greystone St	Both
2	Traffic calming on streets near EMU for safety	Both
2	N Main St & Gay St intersection – establish crosswalk on final corner (3 of 4 exist)	Ped
2	East-west crosswalk(s) on Virginia Ave north of Third St for Safety (Perhaps at Collicello North development)	Both
2	Bike lanes on N Main St from Washington St to north	Bike
3	Include parking area at future trailhead of Northend Greenway	Both
	<i>Sidewalks and bike lanes or shared use path on Mt. Clinton Pike (connect to Smithland Soccer Complex)</i>	Both
	<i>Connect Woodleigh Ct to Mt. Clinton Pike with official path</i>	Both
	<i>Bike and pedestrian facilities on Mt. Clinton Pike west of Chicago Ave</i>	Both
	<i>Crossings and bike lane or path on Route 42 from Mt. Clinton Pike to north city limits needs</i>	Both
	<i>Northend Greenway between Chicago Ave to Downtown</i>	Both
	<i>Bike Lanes on E/W Gay St to connect east-west</i>	Bike

Observations about linking North West quadrant into the broader city system:

- Talk with various landowners where unofficial paths are in use to make them official paths that offer shorter, more direct routes.
- Mt. Clinton Pike offers connection possibilities to the east quadrant for both bike and ped.
- Virginia Ave becomes an important connection to the north to the county and to the south to downtown and the southeast and southwest quadrants.

Southeast Quadrant

Recommended Priority	Need Statement	Bike/Ped
An overarching theme of the discussion of needs in this group was a desire for connectivity. This included connectivity throughout the city, as well as routes connecting neighborhoods to schools and playgrounds.		
1	Traffic lights and crossing guards to eliminate buses around Spotswood ES, especially at Reservoir St	Both
1	In-street pedestrian signage on Mason St and Water St	Ped
1	Educate Stone Gate and Sun Chase property managers about encouraging residents to use the flashing lights at the crosswalk on Neff Ave	Ped
2	Establish bike lanes on Port Republic Rd on the bridge crossing I-81.	Bike
2	Eliminate parking on one side of Devon Ln	Bike
2	Establish a long, continuous, accessible trail, potentially by extending the Bluestone Trail into the county, following Black's Run and Cook's Creek and on the west side of I-81 south of Erickson Ave following Route 11.	Both
2	Connect A Dream Come True park to surrounding neighborhoods by a separated trail	Both
2	Connect JMU to Downtown to the Northend Greenway via Federal St or Black's Run	Both
3	More routes connecting residential areas to shopping on E Market St	Both
3	Connect the new Hotel and Conference Center to Downtown via a separated path.	Both
3	Shared use path through Ramblewood Park (Connect Bluestone Trail to Greendale Rd).	Both
3	Designated parking for trailheads along Bluestone Trail and future Northend Greenway	Both
	<i>Unsafe and uncomfortable for bikes and peds across Port Republic Rd between Forest Hill Rd and Bluestone Dr</i>	Both
	<i>Sidewalks and crossing points on Reservoir St between MLK Jr. Way and Evelyn Byrd Ave</i>	Ped
	<i>Crossing points on Reservoir St between Myers Ave and Carlton St for safer access to Spotswood ES</i>	Both
	<i>Sidewalks on MLK Jr Way from Mountain View Dr towards Ott St</i>	Ped
	<i>Make Federal St a bike/ped route</i>	Both
	<i>Extend MLK Jr Way to connect to Country Club Rd for east-west connector</i>	Both
	<i>Bike lanes on MLK Way and Reservoir St (between Neff Ave and E Market St)</i>	Bike
	<i>Encourage connectivity between Devon Ln to Hunters Rd/ Bradley Dr</i>	Both

	<i>Connect Bluestone Trail to south city limits following Blacks Run, and connect with major industrial employers</i>	Both
	<i>Spur Bluestone Trail along west side of I-81 from Ramblewood Park to Pleasant Valley Rd with connections to roads along S Main St</i>	Both

Southwest Quadrant

Recommended Priority	Need Statement	Bike/Ped
An overarching theme of the discussion of needs in this group was an interest in reframing problem-solving from emphasizing how to adapt existing roads designed for cars into shared systems to emphasizing opportunities to create path systems separate from car roads.		
1	Both bicycle and pedestrian accessibility to Harrisonburg HS and to-be-built elementary school near there from neighborhoods via Hillandale Park and other non-road routes. Emphasis is put on having a pathway that is NOT shared with cars.	Both
1	Create separate facility or bike lanes on 33W to Harrisonburg HS. This will fill in a gap that currently exists regarding bike options to and from the school.	Bike
2	Create non-road access to Thomas Harrison MS from Westover Park <i>and connect to W Market St</i>	Both
2	Safe pedestrian crossing options at the intersections of S High St and S Main St & Erickson Ave, especially S High St & Erickson Ave from SE corner to NE corner	Ped
2	Install sidewalk from SE corner of S High St & Erickson Ave to the nearby Food Lion on S High St	Ped
2	Permanent traffic calming solutions on S Dogwood Dr. (Turn stop sign on Ohio Ave to be stopping traffic on S Dogwood Dr? Small roundabouts in intersections?)	Both
2	Better signage in Hillandale Park regarding what paths are ped-only and what paths are shared bike/ped i.e. gravel path from South Ave into park	Both
2	Addressing natural tendency for bike/ped to cross S High St at Emery St en route to Hillandale Park and shops. Either create safe crossing option or better enforce no crossing at that point	Both
2	Create bike lane on Maryland Ave from S Main St to S High St	Bike
2	Address congestion that forms on Maryland Ave when Keister ES lets out from the school day	Both
2	Complete bike lane on S High St to Garbers Crossing Shopping Center	Bike
2	Create a safer crossing across S High St at W Bruce St and W Water St. Like Emery St, these are places where both bikes and peds cross because it is a natural path/short path between two points. W Market St from S High St to S Liberty St is likely not used as it has more cars, on a steep hill, and is narrow.	Both
3	Clockwise bus route going west on Erickson Ave stops for Wal-Mart on Erickson Ave – this bus stop needs a safer crossing for pedestrians	Ped
	<i>More bike/ped support at intersection for left turns at MLK Jr Way and S Main St</i>	Both

	<i>Create rails-with-trails next to rail line</i>	Both
	<i>Complete SE Connector/ Erickson Ave improvements between S High St and Garbers Church Rd</i>	Both
	<i>Sidewalks along W Mosby Rd from S Main St to west</i>	Ped
	<i>Safe crossings on S Main St at W Kaylor Park, Baxter Dr, and Pointe Dr for residents to connect to opposite sides and to future Bluestone Trail</i>	Both
	<i>Improve sidewalk on W Market St for bike safety between Dogwood Dr and Westover Park entrance</i>	Bike
	<i>Sidewalks on S Dogwood Dr</i>	Ped

Observations about linking South West quadrant into the broader city system:

- While not city-specific, attention needs to be paid to how the city blurs the lines with the county to enable safer transitions for road cyclists, particularly heading west on Erickson Ave and heading south on 42.
- There is a strong interest in linking this quadrant to the Bluestone Trail safely across 11 so that neighborhoods between 11 and 42 have safe access. The most likely prospect for this seems to be at Kaylor Park Dr and as far from the I-81 interchange as possible.
- Participants wanted to ‘see’ this quadrant as an area where the nodes are schools, neighborhoods, and parks and the lines linking them are the bike/ped infrastructure. The infrastructure should be dedicated vs. adapted to existing car systems.
- Because schools are a node in the system, new schools should be designed with entry points for potential dedicated bike/ped paths so that they do not have to be retrofitted after the fact. Case in point is the fact that there is poor bike/ped access to Thomas Harrison MS from W Market St. School design includes adequate, covered bike parking near a logical entrance. Because this involves funding decisions, too, it is recommended that a school system representative at the appropriate decision-making level be involved in Bike/Ped Committee work.

Overall System-Wide Plan Comments

Offer amenities at bus stops (shelter, safety, etc.)

Working with school board to be a part of the conversation about alternative modes of transportation to school

Connecting quadrants – may need to rely more on greenways to make these connections

Have Greenway Master Plan as a sub-plan of the Bicycle & Pedestrian plan

Identify more unofficial paths-in-use

Solidify the “last mile” cross-mode connections

Focus on maps and wayfinding

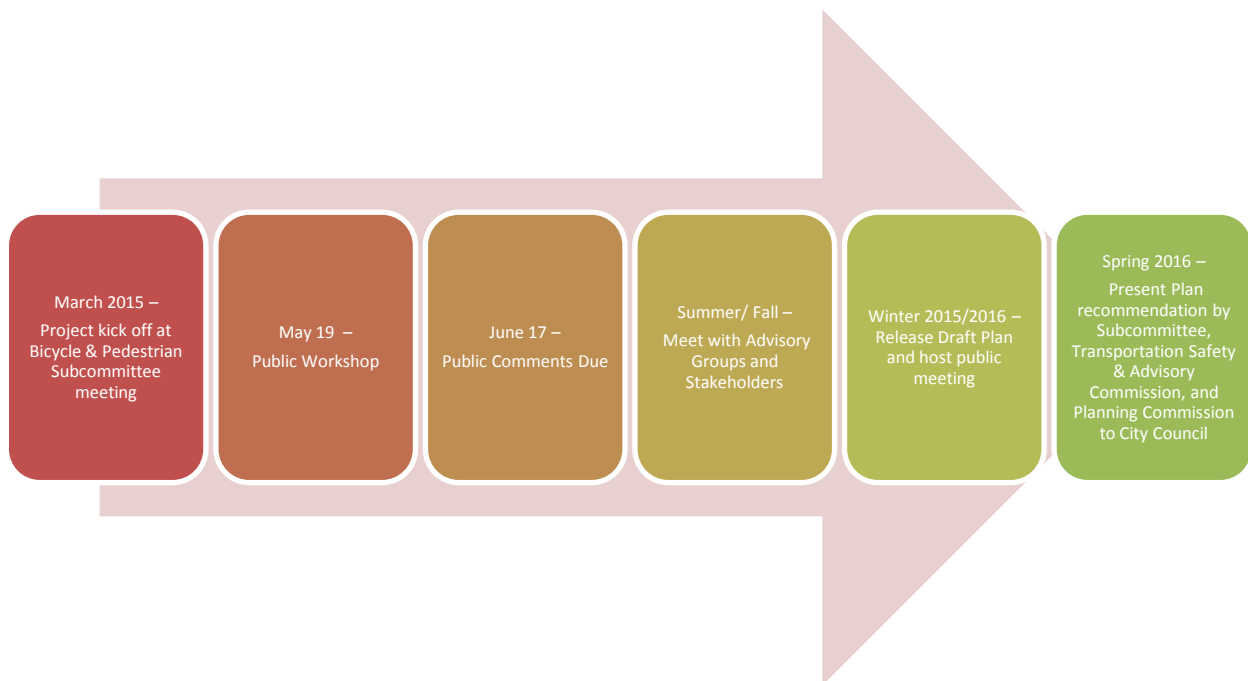
Strengthen confidence that all users are educated on rights, responsibilities, safety

Use amenities/optional fee-for-service in high traffic areas to foster economic sustainability (Bike pumps, repair, vending machines, etc.)

WRAP UP

The recommendations collected at this Workshop will be reviewed by city staff and the Bicycle & Pedestrian Subcommittee, and will be used to inform meetings with advisory groups and stakeholders.

Below is the schedule for moving forward.



For updates, visit: <http://www.harrisonburgva.gov/bicycle-pedestrian-plan>

Appendix C:

Focus Group Summaries



1 **Bicycle & Pedestrian Plan Focus Group One: Safe Routes to School, Youth & Families**

2 **Tuesday, October 6, 2015, 4:30pm-6pm**

3 **Meeting Summary**

4 Focus Group Participants:

5
6 Any Aviles, Parent
7 Becky Johnston, Sentara RMH Safe Routes to School Coordinator
8 Teresa Hulleman, Parent
9 Craig Mackail, Harrisonburg City Public Schools
10 Ben Sandel, Parent
11 Adam Shank, Harrisonburg City Public Schools – Smithland ES
12 Stefanie Warlick, Parent

13
14 City Department Participants:

15
16 Ian Bennett, Harrisonburg Fire Department
17 Aaron Dove, Harrisonburg Police Department
18 Adam Fletcher, Planning & Community Development Department
19 Matt Little, Parks & Recreation Department
20 Brad Reed, Public Works Department
21 Tom Hartman, Public Works Department
22 Jim Baker, Public Works Department
23 Chris Rush, Harrisonburg Police Department
24 James Winniger, Harrisonburg Department of Public Transportation

25
26 Other Participants:

27
28 Moderator: Thanh Dang, Public Works Department
29 Notetaker: Zach Nagourney, Public Works Department
30 Interpreter: Silvia Beitzel

31 *At this meeting, participants were told that their comments would be anonymous.*

- 32 1) Thanh welcomed the group, described the purpose, and guidelines for this meeting.
33
34 2) Introductions
35 a) Participant 1 – Lives on E. Wolfe Street, children bike & walk to school, son attends out
36 of district school at Waterman ES.
37 b) Participant 2 – Works with Harrisonburg City Public Schools, lives near Thomas
38 Harrison Middle School and sees kids walking and biking to school every day.
39 c) Participant 3 – Lives near Stuart St. Has 3 kids that ride bikes to school
40 d) Participant 4 – Works with Sentara RMH and promotes active lifestyles to youth around
41 the community working with schools.
42 e) Participant 5 – Has 5 kids, the younger children bike or walk. High school student can't
43 bike but would like to.

- 44 f) Participant 6 – Works with Smithland ES Spanish speaking families and would like to see
45 more access for those families.
- 46 g) Participant 7 – Has 3 kids and lives in Spotswood Mobile Home Park off Country Club
47 Rd, a busy street with dangerous biking and walking conditions.
48
- 49 3) Question #1: What influences your decision to walk, bike, take the bus, or drive?
- 50 a) Biking and walking is good to promote a healthy lifestyle.
- 51 b) Biking and walking is easy in neighborhoods surrounding and areas within the small
52 downtown area. Kids could bike to library downtown. But now kids are getting older and
53 they want to go to places farther away (Barnes & Noble, etc.) and now they must drive
54 because they aren't comfortable allowing kids to bike that far away and on roads in that
55 area.
- 56 c) Finding the “path of least resistance” and planning ahead is a big influence.
- 57 i) Example is their family planned a safe route to bike from home the Montessori on
58 Port Republic Rd. from downtown area.
- 59 d) Has a large family and having the kids bike to school helps organize the schedule and
60 frees up more of her time, and her decisions to allow her kids to bike is based on safe and
61 accessible routes.
- 62 i) Kids would be able to bike/ walk to afterschool activities on their own.
- 63 ii) Older kids bike less now because the high school is far away and there isn't an
64 accessible & safe route.
- 65 iii) Would like to see widening of Erikson Ave between Route 42 to Garbers Church
66 Road to include bike lanes so kids can bike safer to school.
- 67 (1) Brad and Tom mentioned there is a plan for that project and meetings like this
68 will help bring funding to make that project possible.
- 69 e) Parents often walk from trailer park on Country Club to Smithland ES because they can't
70 afford transportation (a car) but there aren't sidewalks.
- 71 i) Thanh – Are there school buses available?
- 72 (1) For kids, yes. But only to and from school during regular hours. Parents must
73 walk to attend afterschool meetings, pick their kids up, etc.
- 74 f) There is no transportation given to afterschool programs therefore families must provide
75 their own transportation.
- 76 i) Some students take transit because they don't have transportation available.
- 77 g) Providing easy routes is a difficult task for some schools like Skyline MS & Smithland
78 ES.
- 79 h) Will there be infrastructure built into new elementary school's plans?
- 80 (1) It all depends on funding, but there are plans for safe infrastructure on the school
81 property, new shared use path along Garbers Church Road in front of the school.
- 82 (2) Craig and Tom added that conversations between the Harrisonburg Schools and
83 City are happening to help get funding to build safe infrastructure, which may be
84 a new shared use path to connect Hillandale Park to Garbers Church Road.
85
- 86 4) Question 2: What can be done in addition to infrastructure?
- 87 a) “Thank you to the city” for new infrastructure added over the years, feels great about
88 existing infrastructure but there needs to be more enforcement around school areas
89 because enforcement in these areas made the areas feel safer.

- 90 i) Aaron – On Route 33, school zone was just added for Thomas Harrison Middle
91 School.
- 92 ii) Brad – Explained how the process of adding a school zone works.
- 93 b) Would like to see all behaviors change.
- 94 i) Example – Madison, WI had an educational program to share rules of the road to all
95 users – bikers, walkers, and drivers.
- 96 c) Distracted drivers and those cutting corners make bikers and walkers feel less safe.
- 97 d) Feeling unsafe crossing at intersections might be a right of way problem.
- 98 e) Drivers not stopping for school bus stop signs.
- 99 f) A need for a period of enforcement. A period of warnings by police would be a good
100 start.
- 101 g) City schools are able to add enforcement in certain areas due to a grant received but
102 funding was reduced this year. Thinks it is very helpful to have enforcement in those
103 areas.
- 104 i) Chris – Statistics are staggering with distracted driving, but there aren't enough
105 officers to enforce every school zone. Routes to and from schools are priorities but
106 finding enough time and people is difficult.
- 107 h) Smithland ES faculty doesn't feel comfortable telling students to bike or walk to school
108 due to safety.
- 109 i) 15 minute walk from Country Club to Smithland ES.
- 110
- 111 5) Question 3: There have been a number of community events that encourage walking and
112 biking, as well as, educate people on how to walk, bike, and drive safely. What programs
113 have you enjoyed? What programs do you wish to see more of?
- 114 a) Great job at Keister ES and Thomas Harrison MS with the walk and bike to school days.
115 Those days really help spread the word about biking and walking. Those schools have
116 safe routes.
- 117 b) Parks & Rec bike classes really help but are difficult to attend due to scheduling.
- 118 c) Bike to ice cream was a great idea.
- 119 d) Bike Month – A lot of the same people but when new people start to participate it is
120 fantastic and adds to the bike-friendly nature of Harrisonburg.
- 121 e) Schools having bikes for students to use is also important.
- 122 i) Example: middle school gym class went to Hillandale Park and rode the trails, it got
123 students more interested in biking.
- 124 f) Neighborhood is disjointed around Sterling St & Route 33, not sure if there is a program
125 to get families to walk to school together.
- 126 i) Had trouble finding access to parents to get “walking school buses” started. There
127 have only been little pockets of interest shown by parents but they are now looking
128 for school staff volunteers to help. University Place Apartments is only a 5 minute
129 walk to school, but nobody was walking until walking group was organized.
130 (1) 15 kids waiting for bus when they could've already been at school.
- 131 ii) No good place to cross Route 33 at Sterling & Reservoir.
- 132 (1) Brad – Is it uncomfortable to cross at Sterling?
- 133 (a) For bikes, yes. Light doesn't change for bikers.
- 134 (b) Brad – should contact Public Works when lights not detecting bikers. Brad
135 explained where a bicyclist should line up behind the stop bar in the middle of

136 the lane to be seen by the camera. Detection cameras are at all lights in the
137 city, except in the downtown core.

138 (c) Also no sidewalk on Sterling St, and ends on the east side on Reservoir St
139 makes for an awkward transition. Will many times walk through cemetery.

140 g) Thanh – What kinds of programs should Parks & Rec look for?

141 i) Matt – We could add more education classes on bike/ped safety and/or pass a
142 pamphlet out to citizens. Information could be added to the Activity Guide.

143 (1) An extension of ideas we've had tonight in order to reach a broader audience.

144 (2) Can inform electronically through Bike Coalition.

145

146 6) Question 4: If you were given a list of new bike/ped projects and programs needed in the
147 City, how would you prioritize which projects should be funded first? How would you decide
148 what is the most important? What considerations would you make?

149 a) Areas around Smithland ES and Skyline MS are important – they don't have any
150 infrastructure.

151 b) Prioritize based on high impact, lack of infrastructure.

152 i) Some areas with sidewalks still need improvements to be safer and more comfortable,
153 but areas with no infrastructure higher priority.

154 c) Projects that get kids off the road, is we have the ability to build multi-use paths we
155 should build them. More cost-effective & better for the environment.

156 i) In Cupertino, CA a kid was struck and killed by a truck while riding bike on road and
157 everyone became a little more nervous and scared to ride on the road. It only takes
158 one incident.

159 d) Paths between parks and schools are high priority because it eliminates danger by taking
160 off road routes.

161 i) Example: Cale Trail

162 e) Sharrows help motorists become more aware of bicyclists.

163 f) Brad – Do you feel comfortable letting kids ride on skinnier sidewalks?

164 i) Wider sidewalks are needed on busier roads

165 ii) Skinnier sidewalk if buffer area between road and sidewalk is included.

166 g) Brad – Do you think it's better to ride on the sidewalk or road?

167 i) Safer biking on roads even if there was a sidewalk down all of Central Avenue.
168 Drivers are looking at the road.

169 ii) Brad stated bikers are within drivers' "cone of vision".

170 iii) Safety of riding bike on a road or sidewalk depends on the street, commercial vs.
171 residential, number of entrances, speeds of vehicles, etc.

172

173 7) Question 5: Is there anything missed?

174 a) On foggy days, some kids are very hard to see and we need to get students to wear more
175 reflective clothing.

176 b) How do we do that?

177 i) Offer more strobe lights

178 ii) PTA buys armbands to pass out

179 iii) At Thomas Harrison ES, kids were spot checked for lights and then given lights if
180 they didn't have one. Kids won't wear vests.

181 iv) Kids now wear helmets

- 182 v) Lights are a priority, given to citizens by fire and police departments in the past. From
183 grant funding.
- 184 c) Keep putting in energy and continue to build upon what we're doing. New kids and
185 families every year.
- 186 d) Adam – The Bike/Ped Plan is ahead of the Comprehensive Plan, please come and
187 participate in Comprehensive Plan meetings beginning next year. Comprehensive Plan is
188 about street network, zoning, land use, and more.
- 189 i) Thanh – how comfortable a street feels to walk or bike on is influenced by other
190 elements of the surrounding environment that are addressed in the Comprehensive
191 Plan.
- 192
- 193 8) Closing Remarks – see attached.

1 **Bicycle & Pedestrian Plan Focus Group Two: Transportation Disadvantaged,**
2 **Traditionally – Underrepresented**

3 **Tuesday, October 13, 2015, 3:30pm-5pm**

4 **Meeting Summary**

5 Focus Group Participants:

- 6 • Beth Bland, Valley Program for Aging Services
- 7 • Sarah Coleman, Church World Service Harrisonburg/ Refugee Resettlement Office
- 8 • Gayl Brunk, Valley Associates for Independent Living
- 9 • John Malone, Community Service Board
- 10 • Daniel Anderson, client of Community Services Board, member of Summit House

11 City Department Participants:

- 12 • Adam Fletcher, Planning & Community Development Department
- 13 • Matt Little, Parks & Recreation Department
- 14 • Brad Reed, Public Works Department
- 15 • Tom Hartman, Public Works Department
- 16 • Jim Baker, Public Works Department
- 17 • Avery Daugherty, Harrisonburg Department of Public Transportation

18 Other Participants:

- 19 • Moderator: Thanh Dang, Public Works Department
- 20 • Notetaker: Zach Nagourney, Public Works Department

22 *Note: During the meeting the group was informed that statements placed into the meeting*
23 *summary would be anonymous. However, Thanh Dang contacted participants afterwards and*
24 *received approval to include identifying information in this summary.*

- 25 1) Thanh welcomed the group, described the purpose, and guidelines for this meeting.
- 26
- 27 2) Thanh said that this focus group has been invited to discuss the needs and wants of people
28 who are transportation-disadvantaged. Who have challenges getting around independently
29 around the city and may need to rely on walking, biking, or transit.

30 Thanh introduced City department representatives.

- 31 3) Participants introduced themselves.
- 32 a) Beth Bland, Valley Program for Aging Services, provide services for adults 60 years and
33 older
- 34 b) Sarah Coleman, Church World Service Harrisonburg/ Refugee Resettlement Program,
35 serves refugees new to the area

- 36 c) Gayl Brunk, Valley Associates for Independent Living, serves all planning district 6, and
37 work with individuals with disabilities – physical, sensory, cognitive, intellectual, any
38 disability, any age.
- 39 d) John Malone, Community Service Board, works with adults and children with behavioral,
40 health, substance abuse, and developmental disabilities.
- 41 e) Daniel Anderson, client of Community Services Board, VAIL, has a disability.
42
- 43 4) Thanh – In a typical week, what services do you and/or your clients need to get to and how
44 do they get there?
- 45 a) John – most services are at the center, clients coming from county and city to center and
46 traveling around to doctors, social services, family, friends, etc.
- 47 b) Gayl – Workswith folks with disabilities in the community, going from their homes to
48 wherever they need to go. Some need to get out to the County, or live in the County and
49 need to get to the City. Sometimes they are going to UVA for medical services but
50 mostly around the community.
- 51 c) Sarah – Many people going to social services, social security, etc. which are all located
52 downtown. Also going to English classes. Career Development Academy in Memorial
53 Hall, RMH, S. Main, and Harrisonburg Community Health Center. Many work outside of
54 the city and getting there is a challenge.
- 55 i) Thanh – How are they getting there now?
56 (1) Sarah – Carpool.
- 57 d) Beth – Echoes previous comments. Her agency does provide some transportation to and
58 from senior center. People going to supermarket, doctor’s appointments, etc. very much
59 like everyone else. Just recently started a limited transportation program within the city
60 for 60+ year olds or with some sort of disability. Price Rotary Center Senior Center at
61 Westover Park.
- 62 e) Daniel –
- 63 i) Uses Harrisonburg transit but has a tough time working around JMU’s bus schedule
64 to get to and from work. May have a job that goes to 8-9 at night at Wal-mart, taking
65 a cab is too expensive for someone on a budget with supplementary income. Need to
66 have transportation beyond JMU schedule to go later year around, like when JMU is
67 out of session. Bus fare is 50 cents, and maybe people would be willing to pay more.
- 68 ii) City traffic is more of an issue he has now. Bought a Moped and uses it to commute
69 even though he’s been hit by reckless drivers 3 times and feels unsafe on higher speed
70 roads because people barrel past him. He has spoken with police department.
- 71 iii) Difficult for some people with disabilities to get from bus stop to Summit House.
72 Could the city transit add a new bus stop beside Summit House entrance?
73
- 74 5) Thanh – Asked the whole group, is the JMU schedule an issue?
- 75 a) Sarah – The buses stopping as early as they do is a problem for our clients who need to
76 get around later in the evening and they can’t get home after it’s over. And the working
77 around the summer schedule is difficult. Would like to see a more consistent bus
78 schedule.
- 79 b) John – Agrees with Sarah
- 80 c) Gayl – They can’t go to the movies on the weekends.
- 81

- 82 6) Thanh - Are there any areas in the city where your services aren't accessible from a bus stop?
83 a) John – The bus stop across from CSB, no pedestrian crossing. CSB on west side, bus stop
84 on east side. Pedestrians could go down to stop light and cross but they choose not to.
85 There isn't a bus shelter but had asked a couple of years ago for one, a lot of clients wait
86 there for a while.
87 i) Adam – Have there been any specific complaints about there being no sidewalks on
88 N. Main?
89 (1) John – Nobody has come to me but I'm sure people complain because it is a
90 pedestrian thruway. Frightening is when people use mobility devices on Main St.
91 We get a lot of traffic from CSB to apartments down Main Street. They typically
92 just walk in the street. Does the city need a certain number of names/ comments to
93 make improvements?
94 (2) Adam – not necessarily.
95
- 96 7) Thanh – Do you have suggestions to improve our outreach?
97 a) Sarah – For out folks, it's tough to read the bus schedule. Teaches people to ride the bus
98 because she teaches English classes and wants to help her students get there. She shows
99 them to look at the map to see where the stops are, then shows them to find the bus
100 number and look at the schedule. She uses google maps to figures out the routes, but not
101 everyone has access to the internet. It is difficult to read the paper map especially for
102 people who are still learning English.
103 b) Beth – People have trouble understanding and comprehending the schedule, getting to
104 and from the bus, needing assistance with carrying packages and groceries, and
105 organizing their day to match the bus schedule because it drops them off, then they have
106 to wait a long time for it to come back.
107 i) Sarah – Heard this complaint too. Leaving for English class 2 hours before the class
108 then waiting 45 minutes after class to take the bus home. Takes up half their day
109 waiting for the bus.
110 c) Gayl – Would like to see Harrisonburg Transit come out with their own app for smart
111 phones. Particularly as a service provider it would help her share information.
112 i) Thanh – How many folks have smart phones?
113 (1) Gayl - Everyone has smart phones. There are programs you can get them for free.
114 (2) Sarah – agreed with Gayl that everyone has smart phones.
115 (3) Daniel – QR code reader isn't great and doesn't work properly.
116 (4) Sarah – NextBus doesn't really do much good because figuring out the route they
117 need is more important than when the next bus is arriving.
118 (5) Beth – Very few of her clients have smart phones.
119
- 120 8) Thanh - What influences decisions to walk or bike for those who are able to do so?
121 a) Gayl –
122 i) Path of Travel.
123 ii) Commends Public Works for making the city more accessible. Been at VAIL for 16
124 years and has seen a lot of improvement with wider sidewalks and ramps, especially
125 with the downtown streetscape.

- 126 iii) Knows a man in a wheelchair who got cited as a motorized vehicle because he got hit
127 in the street. Case got dropped because the state code was clearly meant to for
128 mopeds. He was traveling on a street without sidewalks.
- 129 iv) She worked to get sidewalks into the City's Design & Construction Standards
130 Manual. She fought to get sidewalks in the area but there are still some places that
131 need improvements.
- 132 v) There are even in places without accessible parking.
- 133 b) Sarah – Clients do tend to walk unless they have children or bigger families. Children
134 can't keep up as well. Biking depends on culture, how biking is perceived in their native
135 culture. Sometimes they bike a lot, sometimes biking was for kids.
- 136 c) Beth – Majority of people she works with can't walk or bike.
- 137 d) John – Many clients can afford vehicles and upkeep so many people do walk.
- 138 e) Sarah – For some its affordability. Many of clients don't know English and can't get their
139 licenses so they are forced to walk, bike, take the bus, or beg for a ride.
- 140 f) Daniel –
- 141 i) Got a job coach to help get a job and difficult to find employment that fit the bus
142 schedule. Got a job that threw in \$500 to buy a Moped to get to work. Hard to find
143 the extra time to take the bus. Tough to find a cab from the east side of town to the
144 north side of town.
- 145 ii) Has noticed down at Vine, southbound to N. Main, there is not a lot of room to get
146 down there and thinks there should be a crosswalk there to get across safely. Not
147 enough sidewalk downtown. Roads need to be redone by police department down to
148 Blue Ridge Florist because the road is bumpy.
- 149 iii) Left on Wolfe Street, road is messed up there. Reservoir Street, going toward E.
150 Market there isn't enough lighting especially past the cemetery. How serious does
151 something have to be to get a speed bump?
- 152 (1) Thanh – Talk to Brad after the meeting about Traffic Calming.
- 153 g) Sarah –Some of her staff mentioned crosswalks to shopping areas, were it was not set up
154 for people walking, was set up with drivers in mind, people crossing busy streets.
155 Specifically around University Boulevard & Reservoir Street around Wal-mart. Will find
156 more specific locations to send to us later.
- 157
- 158 9) Thanh - Suggestions to improve our outreach or how you can be conduits to get information
159 to other people?
- 160 a) Daniel – crosswalk near parking deck on N. Mason St., almost hit multiple times. Needs
161 to be fixed. He'll make a list of places.
- 162 i) Thanh – How would you suggest friends or family get in contact with the city?
- 163 (1) Daniel – Put out a petition, he like being hands-on and helps out.
- 164 (2) Gayl – There were focus groups in the past where Jim Baker and Drew Williams
165 had attended. But now clients call her and then she calls the city. Could to have
166 more targeted meetings maybe once a year because people appreciate those.
- 167 (3) Beth – Maybe we could bring all organizations that are offering transportation to
168 see where there is duplication, opportunities to enhance programs. To possibly
169 pull in Rockingham County's transportation program. And other ways to
170 collaborate and expand.

- 171 (4) Gayl – We used to do that; bringing in area transportation providers come to
172 share. We might be primed for a new opportunity with more conversations
173 happening. Agrees with Beth’s idea of bringing groups together and to see where
174 there was overlap and opportunities.
175 (5) Daniel – Saw cement trucks racing on Erickson Avenue while he was on his
176 scooter and felt unsafe. Will the sidewalks on Erickson be finished?
177 (a) Tom – the next phase will be finishing sidewalks through Garbers Church
178 Road.
179

- 180 10) Thanh - Are there any other ideas for encouragement programs or education?
181 a) John - Gather or distribute information at sites where there are many pedestrians and give
182 them contact information. A lot of people walk to his agency.
183 b) Gayl – Has there been any thought for the individual that doesn’t have Medicaid, has
184 lower income, with no car, and needs to get to UVA?
185 i) Brad – There has been talks within Planning District Commission for transportation
186 between JMU and UVA. Doesn’t know much more.
187 ii) Avery – Went to a focus group meeting where there were talks of transporting to and
188 from UVA, trying to come up with idea of participants, but it is something that hasn’t
189 really been developed yet.
190 iii) Daniel – Expressed a complaint about a cab company.
191 (1) Gayl – There is a complaint process for Logistic Care and she’ll get that
192 information to Daniel.
193

- 194 11) Thanh – The City receives a lot of input on where projects are needed. If you were given a
195 list of projects, how would you prioritize projects?
196 a) Sarah – Prioritize bus schedule, expand the bus schedules, or add more buses. We would
197 like more sidewalks, but my clients use the bus a lot.
198 b) Daniel – Is there any law against talking on the phone while biking? Anything can be
199 done to those who violate the law?
200 i) Brad – Cyclists are subject to the same laws as vehicle operators when riding in the
201 street. Police will enforce those laws. You should contact the Police Department to let
202 them know.
203 ii) Daniel – Has a problem with police when he was in a Moped accident on Carlton
204 Street with a driver pulling out of the shopping center. Daniel received a citation for
205 not having a registration. The police did not issue the driver a citation because there
206 was less than \$1,500 in damage done. Says it is not always damage to vehicle that
207 matters. If a human being is hurt and an ambulance is called why would the driver not
208 get a citation for reckless driving?
209 iii) Thanh – Those are important points. We don’t have a representative from Police
210 Department here and we can help you get in touch with the Police to get answer to
211 those questions.
212 c) Thanh - Do you have suggestions for how the City should prioritize projects? Sarah had
213 suggested bus schedule expansion.
214 (1) Daniel – The bus schedule is most important. He rides his scooter, but hard in
215 wintertime.

- 216 d) John – Would prioritize the bus schedule, then sidewalks, then bike lanes because of
217 weather issues. If it's really bad weather or really hot, the buses are the best way.
- 218 e) Gayl –
- 219 i) She agrees about bus schedule.
- 220 ii) Looking at infrastructure, everything should be accessible. Particularly, because we
221 get federal funding. Ex. CDBG funding.
- 222 iii) We need to look at bus stations and bus stops making sure they are accessible.
223 Getting people off paratransit and onto main bus routes.
- 224 iv) Then sidewalks and curb cuts to be fully accessible, that creates path of travel
225 throughout the community that is more seamless.
- 226 f) Thanh – To make everything accessible, how would you prioritize existing infrastructure
227 vs. need for new infrastructure or is it location based on proximity to places?
- 228 i) Gayl –if somebody is building a housing complex they should build everything to be
229 accessible, unless they get an exemption. Then we should make sure that everything
230 we already have is accessible. Make sure existing sidewalks have curb cuts, and then
231 plan for future growth and create new accessibility.
- 232 g) Daniel – Since City buses were bought by JMU, how much influence does JMU have on
233 Harrisonburg Transit since they bought it?
- 234 i) Avery – A common misunderstanding. 80% of buses purchased through federal
235 funding, 10% from state, 10% combination of city and JMU.
- 236 h) Daniel – Is there any way to get Logistic Care to pay for bus tickets to help people get
237 around the city, instead of paying for cab rides?
- 238 i) Avery – I can speak with you after the meeting.
- 239 i) Beth – Older population has very unique needs, while so much has been focus on the
240 student community and they are important, we need to look at how we can better meet
241 the needs of older adults with limited options. Many can't drive, have physical
242 disabilities, cognitive disabilities, because they still have to get places. What partnerships
243 might we might form to meet those needs?
- 244 i) Brad – What are some examples you have in mind to help the elderly?
- 245 (1) Beth – Finances to pay for cabs or paratransit and we don't have enough
246 assistance to help carry groceries, put on coats, etc. Having to wait for a vehicle to
247 drop them off and circle back around can be difficult for them.
- 248 (2) Brad – Are there specific pedestrian improvements?
- 249 (a) Beth – Not many elderly walking very far, they need some type of vehicular
250 transportation.
- 251 (b) Daniel – some people who qualify for paratransit don't take advantage of it
252 because they do find that a \$4 round trip is more expensive than a \$1 round
253 trip ticket.
- 254 j) Elise – Sounds like affordability might be a good way to prioritize.
- 255 k) Sarah – Her clients receive Medicaid for 8 months so they get the discount for price. She
256 thinks it's very affordable for public transportation. Harrisonburg is the cheapest bus
257 system she's seen.. Thinks that the people paying 50 cents might pay a little more if it
258 meant they didn't have to wait so long. But that's an opinion of her population.
- 259 l) Daniel – Summit House has been generous enough, if people stay long enough they do
260 provide them with a bus ticket home. There are some people who don't take advantage of
261 the system, they use it properly and they hang on by a thread. It depends on what you

- 262 receive every month. Affordability is a big problem for most friends he goes to Summit
263 House with.
- 264 m) Beth – Her agency doesn't charge, instead they ask for a donation. Could provide more
265 services if they had more volunteers.
- 266 i) Daniel – Maybe there could be a program that receives donated vehicles to City
267 transit, or other organization. If people don't need a hydraulic lift and they were able
268 to get into a car, have a separate service that volunteers could drive people to places.
269 Similar to Logistic Care, but similar to paratransit in scheduling pick up.
- 270 (1) Thanh – What are opportunities or challenges to Daniel's suggestion?
- 271 (a) Gayl – Can't get the volunteers to drive. Also have issues. For example, Uber
272 drivers are not held to the same accountability and regulations as taxi drivers.
273 There's a battle between those two communities. Anyone want to guess what
274 locality in the Commonwealth of Virginia has the most Uber registered
275 drivers? Answers, Harrisonburg. Many JMU students. May not be highly
276 utilized yet.
- 277 (b) Gayl- The bus is very affordable. It's getting to the bus, the bus schedule, and
278 the logistics.
- 279 (c) John – This bus is fine. But any alternative to the bus, not walking, taking a
280 cab, that is challenge. Cabs are expensive.
- 281 n) Thanh – Summarizing what was been said:
- 282 i) Prioritize bus schedule expansion,
283 ii) Accessibility of sidewalks leading up to bus stops,
284 iii) Repairing existing sidewalks to make more accessible, safety at pedestrian crossings.
285 Separately, make sure the city's design standards and construction process ensures
286 that new facilities are accessible.
- 287 o) John - Specifically no sidewalk on North Main.
- 288 p) Sarah – When would you need suggestions for sidewalks? She could talk to clients.
- 289 i) Thanh – Provides overview of Bicycle & Pedestrian Plan process. Input was received
290 in May 2015, and through a previous collection effort with Rockingham Co. Open to
291 receiving information whenever but would like comments November 15th at the latest
292 for the first draft of the Plan.
- 293 q) Daniel – How much does JMU have say in how city transit runs? Where does JMU get
294 their money to build new convocation center, a plaza, etc.?
- 295 i) Gayl – Its 2 separate pots of money; one for capital funding and one for other.
- 296
- 297 12) Gayl – Since Harrisonburg is an MPO, which includes some of the County, what point
298 should we expect to see the transportation, biking, and pedestrian plan be all inclusive of the
299 whole MPO area.
- 300 a) John – What is MPO?
301 b) Gayl – Metropolitan Planning Organization.
302 c) Avery – From City transit's perspective, it would be when the county contributes to
303 transportation.
304 d) Thanh – The Metropolitan Planning Organization member jurisdictions are Harrisonburg,
305 Rockingham County, Bridgewater, Dayton, and Mt. Crawford. The group is made up of
306 elected officials and city staff to facilitate transportation planning – transit, bike, ped,
307 freight, etc.

- 308 e) Brad - MPO is currently working Bike/Ped Plan to encompass entire area. Rockingham
309 County and JMU are working on plans. We are always talking to each other to coordinate
310 efforts and connect facilities, but many different challenges come into play across
311 jurisdictions.
- 312 f) Gayl - Fascinating that we've been an MPO for a while but most of its concentrated
313 within the city limits.
314
- 315 13) Daniel – Is CAT's bus connected to city transit?
- 316 a) Avery – A company called Virginia Regional Transit contracted with Blue Ridge
317 Community College. They run services from Blue Ridge to/ from JMU.
- 318 b) Daniel – only 50 cents to get from JMU to Staunton.
- 319 c) Gayl – But you can't get back in the same day.
320
- 321 14) Thanh – Before we wrap up, is there anything that we've missed?
- 322 1) Elise – Is there anyone not here who you think would be important to hear feedback from?
- 323 a) Sarah – Would have been interested to have a few of her clients represent their
324 communities here. We had 60 people arrive in September so we have been very busy
325 and were unable to invite community leaders to this meeting. They would know what
326 their community members are using and needs.
- 327 b) Daniel – Pleasant View(?) would have some good feedback.
- 328 2) Avery – We schedule a “Ride the Bus” program to help people get acquainted with the
329 bus system. And could coordinate this with your organizations on a bi-annual basis.
330
- 331 3) Thanh – Thank you for coming out today.
332

1 **Bicycle & Pedestrian Plan Focus Group Three: Higher Education & Retirement**
2 **Communities**

3 **Friday, October 16, 2015, 1:30pm-3pm**

4 **Meeting Summary**

5 Focus Group Participants:

- 6 • Lee Eshelman, James Madison University
- 7 • Angela Crow, James Madison University
- 8 • Eldon Kurtz, Eastern Mennonite University
- 9 • Heather Yoder, Virginia Mennonite Retirement Community

10 City Department Participants:

- 11 • Adam Fletcher, Planning & Community Development Department
- 12 • Brad Reed, Public Works Department
- 13 • Avery Daugherty, Harrisonburg Department of Public Transportation

14 Other Participants:

- 15 • Moderator, Thanh Dang, Public Works Department
- 16 • Notetaker, Danielle Morris, Public Works Department
- 17 • Eric Saner, Bicycle and Pedestrian Subcommittee

18
19 1) Thanh welcomed the group, described the purpose, and guidelines for this meeting.

20
21 Thanh introduced City department representatives.

22
23 2) Participants introduced themselves.

24 a) Heather Yoder – VMRC Wellness Center. Residents and community members can use
25 the wellness center.

26 b) Lee Eshelman – JMU Transportation Demand Management. Responsible for supporting
27 transit, bicycle & pedestrian planning and implementation, transportation safety and
28 signage on campus.

29 c) Angela Crow – JMU writing and rhetoric department, does research on bicycling, and
30 serves on JMU Bicycle & Pedestrian Advisory Committee.

31 d) Eldon Kurtz – EMU, Director of Facilities – works with traffic and infrastructure
32

33 3) Thanh – In a typical week, what places do you, students, faculty, staff, residents need to go to
34 and how do they get there?

35 a) Lee –

36 i) JMU has a contract with Public Transit to use their buses to get students from off-
37 campus to on-campus, and runs shuttles across campus all day into the early evening.
38 Public Transit serves approximately 2-2.5 million riders per year. JMU also uses them
39 for games and graduation events. All buses have bike racks. Has done surveys,

40 ii) Lots of walking and biking on campus. Has collected data on key corridors.

- 41 iii) Bluestone Trail – lots of students bike from the apartments to campus via the trail.
42 JMU plans to build the trail thru campus soon and wants to connect with Northend
43 Greenway.
- 44 iv) Lee is wondering what are safe routes from apartment complexes; especially those
45 that are further out from campus. Ex. Copper Beech, South View, etc.
- 46 v) JMU has surplus bike racks they don't know what to do with them.
- 47 b) Eldon –
- 48 i) Residents surrounding EMU and EMU students go to the Harmony Square shopping
49 center by biking, walking, driving, and bus.
- 50 ii) Red Front – there is a need for pedestrian enhancements to get residents and students
51 there safely. Also a route towards downtown, and La Morena.
- 52 iii) The shopping center along Mt. Clinton Pike (Gift & Thrift/ Traditions) – students and
53 residents go there via all modes of transportation.
- 54 iv) There are people who work/ attend EMU who are residents living in/around
55 downtown and would like a route to bike and walk between EMU and downtown
56 without competing with the chicken trucks.
- 57 v) Eldon is noticing more bus riders, observed people at bus stops. But there is a big
58 delay between the buses that service the area – so people drive instead of waiting an
59 hour to hour and a half. Need more frequency of buses.
- 60 c) Heather –
- 61 i) VMRC is next to EMU, so share similar needs with transportation.
- 62 ii) Residents who can't drive rely on each other for transportation or buses, but have to
63 wait on the buses due to the delay between buses on the routes. Some residents need
64 the para-transit buses, which is helpful for those have limited mobility.
- 65 iii) Some residents walk (or use motorized chairs) to Harmony Square. Relatively safe to
66 get there, but it isn't always safe at the roadway crossings or drive entrance crossings.
- 67 iv) Residents also go to Rite-Aid on Rt. 42.
- 68 v) They are seeing younger residents at VMRC who bike. They bike on Rt. 42 North,
69 but the bike lanes “cut-off” as you enter the City from the County.
- 70 vi) Staff sometimes use the bus system, but most staff live in Elkton, VA or in Bergton,
71 WV.
- 72 d) Angela –
- 73 i) Has been trying to figure out how to do education for JMU students, but has been
74 difficult. Trying to partner with UREC.
- 75 ii) Her freshmen students are gathering information on other universities' education
76 programs/ videos and will share with Lee.
- 77 iii) The women in her classes say they would not walk/bike alone, but would in a group.
78 Most do not feel safe walking alone especially at night. Most live in apartments, etc.
79 that are in “less visible” areas. Some even don't feel safe walking through Arboretum
80 at night.
- 81 iv) She suggested a college-level “safe routes to school” program (with different name)
82 to help women group together to walk home.
- 83 v) She said that JMU makes campus a safe place to walk.
- 84 e) Lee –
- 85 i) Is working on a campus survey on transportation that asks about perceptions about
86 safety.

- 87 4) Thanh – Have you experienced, observed, or received feedback about difficult places and
88 routes to access places in Harrisonburg?
89 a) Lee – is working on a survey out asking students where the most dangerous locations or
90 conditions on campus are.
91 b) Heather – difficult to get to Rite-Aid, Gift & Thrift (on Mt. Clinton Pike) and Harmony
92 Square (even though it's on the same side of the road, getting across roadway crossings &
93 drive entrances is difficult)
94 c) Eldon & Heather - Parkwood Dr has no sidewalks so you have to walk in the roadway
95 and the high school is on that road.
96 d) Eldon - will there be mid-point crossings in new roundabout on Mt. Clinton Pike?
97
- 98 5) Thanh – What could be done to encourage people to walk, bike, or take transit more?
99 a) Lee – build infrastructure to make it more attractive and safe and then do more education.
100 And then enforce. You shouldn't start writing tickets to bicyclists who don't have
101 anywhere safe to ride or haven't been educated.
102 b) Thanh asks, what features makes a route for walking or biking more attractive and safe?
103 c) Lee - Shared use path concept is good. It does not physically separate bicyclists and
104 pedestrians from each other, but separates them from drivers.
105 d) Angela – Shared use paths need signage to explain shared space.
106 e) Lee –
107 i) In ideal world we would be able to separate and give bicyclists, pedestrians, and
108 drivers each their own space.
109 ii) The Bluestone Trail is gorgeous from Purcell Park to JMU, along Newman Lake. Its
110 attractive.
111 f) Heather –
112 i) Well maintained,
113 ii) No trip hazards,
114 iii) Benches placed along the way for when people need to take a break when they get
115 tired.
116 g) Eldon -
117 i) Appropriate lighting
118 ii) Trees and vegetation can enhance a space, but beware of creating “lurking” spots
119 around vegetation. Balance those things.
120 h) Angela –
121 i) Student population not comfortable on roads, the paths are a starting point to help get
122 them acclimated.
123 ii) For women, having groups of women able to ride with other women helps them learn
124 how to ride on the road more safely. Such as Harrisonburg Women on Wheels group
125 and group in Staunton. Having a group women encourages women to try biking,
126 gives them a sense that the streets are not as horrific as they thought. Research shows
127 that women are less likely to take risks on bicycles. Research shows that women will
128 take risks if they are not riding alone and there is someone there to help them learn. If
129 the can be a program supported by the City or others, it would be good.
130 i) Lee –
131 i) Other part of the equation is to educate drivers.

- 132 ii) Lots of drivers are in a hurry and don't know how to drive around bicyclists and
133 pedestrians.
- 134 iii) JMU trying to change the signage on campus to make it more apparent that the
135 bicyclist does not need to accommodate the vehicle, the vehicle needs to
136 accommodate the bicyclist.
- 137 iv) Also have skateboarders to educate.
- 138 j) Thanh asks what programming have you seen other communities do to educate?
- 139 i) Heather - VMRC offers drivers safety courses with AARP.
- 140 ii) Lee - Educate drivers about the right-of-way for bikes and the three foot rule. He
141 doesn't think that is common knowledge.
- 142 iii) Eldon – it's been a long time since he's taken drivers education and how to drive
143 around bicyclists and pedestrians wasn't included then.
- 144 iv) Avery –
- 145 (1) Transit drivers are trained and model how to drive around bicyclists and
146 pedestrians
- 147 (2) Thinks there needs to be some consequence after education efforts are made or
148 bad behaviors will continue.
- 149 v) Eldon –
- 150 (1) Cultural awareness needs to develop. Now drivers are stopping on Park Rd at
151 crosswalks, but it didn't use to be that way.
- 152 (2) More traffic calming.
- 153 vi) Angela - Signage can be confusing –
- 154 (1) "BIKE LANE ENDS" doesn't mean the bicyclists have to get off the roadway,
155 but some people think that.
- 156 (2) Maybe another sign indicating the bike has use of the full lane – "Bikes May Use
157 Full Lane".
- 158 (3) Consistency of signage across the city recommended.
- 159 (4) Recognizes there are limited ways to teach bicyclists and drivers; can't require all
160 to take drivers exams again.
- 161 vii) Thanh - ...Changing laws and expectations...
- 162 viii) Eldon – ... greater prominence of bicycles as a viable form of transportation.
- 163 ix) Angela – Other community, Mobile(?), created videos to show people how to pass.
- 164 x) Lee – maybe pamphlets on windshields.
- 165 xi) Adam – advertising on transit buses.
- 166 xii) Angela –
- 167 (1) Stanford has a commuting buddy system.
- 168 (2) Suggests creating sticky stories to encourage
- 169 (3) Connect people to the Comfort Bike Map
- 170 xiii) Brad explained the Comfort Bike Map.
- 171 k) Thanh summarized what was discussed:
- 172 i) Education for bicyclists, pedestrians, and motorists
- 173 ii) Improved infrastructure such as crossings
- 174 iii) Shared use path design to be safe and attractive
- 175 iv) Improve Public Transit
- 176

- 177 6) Thanh – If you were given a list of new bike/ped projects and programs needed in the City,
178 how would you prioritize which projects should be funded? How would you decide what is
179 the most important? What considerations would you make?
180 a) Heather – Safety. Defined as looking at accident rates
181 b) Lee – Identify major thru-fares for bicyclists and pedestrians and then make them more
182 attractive and safe so then they would use those more, and stay off of busy streets and out
183 of parking lots. North-south shared use path is great, what about east-west corridors?
184 c) Eldon – Noted a written piece by Bob Berson - Why not have something [a trail] head out
185 to Dayton or Bridgewater?
186 d) Eldon – for prioritization observe bike and ped heavy use areas
187 i) Where’s the heavy use? If we build it, will it get used?
188 e) Thanh asks – what are indicators of where heavy use is and where it could be?
189 i) Lee & Eldon – where we don’t have sidewalks we see cow paths
190 ii) Lee – JMU Bicycle & Pedestrian Master Plan had a smart phone app to trace where
191 the bike/ped person moves to/from (voluntary), could be used in city to track people
192 (JMU MOVES app) – could also see where they are going for future projects.
193 f) Thanh asks – how do we determine where people want to go?
194 i) Lee – create routes such as Grace St corridor improvements by looking at maps and
195 seeing where people are going
196 g) Angela – Gender issues. Men and women have different comfort levels and often choose
197 routes differently.
198 h) Avery asks - does JMU or EMU have a registration requirement for bicycles?
199 i) Eldon & Lee – JMU & EMU do not require registration for bicycles currently
200 ii) Lee – Kicking around idea that if you do register you’d get a free bike helmet and a
201 pamphlet with education information. But there’s really no incentive to register your
202 bike. We don’t have a big theft issue in Harrisonburg so why would you register your
203 bike?
204 iii) Eldon - It is recommended, especially if bike were to be stolen and left somewhere.
205 iv) Avery – sometimes people forget and leave their bikes on the transit bus. About one
206 bike per week.
207
208 i) Thanh – These are all great ideas. When we summarize this report, I hope it will spur
209 other good ideas and partnerships.
210 i) Lee – The beauty of this discussion is if we could standardize some of these
211 approaches – enforcement, signage, wayfinding, registration, etc – try to make it
212 uniform to reduce confusion. It would be good to keep this going with ideas.
213 ii) Eldon – This would help reinforce the culture we are trying to develop.
214
215 j) Thanh - What ideas do you have for encouraging this type of conversation with these
216 players? Are there any other players missing? What kind of forum? How frequent would
217 they meet? What would incentivize people to participate?
218 i) Angela – likes the JMU BPAC. There is overlap with the City Bike-Ped
219 subcommittee.

- 221 ii) Thanh – There’s the Harrisonburg & Rockingham Bike-Walk Summit coming up, is
222 that the forum?
- 223 iii) Eldon – Events like “Bikes, Burgers, and Beers”?
- 224 iv) Lee – if someone like Angela brought an idea to him, he can reach out to city staff to
225 discuss?
- 226 v) Angela - if groups get together they can see what each are doing and not waste time
227 by doing the same thing and spinning their wheels.
- 228 vi) Lee said JMU BPAC has organized subcommittees around 5Es – education,
229 encouragement, engineering, enforcement, and evaluation.
- 230 vii) Angela – there are now also 5C’s for women.
231
- 232 k) Thanh summarized the discussion on prioritizing projects, not in any order:
- 233 i) Safety – looking at accident history; identifying opportunities where short term fixes
234 are;
- 235 ii) Look at where heavy use exists and where there is potential for heavy use – using
236 apps and talking to people about where they want to go;
- 237 iii) Identify major corridors for pathways for bicyclists and pedestrians to go north-south
238 and to go east-west;
- 239 iv) Need a forum to help coordinate messaging and infrastructure improvements across
240 organizations and throughout the community.
241
- 242 l) Eldon – While encouraging people to bike, providing places to park bikes is important;
243 Also consider appropriate storage for the length of time people need
- 244 m) Lee – JMU campus is evaluating their bike racks – number and locations, including
245 sheltered bike racks and appropriate style of bike racks; sometimes bike racks are
246 overflowing
- 247 n) Adam – suggested huge posters in department stores (Walmart, Target), on city buses,
248 where I pay my bills with a “DID YOU KNOW...” kind of message. Would need to be a
249 consistent design. Maybe put on side of transit buses. Not a small handbill. WOW factor,
250 in your face.
- 251 i) The group expressed support of this.
- 252 ii) Discussion of importance of consistent messaging, consistent visual cues, branding so
253 people will remember. Example: Doodie-Free Harrisonburg campaign from 2008.
- 254 o) Eldon – evening news could reach out to older residents.
- 255 p) Brad asked if JMU or EMU was exploring Bike Share Programs
- 256 i) Eldon said a number of years ago there was a bike share program with yellow painted
257 bikes, but then they were taken and wrecked.
- 258 ii) JMU said that UREC has a bike share program.
- 259 iii) There was discussion about a more professional bike share program, rental with credit
260 card that would also be tied with off-campus housing.
- 261 q) Avery – Is it a requirement/could it be a requirement for students who register for classes
262 to indicate where they live in the city? If so, that information could be used to show
263 initial surges of where students are coming from and when.
- 264 i) Eldon – Information exists in a protected directory. EMU could not give addresses
265 out unless it was voluntary.

- 266 ii) Brad – Points could be provided on a map like it was for SRTS projects he’s worked
267 on. Info from school provides areas the students are from represented as dots on a
268 map – no detailed address or other specifics are provided.
- 269 iii) Lee – are there places where bikes should not go/be?
270
- 271 7) Thanh asked if Eric had any questions or thoughts for the group. Eric -
272 a) Noticed a lot of interest in education and getting information out there. There was a
273 suggestion to do this by requiring people to register their bikes and giving out materials
274 then. He recommended also giving out materials to educate drivers when they register
275 their cars for parking on campus and suggested handouts with rules of the road for
276 drivers.
- 277 b) Noted discussion about enforcement and suggested not forgetting also to do positive
278 enforcement. A short PSA could be to stop people who are doing things the right way.
279 Maybe the evening news would cover or you could get a gift card.
- 280 c) Cautions against required bike registration. Especially if it leads to ticketed enforcement.
281 It could hurt low income people and a barrier to everyone biking.
- 282 d) Liked comment made about need for good parking facilities. Noted SVBC has program
283 that encourages community bulk bike rack purchase.
284
- 285 8) Thanh – did we miss anything?
286 a) Angela – Marking streets – May make sense to identify with markings on the street
287 which streets are safer to ride on. Some people don’t know what markings are supposed
288 to mean. Just came back from a trip in the Netherlands where markings were clear.
- 289 b) Lee – there may be some places where we shouldn’t have bikes. There’s no shoulder or
290 room to share, and speeds are very high. How do we make that work safely?
- 291 c) Angela – consider if there is another safer route vs. improvements to be made where there
292 is not an alternative.
- 293 d) Heather – Bus System/Schedule – There are residents who have lost their licenses or their
294 family don’t think it’s safe for them to drive anymore. They need to pick up groceries and
295 the bus schedule can be overwhelming to those who have never done it. Is there a
296 program to help teach them to use the buses?
- 297 i) Avery – already partners with Bob Horst at VMRC to assist elderly on how to
298 navigate the system – twice a year. Additional times can be scheduled. Transit brings
299 a bus and para-transit to show them how to get on, etc.
- 300 e) Adam & Heather – is it possible for the bus drivers to help/assist the person getting on
301 the bus: putting bike on rack, etc.?
- 302 i) Avery – liability issues for potential damage to bicycles. Drivers can only help from
303 the edge of the ramp up to the bus per ADA regulations.
- 304 ii) Heather – VMRC may need to think about enhancing their own transportation
305 program versus using public transit.
306
- 307 9) Thanh – summarized next steps for the Bicycle & Pedestrian Plan.
308 a) Thank you for coming out today.

1 **Bicycle & Pedestrian Plan Focus Group Four: Business & Economic Vitality**

2 **Tuesday, October 20, 2015, 1:30pm-3pm**

3 **Meeting Summary**

4 Focus Group Participants:

- 5 • Kevin McDermott – Central Shenandoah Planning District Commission
- 6 • Joan Hollen – Shenandoah Valley Partnership
- 7 • Frank Tamberino – Harrisonburg-Rockingham Chamber of Commerce
- 8 • Thomas Jenkins – Shenandoah Bicycle Company
- 9 • Daniel Martin – Valley Mall Management

10 City Department Participants:

- 11 • Brian Shull, Department of Economic Development
- 12 • Tom Hartman, Public Works Department
- 13 • Jim Baker, Public Works Department

14 Other Participants:

- 15 • Moderator, Thanh Dang, Public Works Department
- 16 • Notetaker, Zach Nagourney, Public Works Department
- 17 • Carl Droms, Bicycle & Pedestrian Subcommittee

18
19 1) Thanh welcomed the group, described the purpose, and guidelines for this meeting.

20
21 2) Thanh introduced City department representatives.

22
23 Participants introduced themselves.

24
25 3) Thanh – What kind of places do you, your customers, or employees go in a typical week and
26 how do they get there (walk, bike, bus, drive)? What influences their decision?

27 a) Frank –

28 i) Staff drive their cars and go to various meetings in personal vehicles. People coming
29 to meet at his office also drive. Sometimes they might carpool, but are auto-
30 dependent.

31 ii) Depending on the size of the meeting they will try to meet at a more centralized
32 location, like downtown.

33 iii) Also needs to keep in mind some people may be coming from outside the area.
34 Always makes sure there are plenty of parking spaces.

35 iv) Some people can combine multiple meetings in downtown, but he may have to drive
36 to Massanutten, then to Broadway and back to Harrisonburg.

37 b) Joan –

38 i) Works at the Icehouse downtown.

- 39 ii) People who work downtown who come to her building will walk. But people who
40 work in office, to go to meetings they have to drive because they cover a broad area.
41 They live outside of Harrisonburg have to drive to work.
- 42 iii) She loves to work downtown because she likes to walk around downtown. Can walk
43 to local restaurants or just around the block.
- 44 c) Thomas –
- 45 i) Majority of staff rides bikes to work due lifestyle and to convenience. Having safe
46 bike, covered bike parking solves where do I park my bike? Errands that the staff runs
47 are close enough to ride bike, e.g. bike is close to shop.
- 48 ii) Majority of customers drive to the store. Do have some that bike. Seen more of an
49 increase in pedestrian traffic as we have seen more people working downtown.
50 Walking to the shop during lunch. And this is more skewed then most other
51 businesses. A good majority of JMU students are riding bikes to the shop. The shop is
52 easy to get to by bike and makes it easier for customers to get to.
- 53 d) Daniel –
- 54 i) 90% of both staff and customers are driving. Most of his staff live outside of
55 Harrisonburg in Bridgewater, Augusta, Grottoes, etc.
- 56 ii) Other 10% are JMU students taking public transportation.
- 57 iii) When the City added sidewalks, he thought we would have seen more biking and
58 walking, but haven't.
- 59 e) Kevin - Are there any bike racks?
- 60 i) Daniel – 3 bike racks
- 61 f) Thomas asks Daniel – Have the sidewalks spurred more walking in that area? People
62 working or shopping coming from outside the sidewalk area?
- 63 i) Daniel – Yes.
- 64 g) Frank – People in hotels, within a couple of blocks from there, has seen people walk all
65 the time.
- 66 i) Thomas – Yes, when I stay out of town at a hotel. I get to walk for a few minute
67 because I've been stuck in a car or a conference all day.
- 68 h) Daniel – A lot of it is mindset. If I want to go to Chick-Fil-A for lunch, why don't I walk?
69 The sidewalks are there. If the City is going to make the investment for infrastructure and
70 public safety, we need to educate people to use the sidewalks. Maybe with more traffic
71 and population growth it would force people to walk? Like in big cities. It hasn't
72 happened here yet to force people to walk.
- 73 i) Joan – The time to get somewhere influences the decision to drive.
- 74 j) Kevin – When you get outside of the immediate downtown and JMU the density changes.
75 The route from the mall to Chic-Fil-A isn't that far, but it seems far away.
- 76 k) Daniel – When he worked in DC he would walk further than that. You don't think about
77 it.
- 78 l) Frank – It's all perception.
- 79 m) Kevin – When you live in those places, there's a greater attraction to walking. He's not
80 familiar with East Market St, but imagines that you're walking along long stretches of
81 parking lots. There isn't much scenery to look at while walking, and the Chick-Fil-A that
82 looks so far away. You don't think about that in a more dense place.
- 83 n) Kevin - The people he serves, through the HRMPO, are taking work trips, school trips,
84 and shopping trips. 85 – 90% of those trips are taken by car. The college students are

85 biking and are who use transit the most. Once outside of JMU area, the public doesn't use
86 transit as much.

- 87
- 88 4) Thanh – What're the most important transportation factors that influence a business location?
- 89 a) Frank – It depends on the type of business. For chains and commercial businesses that are
90 dependent upon traffic coming through the door (retail, service) most look at Average
91 Daily Traffic count – how many cars are passing by. Can you turn in and turn out? For
92 companies that are not dependent on that traffic, like IT companies, can locate anywhere.
93 Not sure how many are not downtown. Most are in downtown because that is what they
94 want and they want to intermingle with others and have synergy between them.
95 However, if they are looking to relocate and are used to being a suburban location, they
96 may just choose another suburban location with a large footprint.
- 97 b) Joan – Sometimes companies who want to locate here will ask if there is public
98 transportation available for employees to get around. SRI was in favor of bike paths for
99 their employees. Some companies use biking as a huge asset for quality of living.
- 100 c) Frank – Some people see biking as either a recreational activity or a form of
101 transportation.
- 102 d) Thomas – From a retail perspective, he looks at traffic around the business and ease of
103 getting in and out. Non-retail depends on other things. Sometimes companies see a
104 location and having the option of a facility nearby for employees to bike for
105 transportation to work is an appealing feature for employers. So that recreational cyclists
106 may find they can do it for transportation. DEQ office on the southside of Harrisonburg is
107 a hard place to get by bike. They have lots of employees who are environmentally
108 conscious who would bike but are limited. Public transit would be appealing for big
109 stores like Wal-mart, Target to attract employees and shoppers.
- 110 e) Thanh (directed to Joan) – What kind of response do you give to people calling?
- 111 i) Joan – Promotes Bike the Valley website, City's recognition for biking. Hasn't
112 promoted bike to work because she doesn't have material to promote what she
113 doesn't know.
- 114 ii) Thanh – What about transit?
- 115 iii) Joan - Only Harrisonburg, Staunton, Waynesboro have transit.
- 116
- 117 f) Kevin – The Governor and others, when talking about VTrans vision process. Another
118 way for cities to attract businesses and have a great economy to focus more on making
119 your place a place where people want to stay and live. And then they'll come and build
120 their business from the ground. He thinks Harrisonburg has a great start on that with JMU
121 here. If you can make it attractive for people to live and they will want to stay. The
122 Millennial generation wants a town that is bikeable, walkable and transit friendly. It
123 makes it more attractive.
- 124 g) Thomas – D.C. is trying to figure out a way to retain the Millennials. The cost of living
125 keeps going up.
- 126 h) Daniel – Tyson's Corner is trying to make it easier to work, play, live and stay in that
127 area.
- 128 i) Frank – Reston, VA, building a small city and shutting everyone out.
- 129 j) Kevin – Out in Denver, many malls that were not doing well have been redeveloped into
130 community centers and residential areas have been put in alongside retail.

- 131 k) Frank – In Denver, a business’s rented bikes for a beer tour.
132
- 133 5) Thanh – Do you think improved infrastructure would attract businesses and/or local tourism?
134 a) Kevin – 100% yes!
135 b) Joan – agrees.
136 c) Kevin - People want to vacation at places that are easy to get around.
137 d) Thomas – Agree. Bicycle tourism has increased and will continue increase. But people
138 want to be able to bike not just for recreational purposes, but they want that whole day
139 experience to be able to walk to restaurants, to hotel, etc. or use public transportation. I
140 think that is still missing here.
141
- 142 6) Thanh – Are there any examples of transportation infrastructure improvements that you have
143 seen that promotes this type of environment?
144 a) Joan – Adding sidewalks and crosswalks by the mall has been helpful for people walk out
145 there. Has improved safety. And allowed people to walk to restaurants, etc.
146 b) Kevin – Downtown streetscape improvements, ascetics, has really helped add to the pride
147 of Harrisonburg. If they are visiting, they may think they want live in a place like
148 Harrisonburg, how fun it looks, that is easy to walk around.
149 c) Kevin - There are a lot of mountain biking and hiking opportunities outside of the city,
150 like Shenandoah National Park. That is really attractive and those resources that
151 successful cities play off of.
152
- 153 7) Joan – Are the any statistics of people who come from outside of Harrisonburg, who come
154 here for recreational biking? She lives outside of Bridgewater and sees tons of people on
155 bikes. The evening bicyclists may be local. On the weekends, there may be hundreds of
156 people biking by and wonders if people are parking somewhere and then riding.
157 a) Carl – a lot of people from Harrisonburg, Massanutten, and other places do park in
158 Bridgewater and then bike.
159 b) Kevin – Currently working on an Economic impact Study. A survey was released around
160 April 2015 using survey monkey, as promoted for visiting and local bicyclists to go on to
161 answer some questions about what their spending habits regarding bicycling and how
162 often they visit and where they ride. Survey will close in mid-November 2015. Results
163 will be run through an economic impact model to see what economic impact of local
164 bicyclist is. About 1,200 people have filled of the survey to date.
165
- 166 8) Thanh – Have you observed or received feedback of difficult places and routes to access for
167 biking, walking, or transit?
168 a) Frank – Anywhere along 33 where there isn’t a sidewalk.
169 b) Daniel – North Main Street from the county building to the north. There’s always people
170 walking on the road and in the grass.
171 c) Thomas –
172 i) Anywhere on Country Club Road.
173 ii) Getting from east-west sides of town to the other.
174 iii) Along Route 33 crossing 81.
175 iv) On MLK Jr. Way from Route 33 to 42 is difficult.
176 v) And hard to get to the very south end of town, DEQ offices.

- 177 d) Kevin –
178 i) Big break from inside the city to outside. Hard to get around outside the core of the
179 City and going out into the County.
180 ii) 33 on the east and west side.
181 iii) 11 on both the north and south side are difficult.
182 iv) Also heard difficult to get from Belmont to the City.
- 183 e) Daniel – What about Reservoir St improvements?
184 i) Tom – It will have bike lanes and sidewalks.
- 185 f) Frank – Not having sidewalks on a road isn't a bad thing if traffic is moving slowly,
186 people are more courteous. But for roads with higher traffic and higher speeds, you're
187 taking your life into your own hands.
188
- 189 9) Thanh – What can be done to encourage people to bike and walk more? Infrastructure,
190 encouragement, education.
- 191 a) Thomas – Education is a big thing. Getting people in the mindset that walking and biking
192 doesn't take that long door to door. Employers should encourage biking/walking from a
193 health perspective. Parking can be a big expense, such as in places like downtown. To
194 educate from different angles from the city and employers – example: you work here,
195 these are all the places that are a 5 minute walk. Some people are driving a few blocks to
196 get to lunch and it takes longer than walking.
- 197 b) Thanh – Have you seen any employer programs that should be tried around here?
198 i) Frank – In Florida, employers encouraged employees to walk and bike so they
199 wouldn't have to pay for all the parking spots. The best incentives is a disincentive,
200 make it inconvenient for people to use a vehicle. But that can be counterproductive if
201 people say they just won't go there any more, it could hurt a business.
- 202 ii) Daniel – There is probably a distance, that helps people decide whether to bike or
203 walk. A lot of the mall employs people from outside Harrisonburg. Education is key
204 once you're at the location – you park at the mall or you live downtown, then you
205 park your car for the day and walk, bike, or use transit to get around within the City.
- 206 iii) Thomas – Thinks that staff at JMU could commute to campus via car. Then when
207 they get here, they could park at a satellite parking lot for staff, they could retrieve
208 their bike out of a covered/ secure locker, and then bike to and around campus all day
209 and for errands. I think people get into the mindset that it's one or the other, but I
210 think it can be both.
211
- 212 c) Thanh – Have you thought more about a carpool lot, Park & Ride in the area?
213 i) Kevin – Thinks it's been a missed opportunity not to have a Park & Ride in
214 Harrisonburg. Thinks it's needed. Putting one outside of downtown, then provide
215 transit service or walk into downtown or to JMU campus. It works both ways. People
216 in Harrisonburg and Rockingham might park there and carpool to Staunton, Augusta,
217 and Waynesboro for work. Kevin lives out near Charlottesville and see this type of
218 Park & Ride around the UVA campus, where people park outside of campus and
219 takes a bus in for free.
- 220 ii) Thomas – Thinks RMH had some incentives when they were located in their old
221 location.
222 (1) Brian – Many RMH employees would park in municipal lots the ride or walk in.

- 223 iii) Kevin – Does EMU have any issues with parking? Would they be attracted to Park &
224 Rides?
225 (1) Frank –Doesn't think EMU has any issues. Bridgewater is starting to develop
226 some issues with parking availability.
227 (2) Brian – EMU has started adding more bike sheds with new dorms.
228
- 229 10) Thanh – If you were given a list of new bike/ped projects and programs needed in the City,
230 how would you prioritize which projects should be funded first? What factors are most
231 important?
- 232 a) Joan – Safety, places where people have been hit.
233 b) Daniel – Areas where there's congestion for vehicles, buses, etc. Should alleviate
234 tensions in those areas.
235 c) Frank – Highest priorities would be congested areas.
236 d) Kevin – Whatever projects get you the most bang for your buck, areas that could help the
237 most people. Look at population density and job density.
238 e) Frank – Sidewalks, too. Sidewalks may not take a lot of people off the road, but anything
239 you can do helps.
240 f) Thomas – There needs to be a balance between long term vision and planning, and fixing
241 congestion issues now. If you're always dealing with what is the problem now, you will
242 always be playing catch-up. You have to have the vision for what is down the
243 pipeline, projects being planned for 20 years out. Consider a goal to increase public
244 transportation or increase trips by walking and biking. Average citizen might not
245 understand the balance, but there need to be one.
246 g) Daniel – Transportation issues are difficult to fix because there is never enough money to
247 fund the projects. In DC, when Springfield exchange was done, it took so long to do that
248 the improvements became obsolete when the project was completed. Wants to fix things
249 now but has to also plan for the future. The hot points identified now could move in 5
250 years due to changes, or other improvements.
251 h) Kevin – looking at future land use goals, not just transportation.
252 i) Thomas – Regarding the University, looking at how much congestion is due to students
253 commuting to school. As a citizen, he chooses parts of town he'd travel to or avoid based
254 on time of year or time of day, based on university schedule. Maybe look at
255 transportation dollars differently. The university is such a major part of the transportation
256 issue.
257 j) Daniel – Assumes there is a bad point elsewhere in the City that was fixed when the
258 Southeast Connector opened because people changed their routine. If you were to try to
259 fix that one small bad point, you may have wasted a lot of money.
260 k) Frank – part of it is mindset and tolerance level. You could keep widening Reservoir
261 Street until you have no stops along it, or do you just live with it. He now plans his
262 commutes based on time of days or choose an alternative route.
263 l) Thomas – Does the City track peak hours?
264 i) Tom – Yes we do. We build sequencing into the traffic signals based on peak hours
265 and peak direction of travel.
266 m) Thanh – To summarize, the group would prioritize projects by
267 i) Looking at long term planning versus short term fixes, to carefully evaluate
268 opportunities

- 269 ii) Safety, such as accident information
270 iii) Areas with congestion
271 iv) What is the cost benefit, look at population densities and where people are moving
272 v) Sidewalk safety (not really a priority factor)
273 n) Frank – sometimes you have to build where you want people to go.
274
- 275 11) Thanh – Have we missed anything?
276 a) Frank – How much PR, publicity goes on from a public transportation standpoint? If
277 you're a student you're probably getting that information. But other people coming to
278 town or dependent on public transportation or who might be willing to take transit with
279 awareness.
280 i) Thanh – Will relay that question to transit. In other focus group meetings, Avery from
281 transit offered bus riding education programs to community organizations.
282 ii) Kevin – We have a Ride Share Program, grant funded by Department of Rail &
283 Public Transportation. The program promotes any types of non single occupancy
284 vehicle choices in transportation. Trying to incorporate more transit PR.
285 iii) Thanh – Are there ideas to promote public transit that we can relay to Kevin's office
286 or to Transit?
287 (1) Frank – More awareness. Most people aren't in the automatic mindset to catch the
288 bus.
289 (2) Kevin – Envisions the Ride Share Program helping people become more aware of
290 transit. Sending employer human resources departments bus schedules and the
291 bike comfort map that Harrisonburg made. Great resource that could be provided.
292 b) Thomas – Is there any incentive programs – for employers or schools to reduce the
293 number of car trips going to that location? Parents dropping off one kid at the school or
294 business employees all driving to work. Are there municipalities out there who reduce the
295 demand on our infrastructure by working with employers through incentives? Maybe
296 that's money better spent then on infrastructure.
297 i) Thanh – Doesn't know of any.
298 ii) Tom – The city has the Safe Routes to School program that encourages parents to
299 walk their kids to school. If a new business comes into the city the developer is
300 required to build sidewalks, connector roads for interconnectivity, etc. We don't have
301 the level of your idea.
302 c) Thomas – Suggests the city consider a cost share program to provide infrastructure to
303 connect housing developments. Looking at big college housing units that are not
304 integrated. Understands that they are private businesses and private developments, but
305 there are opportunities there to connect them. There could be path connection The
306 Overlook to the back of The Overlook to Hunters Ridge. What financial incentive can the
307 city offer to the neighbors to reduce demand on our infrastructure?
308 i) Jim – Would love to take a \$2 million project, instead of building \$2 million worth of
309 roadway, but to break it out into multiple smaller funds, and take it to private
310 developers to build interconnectivity and paths. But part of the education process
311 goes beyond educating our own people. We need to educate the people who provide
312 the funding to the City. The strings that come attached to the dollars the City received
313 require that it only be spent for roads for motor vehicles. Federal highway funds can't
314 easily be used for building paths. As we update the Bike/Ped Plan to show these

- 315 projects, we can add a narrative about bicycle and pedestrian plan to change the
316 mindset.
- 317 ii) Kevin – There may be opportunity to incentivize building those internal connections
318 by allowing them to reduce other required road improvements. Or to reduce the
319 number of parking spaces they are required to build in exchange for building
320 interconnectivity with neighbors. Incentivize transit and alternative forms of
321 transportation.
- 322
- 323 12) Thanh – summarized next steps for the Bicycle & Pedestrian Plan.
- 324 a) Thank you for coming out today.

1 **Bicycle & Pedestrian Plan Focus Group Five: Real Estate Development & Property**
2 **Management**

3 **Wednesday, October 21, 2015, 1:30pm-3pm**

4 **Meeting Summary**

5 Focus Group Participants:

- 6 • Kim Young, Pheasant Run Apartments and Willow Hills Subdivision
- 7 • Jennifer McCloskey – The Hills Harrisonburg
- 8 • Mary Masserley, Matchbox Realty
- 9 • Luke Smith, Funkhouser Realty

10 City Department Participants:

- 11 • Adam Fletcher, Planning & Community Development Department
- 12 • Brad Reed, Public Works Department
- 13 • Tom Hartman, Public Works
- 14 • Jim Baker, Public Works
- 15 • James Wininger, Harrisonburg Department of Public Transportation
- 16 • Alleyn Harned, Bicycle and Pedestrian Subcommittee

17 Other Participants:

- 18 • Moderator: Thanh Dang, Public Works Department
- 19 • Notetaker: Danielle Morris, Public Works Department

20
21 1) Thanh welcomed the group, described the purpose, and guidelines for this meeting.

22
23 Thanh introduced City department representatives.

24
25 2) Participants introduced themselves.

- 26 a) Kim Young, Pheasant Run Townhomes. Student community, also get young
- 27 professionals and graduates.
- 28 b) Jennifer McCloskey, The Hills. South View, North View, and Stone Gate. Jennifer new
- 29 to the area.
- 30 c) Luke Smith, Funkhouser Real Estate Group. Works with homeowners and potential
- 31 investors. Went to JMU and has lived here as a young professional.
- 32 d) Mary Masserley, Matchbox Realty. Main clients are students in downtown Harrisonburg.

33
34 3) Thanh – In a typical week, what places do you, students, staff, residents need to go to and
35 how do they get there? What influences the decision to bike, walk, take the bus, or drive?

36 a) Kim –

- 37 i) Kim lives in Rockingham County. When she comes to Harrisonburg it's to and from
- 38 work, conducting business, doctor's appointments, and groceries. She does have
- 39 employees have moved into the City to be closer to downtown and events. Residents
- 40 bike, walk or take the bus, going to JMU, to downtown areas. For new homes that she

41 has built in Willow Hills, new homeowners purchase in the City to be closer to JMU
42 where they work. They like being closer to restaurants, Farmers Market, and
43 downtown. The Bluestone Trail offers more benefits and a lot of Pheasant Run
44 residents walk or bike to JMU along the trail. Before the Bluestone Trail opened she
45 had noticed more residents biking on South Main St bike lanes and walking along
46 Main St to JMU when JMU closed campus to vehicles. Now with the trail, if you're
47 not an expert and don't feel comfortable biking on South Main St you can use the trail
48 as an alternative. Lots of residents run for exercise along the Bluestone Trail, and
49 walk to campus. Since JMU is becoming more bike/walk friendly, the students are
50 starting to become so.

51 b) Luke –

52 i) Lives a couple blocks from downtown. Spends a lot of time downtown at restaurants
53 and events. Goes to Westover Park. If going downtown or to Westover Park he walks
54 or bikes, and thinks others in his neighborhood do the same.

55 ii) If he goes to his office, he drives. He works near University Boulevard & Reservoir
56 Street and would like to see more sidewalks and bike lanes in the area.

57 iii) He would like to try shopping at Costco on his bike with a trailer in the future, if he
58 felt better about biking on Reservoir St or East Market St.

59 iv) Sometimes he grabs lunches around his office and might drive. He knows that new
60 construction requires sidewalks to be constructed, and believes it would be a
61 challenge to retrofit new sidewalks in that area, but seems like that area could use
62 them. He sees visitors staying at nearby hotels and they are walking to restaurants and
63 are walking in the street, which doesn't look good and can't be comfortable. Thinks
64 this area could be more walkable. What's happening with Reservoir Street?

65 (1) Tom – Reservoir Street Project will provide more sidewalk and bike lanes on
66 Reservoir between south city limits to Neff Avenue, and only sidewalks between
67 Neff Avenue to University Blvd. Also, pending grant funding there's a new Safe
68 Routes to School project planned for Spotswood Elementary that proposes
69 sidewalks along Reservoir St. in that area.

70 c) Jennifer – Is new to the area and drives mostly between three properties. She has tried to
71 walk, but it's a lot of time. Residents take the bus because it's easier than taking your car
72 to JMU campus. Some residents are runners, but some don't feel safe running in the area
73 due to site development taking place. A lot of residents are choosing to go to the fitness
74 center to run/ walk because they don't want to be on the main road. They would prefer to
75 be outside.

76 d) Mary – Most of her residents are going to campus. Has parking garages under Urban
77 Exchange and there are as many bicycles as there are cars. . They have had to install more
78 bike racks in the garage and outside for visitors. Residents also go Farmer's Market and
79 downtown. It's free to park a bike in the garage, but costs money to park a car.

80

81 4) Thanh – Some people purchase a bike and then it gets left parked for a long time. What do
82 you think influences people's decision to ride their bike?

83 a) Mary – The weather is the biggest influence.

84 b) Luke – The weather and where you are going. If you're going to campus or around
85 downtown or to one of the parks on the west side, it is easy, faster, and fun to get around

- 86 on your bike. But if you have to go to East Market St or Reservoir St, you'd probably hop
87 in your car because it's a further distance and it's safer.
- 88 c) There was nodding in agreement from the other participants.
- 89 d) Jennifer – A lot of her residents don't choose to drive to campus because of the parking
90 situation on campus. It takes them longer to drive and park and walk to class. To take the
91 bus and get dropped off where they need to go is a lot easier.
- 92 e) Luke – And the expense of the parking permit.
- 93
- 94 f) Luke – He was on the Bluestone Trail recently and asked Kim if Pheasant Run has a bike
95 kiosk.
- 96 i) Kim – Yes.
- 97
- 98 ii) Kim-
- 99 (1) Agrees that weather and where they are going influences whether they bike or not.
100 Resident scan enroll in the bike share program for \$30 per year for unlimited 12
101 hour use. There are 6 bikes available for use. Helmets are available for free. Has
102 about 30% increase of use on that program since last year.
- 103 (2) Has seen more and more resident's bike more often.
- 104 (3) Residents from Park Apartments next door are also using the Bluestone Trail.
105 They are walking through Pheasant Run to get to the trail, and she sees one
106 gentleman walk by around the same time every day.
- 107 iii) Brad – is the bike share program open to anybody?
- 108 (1) Kim – Yes. Open to all – sign up online.
- 109 iv) Luke – Has been seeing more bike shares in other cities he has visited, and stations
110 are available everywhere. Thinks that Harrisonbug would be a good candidate for that
111 for a bike share program. Would be nice if City had a Bike Share program with
112 stations around the city. It could be good for citizens and visitors. Might also be good
113 for people who don't want to make a commitment to buy a bike.
- 114 v) Kim – That actually was what started her bike share program. Each year, there were
115 10-15 bikes per year that got left behind. She thought initially of doing a program on
116 her own to offer free access to bikes. But then saw a bike share program when she
117 traveled somewhere, and thought this partnership in a more structured environment
118 would keep the bikes better maintained, avoid problems with being stolen or lost, or
119 liability issues. So she entered into a partnership with Zagster. Zagster could expand
120 bikes and kiosks to other locations on campus and downtown.
- 121 vi) Luke – if you are visiting town it would add to the experience.
- 122 vii) Kim –
- 123 (1) There are people, like her, who wouldn't necessarily bike for the physical activity,
124 but would for the enjoyment. Some people want to bike to experience the area
125 without driving.
- 126 (2) Bike share gives them an opportunity without the financial investment.
- 127 (3) Pheasant Run has also partnered with Bluestone Bike & Run for events to show
128 residents opportunities in the area.
- 129
- 130 5) Thanh – What are important transportation factors that influence where future residents
131 choose to move within the City?

- 132 a) Luke –
133 i) If you have family, how busy the roads are.
134 ii) If you are JMU student or a parent, then bus routes are important.
135 iii) Doesn't hear about bus routes from many other people.
136 iv) Biking is important to people who are bikers.
- 137 b) Mary –
138 i) Bus routes are huge. She has spoken with Harrisonburg Public Transportation about
139 bus routes and it doesn't seem that setting up bus routes in certain areas is not as
140 critical to them. But to a parent or to a property manager, where you put that bus
141 route is critical. Where you put the bus route, and if it's not a direct route to campus it
142 could make or break a property.
143 ii) Urban Exchange does not have a direct bus route to campus. It is a roundabout route
144 to Cloverleaf Shopping Center, etc. To get to JMU, you have to either walk, bike, or
145 have a car. So for parents who don't send their kids here with cars anymore, that is
146 make or break during lease signing and where they choose to live. Feels there is
147 insensitivity when talking about bus schedule. It would be nice if the Urban Exchange
148 had a direct route to JMU to serve the 192 apartments that are primarily students,
149 even if only a couple times a day.
- 150 c) Jennifer – Arboretum Trail is nice so students are not on the main road walking from
151 Stone Gate Apartments. Parents like that because their son or daughter can walk or bike
152 away from the main road.
- 153 d) Luke – Even if you're outside of downtown, being able to walk around safe at all hours
154 of the day without being worried about being mowed over a by a vehicle.
155
- 156 6) Thanh – What factors make a place more “walkable”?
157 a) Luke –
158 i) Sidewalks help a lot.
159 ii) Crosswalks at busy roads.
160 iii) Slow traffic patterns.
161 iv) On Bruce Street, sometimes crossing 42 you have to wait a while. People are flying.
162 The way it comes around the bend, feels that it is probably more risky to cross in a
163 car.
- 164 b) Mary –
165 i) Shrubbery. Sometimes in the downtown area, it's hard to see around shrubs at night.
166 Is that the homeowners or the city's responsibility?
167 ii) Taking care of sidewalks for trip hazards.
168 iii) Parking spaces have been added in front of Benny's and it's a car hazard, pulling out
169 into traffic to see around the cars.
- 170 c) Luke – the sidewalk on the west side of the parking garage on Liberty Street. Half of the
171 sidewalk is taken up by the holy bushes. Two people can't walk side by side.
172 d) Thanh encouraged additional comments like this from the participants. If there are other
173 problem areas please email them to Thanh.
174
- 175 7) Thanh – What transportation infrastructure improvements have been positive for the
176 community?
177 a) Kim –

- 178 i) Bluestone Trail is a nice asset. It's great to see different factions of the community
179 using it. Not just students. It's pulling all the aspects of our unique community
180 together for everyone to enjoy. It's a fantastic addition.
- 181 ii) Likes all the pocket parks in different residential areas, makes it more accessible to
182 walk or bike to those facilities.
- 183 iii) Appears that there are a lot of people using bike lanes and sidewalks along Stone
184 Spring Road. Notices more people out and about.
- 185 iv) Improvements in downtown area that is more aesthetically pleasing gives more
186 character to the downtown area.
- 187 b) Luke –
- 188 i) Ice House Expansion and landscaping is nice.
- 189 ii) Is at Westover and Hillandale Park a lot – disc golf and trails.
- 190 iii) There are a lot of doggy bag stations and it's great for dog owners.
- 191 iv) As downtown is starting to expand to the north and Liberty Street is starting to get
192 more used.
- 193 v) And more use along Wolfe Street with the food trucks and new brewery, hopefully
194 will get more people walking along that corridor.
- 195 vi) JMU making it more difficult to drive across campus with the gates makes it nicer to
196 bike across.
- 197 c) Kim –
- 198 i) If you're not a JMU student and you don't have access to get around campus, it is
199 difficult to get onto campus. She volunteers for an organization, and can't park
200 anywhere. Attending the housing fair can be unbearable to cart all of her things. It
201 restricts the interactiveness, but is probably better for JMU.
- 202 ii) Thinks people like being in small town, where people are approachable, all of these
203 additions to parks, paths, beatification projects, makes people want to spend more
204 time in the city and invest in the area.
- 205 iii) Thinks all the projects have enhanced the city.
- 206
- 207 8) Thanh – Have you experienced, observed, or received feedback about difficult places and
208 routes to access places in Harrisonburg?
- 209 a) Luke –
- 210 i) Holy bushes along Bruce St parking deck on Liberty Street.
- 211 ii) University Blvd & Reservoir Street needs more sidewalks. He would walk to
212 restaurants during his lunch breaks if he didn't have to walk on the road or through
213 parking lots. A lot of people in his office drive to lunch too.
- 214 iii) Trying to cross Route 42 from the downtown area to go to Westover Park is not very
215 safe. The two crosswalks are Market St and MLK, which is far away. Suggested
216 considering a tunnel under Route 42 for pedestrians and bike riders.
- 217 b) Kim – concerned about trails in Purcell Park. Doesn't recommend that people walk
218 through there even as it's getting dark. Says some of the area is questionable. At one
219 point in time, there were homeless people closer to the Interstate.
- 220 c) Mary – Reservoir Street between 1pm – 5pm, there is a lot of traffic coming off Evelyn
221 Byrd Ave and they stay in the right lane which causes a lot of backup.
- 222 i) Adam – a lot of it is due to students trying to get home to Chestnut Ridge Dr. and
223 other student housing to the south.

- 224 ii) Brad – should be taken care of with the Reservoir Street Project.
225
- 226 9) Thanh – What could be done to encourage people to walk, bike, or take transit more?
227 Infrastructure & Education, Enforcement, Encouragement?
228 a) Kim –
229 i) Half of her residents don't even know there is a park just beyond Pheasant Run. If
230 residents at other properties are the same, many students don't know beyond what
231 they can't see.
232 ii) With Bike Share Program, Pheasant Run lets the students ride the bikes, get on the
233 trail and explore Purcell Park.
234 iii) Suggests education and visibility about the city parks, trails and amenities in the city
235 with brochures
236 iv) She markets the Bluestone Trail heavily for getting to Purcell Park and to JMU.
237 v) Doesn't think most college students know what's around them. A lot of students don't
238 know about Westover Park.
239 b) Luke – Lots of students have no idea about the parks and what they offer – Westover
240 Park offers fisbee golf, fooseball, weight room, etc.
241 c) Kim – There is overall lack of knowledge about the amenities in this area.
242 d) Thanh – Summarized the discussion that if residents, including students, knew about
243 amenities near them, they might walk and bike more.
244
- 245 10) Thanh - In addition to a community map, what other ideas do you have to share this
246 information with neighbors, customers, etc?
247 a) Mary – Create phone app to show nearby attractions. Students don't use paper maps, but
248 have their phones with them 24/7.
249 b) Kim – App of things to do in the area. The app might feature different things to do in the
250 area to expose students to different things to do.
251 c) Mary - If Bike Share Program set up around Harrisonburg, each station could have
252 electronic informational kiosks to tell people what destinations are near the kiosks
253 d) Luke - Encouraged YELP reviews for parks and community centers – Is used a lot in
254 other places, but not used as much in this area.
255 e) Brad – Do students/ customers not use google maps or similar tools to search for what's
256 nearby?
257 i) Kim – they are not focused on looking unless something specific is suggested to
258 them.
259 ii) Mary – you have to market the park like you would market an apartment and show
260 what you have to offer.
261 f) Kim – subscribes to the City Bike/Walk Monthly Newsletter and it has given her
262 information that she relays to her residents by facebook, etc. It's a great resource that
263 would be of interest to other people.
264 g) Jennifer – It would be nice to give residents a paper Move-In brochure about the
265 amenities to give to new people moving in would be nice.
266 h) Thanh asked if an organization in the City could create that and distribute a brochure to
267 the apartment complexes, would they distribute it?
268 i) Jennifer – Yes, she would distribute it because it helps her residents.

- 269 ii) Kim – Thinks that JMU would want to help promote this information as an alternative
270 to drinking
- 271 i) Thanh – this information will be relayed to Parks & Recreation Department
272
- 273 11) Thanh – What programs have benefited you/your clients? What programs do you wish to see
274 more of, or are there new ones that you would like to see?
- 275 a) Kim – Has partnered with Bluestone Bike & Run who has come and given bike and trail
276 safety, etiquette, and maintenance talks at Pheasant Run for residents.
- 277 b) Luke – Thinks those workshops are happening frequently in our area at other bike shops
278 too. Pointing people to the local bike shops for information to be aware of events.
- 279 c) Mary – Works also at Harrisonburg Fire Department and gives out informational
280 brochures about brain injury awareness, bicycle and pedestrian safety, helmets, etc. that
281 she could get for apartment complexes to give out. Contact her.
282
- 283 12) Thanh – If you were given a list of new bike/ped projects and programs needed in the City,
284 how would you prioritize which projects should be funded? How would you decide what is
285 the most important? What considerations would you make?
- 286 a) Kim –
- 287 i) She would look concentration of housing and retail areas, using population numbers
288 ii) Would put new sidewalks where there are people.
- 289 b) Luke – connect areas where the most people spend the most time
- 290 c) Kim – Agrees with Mary on buses. Pheasant Run gets infrequent service on weekends
291 and over the summer it's on demand. Many residents are choosing not to have cars. More
292 people walking and biking, and affordability is a bigger issue. Not having buses run
293 regularly is a big negative for residents.
- 294 d) Adam – what are the vacancy rates over the summer?
- 295 i) Kim – if they have jobs they are staying. Many are taking classes over the summer.
296 She sees a drop only in July and August, but consistent numbers the rest of the year.
- 297 ii) Mary – doesn't have a ton of drop. Over the summer, students may go home for a few
298 days and come back because their apartment is home. Not having a direct bus route to
299 campus is a tough sell.
- 300 e) Kim – thinks the gate system on campus is forcing more and more people not to have
301 cars. Pushing people to walk, bike, and take transit more. Is the City finding increases in
302 bus ridership? Or is it the same?
- 303 i) James – not really tied to gate system. Number of students has remained about the
304 same, but changes with new housing off campus.
- 305 ii) Kim – says when Pheasant Run first opened, they were giving out passes for 4
306 parking spaces per apartment. Now she may give out 2 or 3 per apartment. She is
307 seeing more bikes and is purchasing more bike racks and is seeing more people at bus
308 stops. Maybe in her community it's not making an impact over the whole system.
- 309 iii) James – ridership has gone up over the last 10 years, maybe nearly doubled. And
310 more people are riding the bus from one side of campus to the other.
- 311 iv) Mary – She has spoken with Reggie at Public Transit, he said that Urban Exchange
312 doesn't have any students who ride the bus. Mary says it's because they have no
313 direct routes.

- 314 v) Kim – says she has hourly service, but there’s not a direct route either from Pheasant
315 Run. On demand service was problematic for her residents.
- 316 vi) James – Acknowledged the big hurdle involved with asking riders to transfer buses.
- 317 f) Thanh summarized the priorities discussed
- 318 i) Prioritizing biking and walking infrastructure based on concentration of housing
- 319 ii) Connecting where people spend the most time
- 320 iii) Improving the bus schedule and provide more direct service
- 321 g) Kim is glad Pheasant Run did the lighting along the trail within Pheasant Run.
- 322 i) Tom Purcell Park is technically closed at night which is why it was not lighted.
- 323 h) Kim suggested connecting to what’s in existence and making it better. Add on and extend
324 to new location. Enhancing and increasing what is there, to make a longer trail, rather
325 than start at a whole new place.
- 326
- 327 13) Thanh – Have we missed anything? Any questions for staff or from staff to the participants?
- 328 a) Adam – In communities, how many are not students and what mode of travel are they
329 using the most?
- 330 i) Kim – only about 2-3% are not students and they drive
- 331 ii) Mary – about 40% are not students (grad students on up) and they utilize all modes of
332 travel. They have chosen to live downtown to be within walking and biking distance.
333 They may get into their car to go to work, but they chose this as home to enjoy the
334 downtown amenities.
- 335 iii) Jennifer – little to no non-students. North View has more non students due to lower
336 pricing and her company will be raising the price.
- 337 b) Luke – Really don’t have a use for the bus system because he really doesn’t see a place to
338 bus to. He has situated himself where he wants to walk to places.
- 339 c) Kim – Willow Hills is a good example of an opportunity where residents may utilize
340 trails if they led to downtown, campus etc. Perhaps there is an opportunity to use the
341 Bluestone Trail by Stone Spring Road, but it is rather intimidating with the hills and the
342 traffic. Thinks people would use trail system to get to downtown, campus, Purcell, etc.
- 343 d) Luke - Hills are a barrier for biking/walking. We live hilly area. Thinks that may be
344 where more bus routes should go, to connect those areas to parks and downtown. Thinks
345 more frequent bus lines would be good. Could charging more help? Are the buses free?
- 346 i) James – Only “free” to JMU students. Transit has a contract with JMU and it costs a
347 \$1.00 to ride the bus for non-JMU students (per ride), ridership has stayed steady for
348 the past few years.
- 349 e) Alleyn – Do you use the trails only during the day?
- 350 i) Kim – yes, I don’t encourage using them at night due to no lighting, I don’t feel safe
351 or secure at it gets closer to dusk. I don’t worry about it during the day. Feels safe and
352 comfortable during the day. Its utilized frequently and a lot of traffic. Feels unsafe
353 during downtime when people are not around.
- 354 ii) James – Arboretum not lit at night, very treacherous.
- 355
- 356 14) Thanh – summarized next steps for the Bicycle & Pedestrian Plan.
- 357 15) Adam – Went over the 2016 Comprehensive Plan and encouraged them to come make
358 comments, etc. Also, made them aware of the Bike/Ped Plan.

Appendix D:

ActiveTrans Methodology



Harrisonburg Bicycle and Pedestrian Plan - 2017

ActiveTrans Methodology

Individual variables within each of the five major categories – stakeholder input, constraints, existing conditions, connectivity, and equity – were scored based on metrics that are specific to each; yes or no, vehicles per day, distance across an intersection, citizen input from public work sessions, traffic speeds, persons per square mile, etc. For each variables or measurement, a decision has to be made as to what deserves priority; Is it more important to add bicycle and pedestrian facilities to high traffic streets, or low traffic streets? Should we improve intersections with short crossings first because they are easier, or long crossings first because they pose greater risks to pedestrian safety? The answers to these priority decisions are found below for each ActiveTrans variable, along with which projects (*Pedestrian Segments, Pedestrian Intersections, Bicycle Segments, or Shared Use Paths*) each variable applies to.

Scaling is also applied to each variable to compare variables that may be measured in different units, and to compare non-numeric values like “yes” or “no” by converting them to numeric values like 0 and 1. Proportionate scaling is used when a range of values has no outliers, while Quantile scaling is used for value ranges that may have outliers, dividing the values into either 4 or 10 quantiles. Inverse scaling can also be used with either Proportionate or Quantile scales when a high value for a variable is not a desirable quality. For more about variable scaling and ActiveTrans methodology, consult the ActiveTrans Priority Tool Guidebook published by the National Cooperative Highway Research Program.

Variable scores are then multiplied by the weight factor for their category (constraints, equity, etc.) found on page 18, and added together to produce the Prioritization Scores found in Appendix E.

Stakeholder Input

Number of Citizen Comments

Applies to: All Projects

Scaling: Proportionate

The projects assessed by the ActiveTrans tool were generated by public comments gathered through:

- A Wiki Mapping exercise conducted by the Harrisonburg-Rockingham Metropolitan Planning Organization between April 19th and June 28th, 2013.
- One public input session held on May 19th, 2015,
- Five subsequent focus group meetings in Fall 2015, and
- Public comments collected during the development of this plan, the bulk was collected in May and June 2015.

Projects were scored based on the number of mentions or identifications each received during the public input process. The ActiveTrans analysis prioritized those projects with the highest level of public support or concern.

Included in an Existing Plan

Applies to: All Projects

Scaling: Proportionate

The ActiveTrans analysis prioritized those projects that were already included in existing City plans including the 2010 Bicycle and Pedestrian Plan, the 2011 Comprehensive Plan, and the city's Capital Improvements Plan. Projects with previous inclusions in these plans were prioritized over newly suggested projects.

Constraints

Available Right of Way

Applies to: All Projects

Scaling: Proportionate

Pedestrian and bicycle projects that can be constructed within existing rights-of-way (property owned by the City) will be easier, faster, and less costly to build. Therefore, the model prioritized projects that can be accomplished without purchasing additional right-of-way. The availability of right-of-way was estimated by taking measurements from the city's existing GIS mapping. The analysis required 8 feet of available space for pedestrian segments, or 17 feet for shared use paths. If these widths were not available at any point along the proposed segment, the project was judged to require additional right-of-way. For bicycle segments, a general assessment of pavement space was made, judging the potential to install bicycle lanes without widening roads or reducing number of vehicle travel lanes.

Major Utility Relocation

Applies to: All Projects

Scaling: Inverse Proportionate

Utilities include electric, gas, water, sewer, etc. Utility relocation can be complex and expensive. The ActiveTrans analysis promoted those projects that can likely be constructed without disturbing existing utility locations, both above and underground. A visual inspection of proposed projects was used to generally assess utility conflicts, although some underground utility conflicts can be hard to see. Projects were scored as having either no conflicts, minor conflicts affecting utility pedestals and other small features, or major conflicts requiring the relocation of overheard utility poles.

Existing Conditions

Vehicle Lanes

Applies to: Pedestrian Segments, Shared Use Paths

Scaling: Proportionate

The ActiveTrans model was constructed to prioritize pedestrian projects along those streets with more than 2 lanes. These wider roads are often main routes, connecting the city's most important destinations, and where pedestrians and cyclists are most in need of safe accommodations. For the purposes of this analysis, shared center turn lanes were included in the overall vehicle lane count. For Bicycle Segments, see Traffic Stress.

Speed Limit

Applies to: Pedestrian Segments, Pedestrian Intersections, Shared Use Paths

Scaling: Proportionate

In line with an overall approach to prioritize projects where the safety of pedestrians is most at risk, the ActiveTrans model prioritized pedestrian projects along streets with faster moving traffic. For Bicycle Segments, see Traffic Stress.

Average Daily Traffic

Applies to: Pedestrian Segments, Pedestrian Intersections, Shared Use Paths

Scaling: Proportionate

Prioritizing sidewalks, bike lanes, and path projects along high volume streets further promotes the approach of establishing a pedestrian network where safety is paramount. Therefore, the ActiveTrans model was constructed to promote projects along busy routes where safe pedestrian accommodations are needed most. For Bicycle Segments, see Traffic Stress.

Traffic Stress

Applies to: Bicycle Segments Only

Scaling: Proportionate

The Traffic Stress Index was established as a part of the Harrisonburg Community Bike Map Project to rate city streets based on their suitability for riders of different levels, from children and beginners to confident expert cyclists. The Traffic Stress Index was calculated by considering variables such as traffic, roadway speeds, road width, and whether bicycle lanes were present. These existing traffic stress scores were incorporated into the ActiveTrans model to promote bicycle segments that have the lowest stress and highest comfort for riders of all levels. For the map and Review Guide, visit www.harrisonburgva.gov/bike-map.

Type of Traffic Control

Applies to: Pedestrian Intersections Only

Scaling: Inverse Proportionate

For pedestrian intersection projects, the model rated whether traffic controls are currently in place, and what kind. Intersections were ranked as either having no traffic signal, a traffic signal only, or a traffic signal that includes pedestrian crossing signals. Intersections that currently have no existing signal at all were prioritized by the model.

Presence of Raised Median

Applies to: Pedestrian Intersections Only

Scaling: Proportionate

When crossing wide streets or divided routes, a raised median between travel lanes moving in opposite directions can serve as a refuge for crossing pedestrians, letting them confront only one direction of traffic at a time. Where a median is available or planned as part of a future improvement project, a proposed crossing project can be made to be safer and more comfortable; therefore, projects including a median were promoted.

Distance from Nearest Traffic Signal

Applies to: Pedestrian Intersections Only

Scaling: Inverse Quantile 10

In the interest of safety, pedestrians should only cross roadways at intersections. Where intersections are far apart, pedestrians are not given convenient options to cross. For this reason, the ActiveTrans model gave higher priority to pedestrian intersection improvements when the next available intersection is farther away, promoting more, and more closely spaced, opportunities for pedestrian crossing.

ADA Compliance

Applies to: Pedestrian Intersections Only

Scaling: Proportionate

The city's existing intersections vary in their compliance with the Americans with Disabilities Act (ADA), requiring curb ramps for wheelchair users and other disabled pedestrians. The model made improvements where ADA upgrades are needed a high priority, helping to serve the needs of all users. While curb ramps are necessary for many disabled users, they are also a great convenience for older users, young children, and parents with strollers.

Longest Crossing Distance

Applies to: Pedestrian Intersections Only

Scaling: Quantile 4

With variation in the width of city streets, pedestrians must sometimes cross long distances, especially when crossing major routes. Very long crossings are most in need of safe pedestrian options; therefore, the model ranked pedestrian intersection projects based on the longest crossing leg, prioritizing improvements to long crossings where pedestrian safety and comfort are most needed.

Connectivity

Connects to Existing or Proposed Sidewalks and Paths

Applies to: All Projects

Scaling: Proportionate

The ultimate goal of the Bicycle and Pedestrian Plan is to construct a network of connected improvements that allow seamless pedestrian and bicycle trips in all areas of the city. To best meet this goal, the ActiveTrans analysis promotes those projects that connect to other existing or proposed facilities, maximizing the overall bicycle and pedestrian network.

Safe Route to School Link

Applies to: All Projects

Scaling: Proportionate

Safe routes to schools are especially important to the overall connectivity goals of the Bicycle and Pedestrian Plan, and promote safe and convenient opportunities for children to bike and walk to and from schools. The importance of projects that provide safe routes to schools is compounded by the availability of special grants to fund projects of this type. For the purposes of this analysis, the model promoted bicycle improvements located within 1 mile of a school, and pedestrian projects located with 0.5 miles of a school.

Along Public Transit Route

Applies to: Pedestrian Segments, Bicycle Segments, Shared Use Paths

Scaling: Proportionate

Connections between bicycle, pedestrian, and transit facilities further enhances the ability of residents and visitors to navigate Harrisonburg without access to an automobile. For this reason, the model promoted projects that are along established transit routes. Project segments that are parallel to existing transit routes are ranked higher by the model, as well as some non-parallel routes at the discretion of city staff and the Bicycle & Pedestrian Subcommittee.

Equity

Equity Score

Applies to: All Projects

Scaling: Proportionate

While pedestrian and bicycle facilities are an amenity to many residents of Harrisonburg, they are a necessity for those who do not have access to a car because of their age, financial situation, or disability. To help deliver bicycle and pedestrian infrastructure to those who need it most, city staff and the Bicycle and Pedestrian Subcommittee devised an equity score of each project based on four criteria:

1. Percentage of the population classified as low and moderate income
2. Percentage of the population under 18 years old
3. Percentage of the population over 65 years old
4. Percentage of households who do not own a vehicle

Each of these factors was mapped for census block groups nearest a proposed project, and projects with high equity scores ranked higher by the ActiveTrans model.

Population Density

Applies to: All Projects

Scaling: Quantile 10

The ActiveTrans model promoted projects near where more people live in order to serve the greatest need for bicycle and pedestrian facilities, and to deliver the greatest benefit to residents for limited construction funds. This analysis uses census block group data for population density.

Activity or Employment Density

Applies to: All Projects

Scaling: Quantile 10

In order to prioritize projects where demand for pedestrian and bicycle routes is high, the model gave higher ranking to projects in or near activity and employment centers, creating options for biking or walking to work and other errands.

Harrisonburg Bicycle & Pedestrian Plan 2017

ActiveTrans Priority Tool - Variable Scaling

	Ped Segment	Ped Intersection	Bike Segment	Shared Use
Stakeholder Input				
Requests & Comments	Proportionate	Proportionate	Proportionate	Proportionate
Included in Adopted Plan	Proportionate	Proportionate	Proportionate	Proportionate
Constraints				
Available Right of Way	Proportionate	Proportionate	Proportionate	Proportionate
Major Utility Relocation	Inv. Proportionate	Inv. Proportionate	Inv. Proportionate	Inv. Proportionate
Existing Conditions				
Total Vehicle Lanes	Proportionate	X	X	Proportionate
Posted Speed Limit	Proportionate	Proportionate	X	Proportionate
Average Daily Traffic (ADT)	Proportionate	Proportionate	X	Proportionate
Traffic Stress	X	X	Proportionate	X
Type of Traffic Control	X	Inv. Proportionate	X	X
Presence of Raised Median for Refuge	X	Proportionate	X	X
Distance from Nearest Traffic Signal	X	Inv. Quantile 10	X	X
ADA Compliance	X	Proportionate	X	X
Longest Crossing Distance	X	Quantile 4	X	X
Connectivity				
Connects to Existing Sidewalk/Path	X	Proportionate	X	X
Connects to Proposed Sidewalk/Path	X	X	X	X
Connectivity	Proportionate	X	Proportionate	Proportionate
Safe Routes to School	Proportionate	Proportionate	Proportionate	Proportionate
Located on Transit Route	Proportionate	X	X	Proportionate
Equity				
Equity Score	Proportionate	Proportionate	Proportionate	Proportionate
Population Density	Quantile 10	Quantile 10	Quantile 10	Quantile 10
Activity/Employment Density	Quantile 10	Quantile 10	Quantile 10	Quantile 10

Appendix E:

GIS and Equity Score Methodology



GIS Methodology for 2017 Bicycle & Pedestrian Plan

Equity Analysis

To facilitate scoring for the equity factor in the project prioritization process, an equity analysis was performed. This analysis took into consideration the geographic distribution of traditionally transportation-disadvantaged and underrepresented populations using the following metrics:

Percentage of population classified as low and moderate income (LMI)

Data was obtained from the U.S. Census Bureau's American Community Survey 5-year estimates (2006-2010), which were appended by the U.S. Department of Housing and Urban Development (HUD) to include LMI population estimates. More information about HUD's methodology for determining LMI population estimates can be found at: <https://www.hudexchange.info/manage-a-program/acs-low-mod-summary-data/>.

Data are presented at the block group level and was classified into five groups using the Jenks natural breaks classification method: https://en.wikipedia.org/wiki/Jenks_natural_breaks_optimization.

Percentage of population under 18 years of age

Data on age was obtained from the U.S. Census Bureau's American Community Survey 5-year estimates (2009-2013). Data are presented at the block group level and was classified into five groups using the Jenks natural breaks classification method: https://en.wikipedia.org/wiki/Jenks_natural_breaks_optimization.

Percentage of population 65 years of age and older

Data on age was obtained from the U.S. Census Bureau's American Community Survey 5-year estimates (2009-2013). Data are presented at the block group level and was classified into five groups using the Jenks natural breaks classification method: https://en.wikipedia.org/wiki/Jenks_natural_breaks_optimization.

Percentage of households that do not own a vehicle

Data on vehicle ownership was obtained from the U.S. Census Bureau's American Community Survey 5-year estimates (2009-2013). Data are presented at the block group level and was classified into five groups using the Jenks natural breaks classification method: https://en.wikipedia.org/wiki/Jenks_natural_breaks_optimization.

To develop an overall equity score to tie these four variables together, each variable was first given a 1-5 score by block group. This score was derived from the methodologies described above for each variable (e.g. – the first of five class groupings for the Percent Under 18 variable is 0-3%, so block groups falling in that range were given a score of 1). In all cases, higher percentages for each variable were considered to be more indicative of a concentration of a transportation-disadvantaged population.

The scores for the four variables were summed, giving a possible score range of 4-20. To convert these values to a final 1-5 equity score, this range was divided into five approximately equal groups, as follows:

Final 1-5 Score	Range of Summed Variable Scores
1	4 – 7
2	7.1 – 10
3	10.1 – 13
4	13.1 – 16
5	16.1 - 20

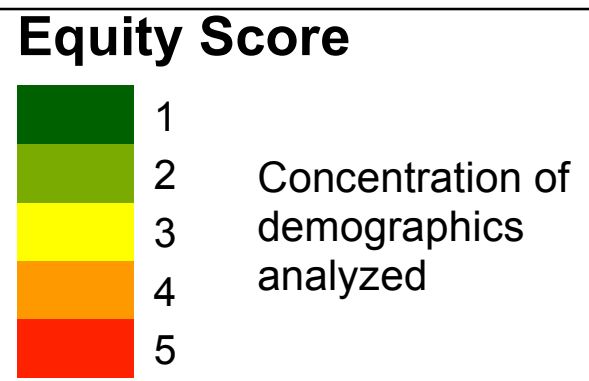
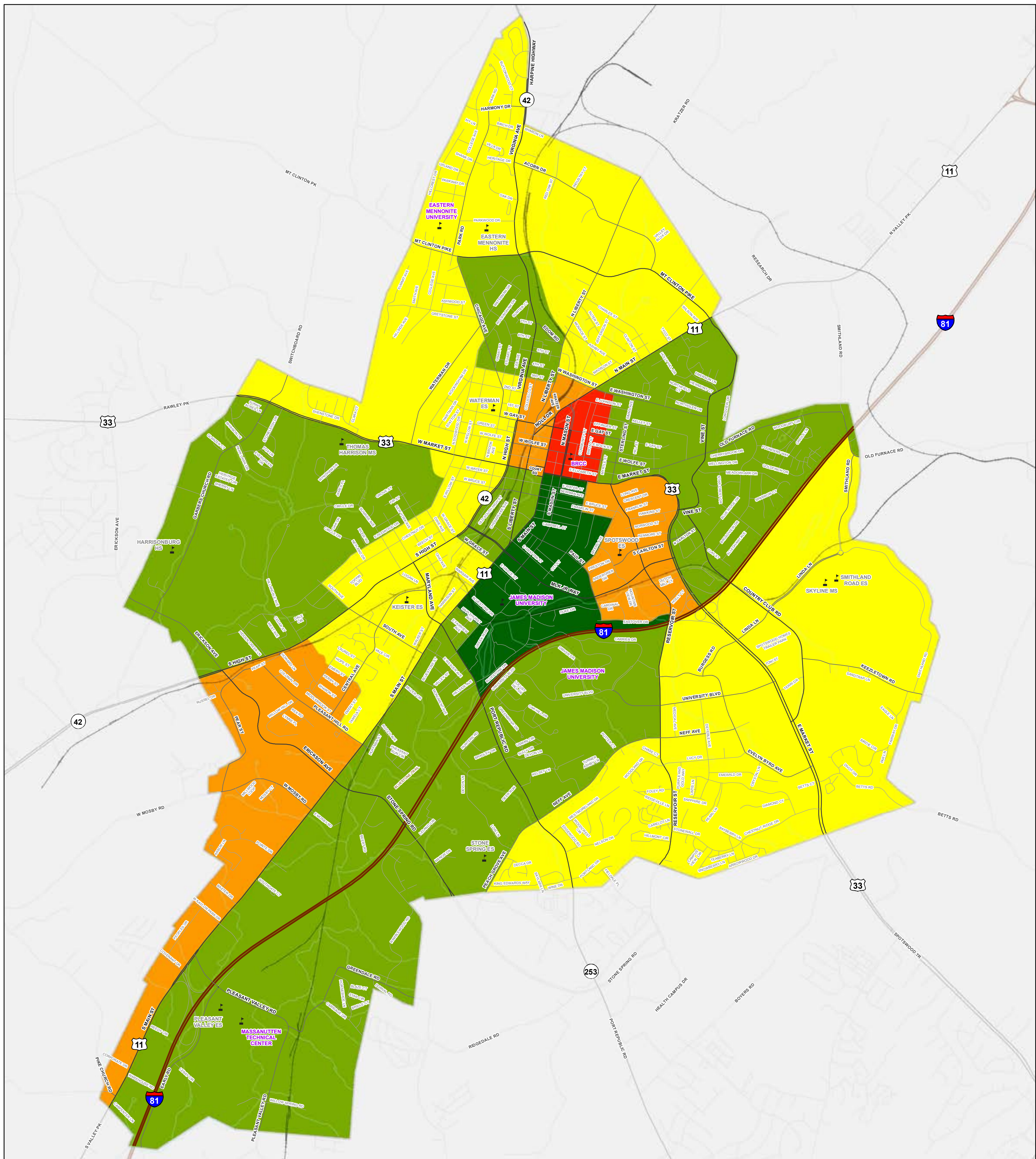
Other Maps

Population Density

Data on population was obtained from the U.S. Census Bureau decennial 2010 Census. Data are presented at the block level in the format of population per square mile of land area and are classified using quantiles to limit the influence of outlier data.

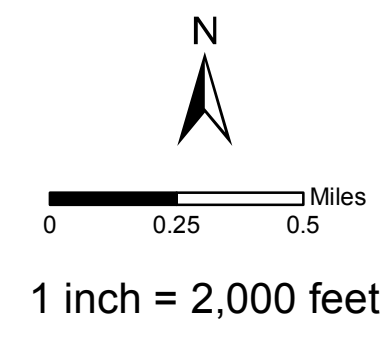
Employment Density

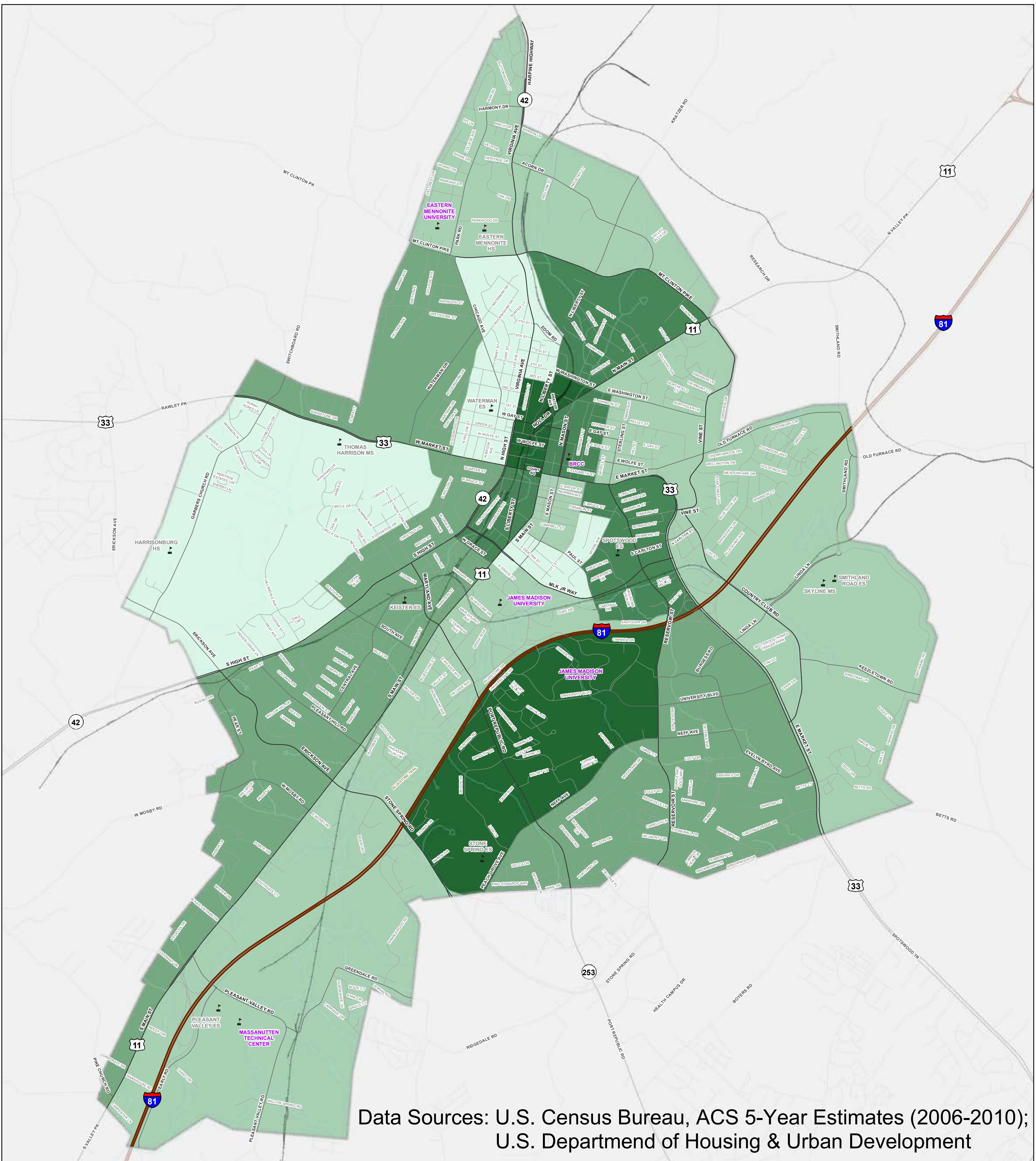
Data was derived from the U.S. Census Bureau’s American Community Survey 5-year estimates (2006-2010). These data were manipulated into tract-to-tract commuter worker flows by the Federal Highway Administration and are available in their Census Transportation Planning Products (http://www.fhwa.dot.gov/planning/census_issues/ctpp/). Estimates for the number of workers commuting from a one tract to another tract were consolidated to determine the total number of workers commuting to each tract within the City of Harrisonburg. Data are presented at the tract level in the format of workers per square mile of land area and are classified using quantiles to limit the influence of outlier data.



Equity Score by Census Block Group

2016 Bicycle & Pedestrian Plan





Percent LMI Population

- 25 - 37%
- 38 - 50%
- 51 - 65%
- 66 - 86%
- 87 - 99%

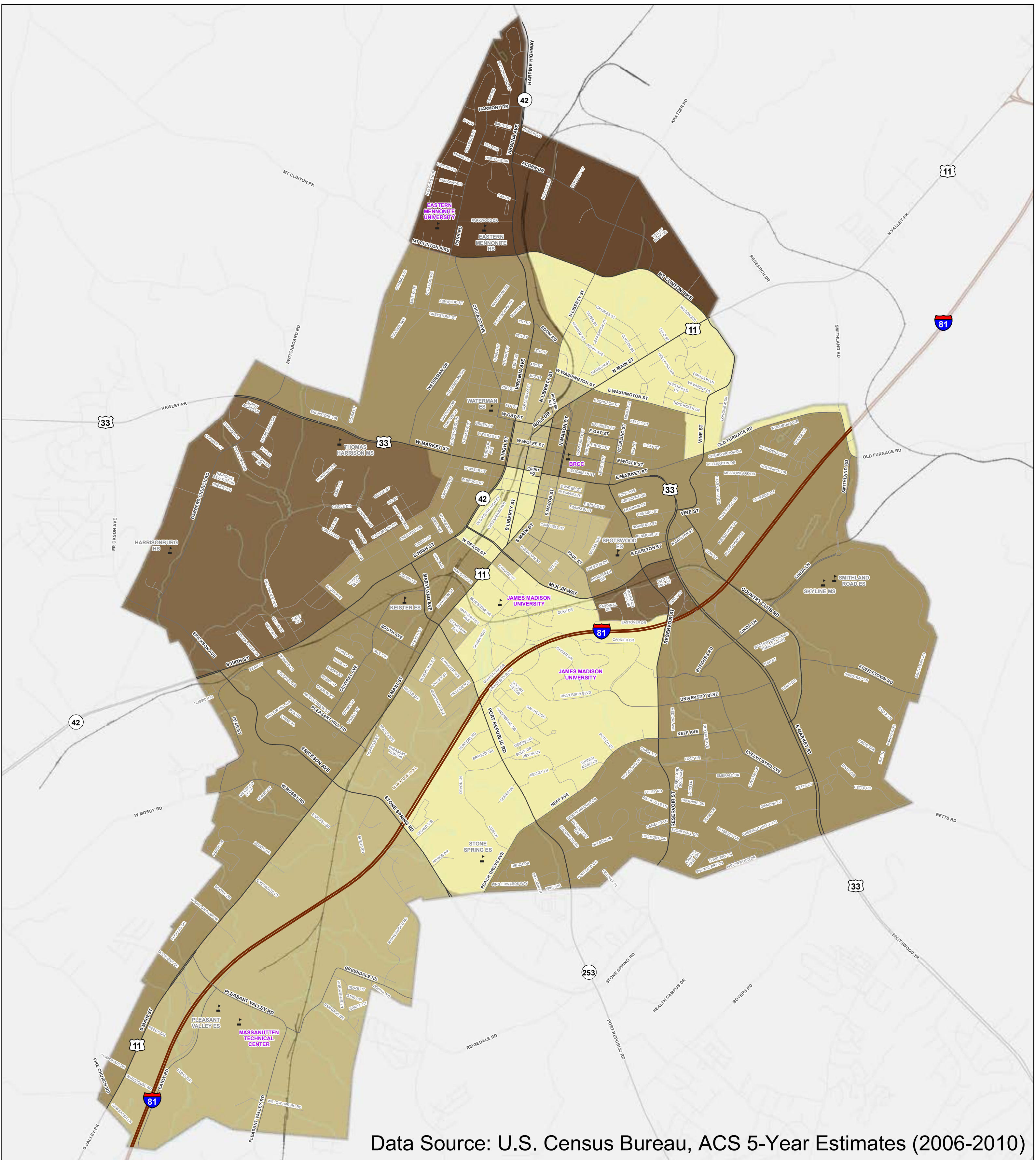
Percent of Persons with Low-Moderate Income (LMI) by Census Block Group

2016 Bicycle & Pedestrian Plan

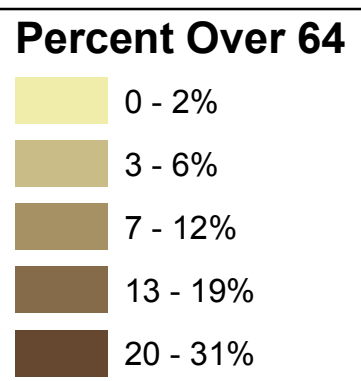
N

0 0.25 0.5 Miles

1 inch = 2,000 feet

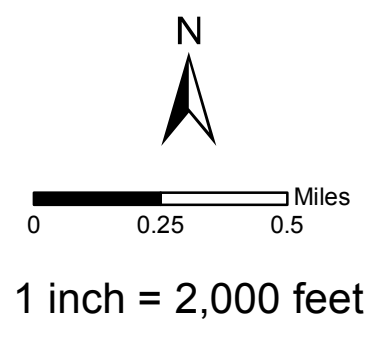


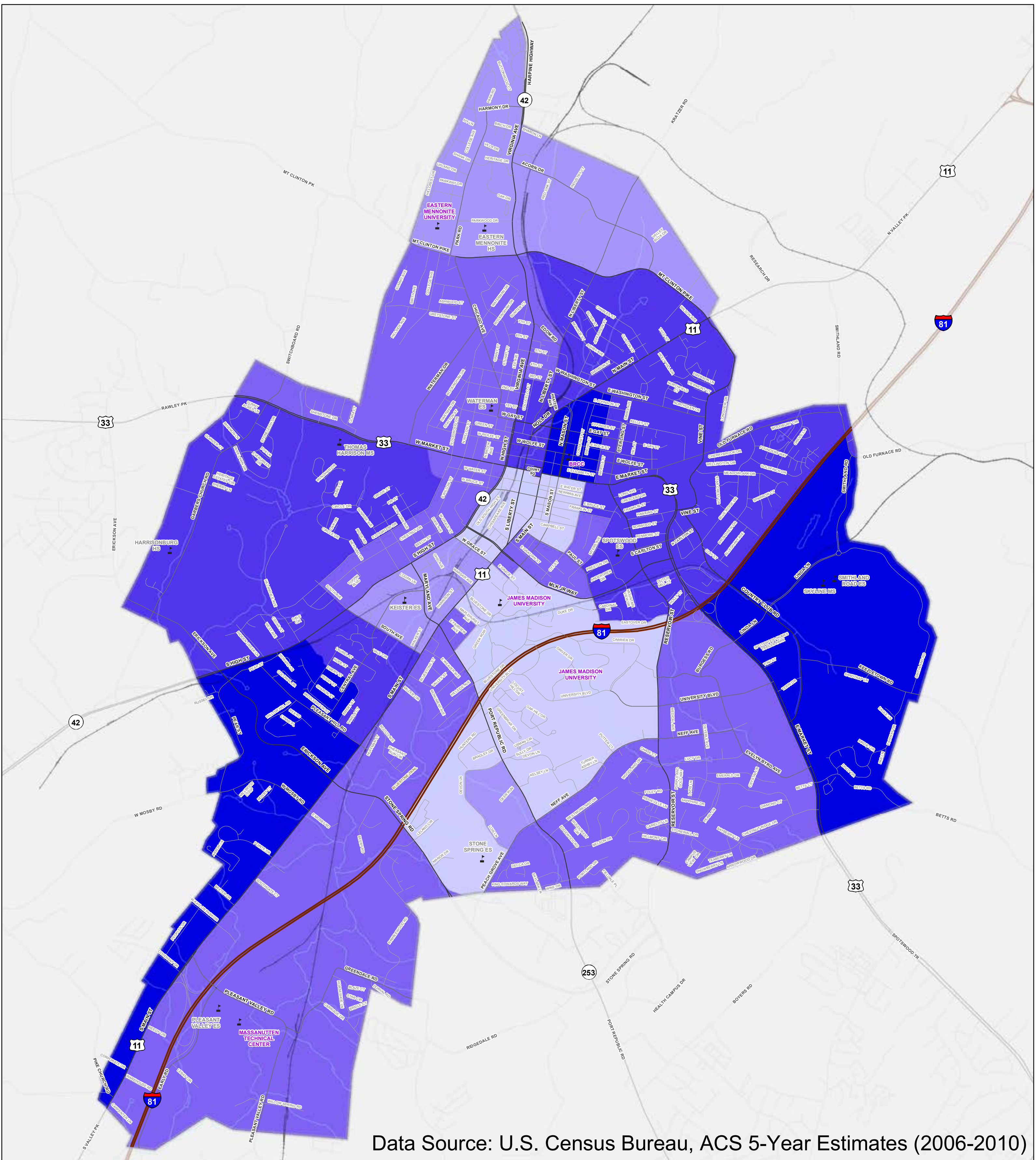
Data Source: U.S. Census Bureau, ACS 5-Year Estimates (2006-2010)



Percent Over 64 by Census Block Group

2016 Bicycle & Pedestrian Plan



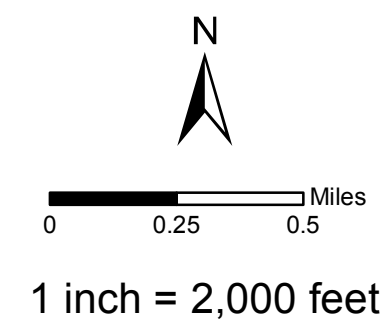


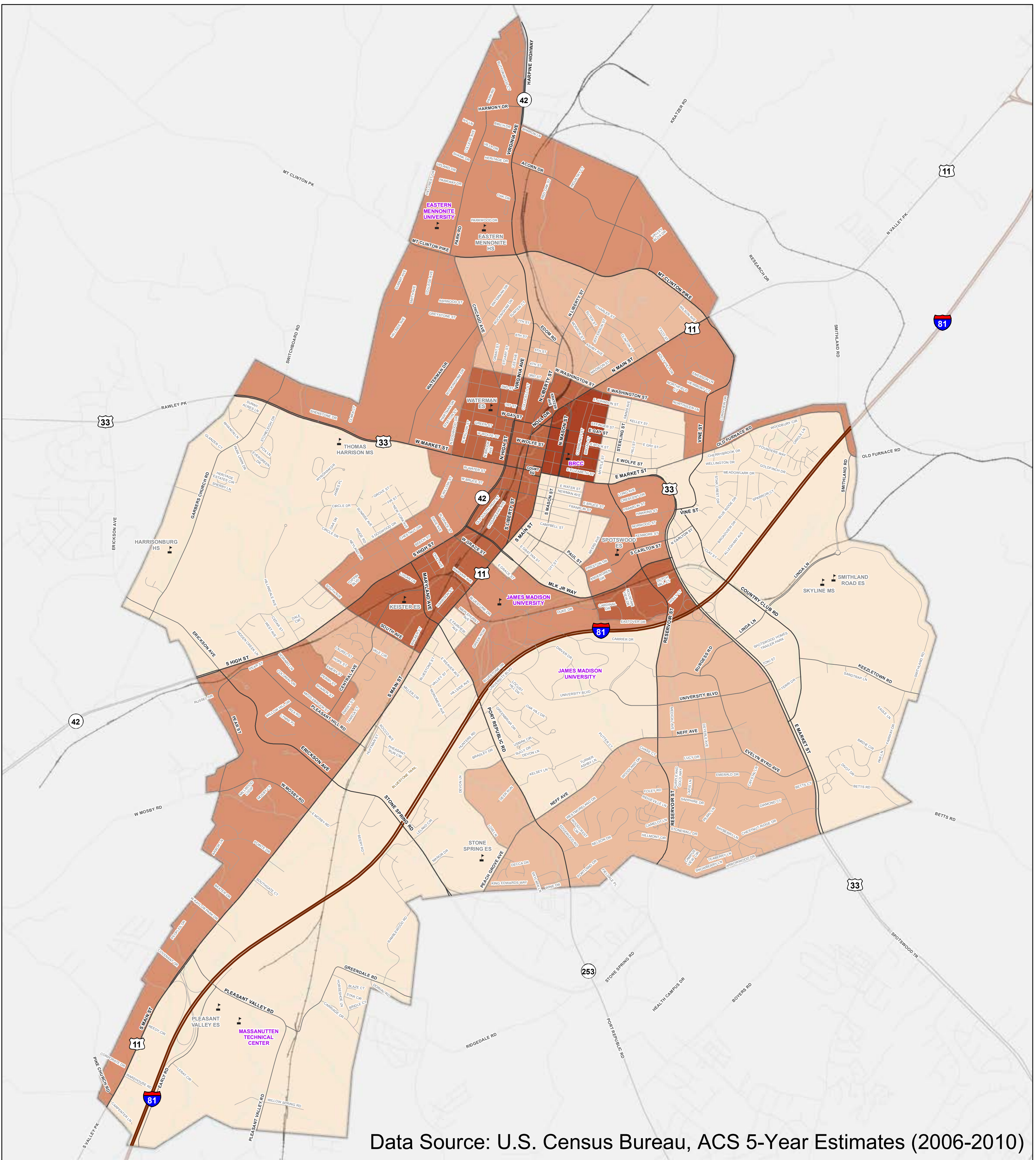
Data Source: U.S. Census Bureau, ACS 5-Year Estimates (2006-2010)

Percent Under 18

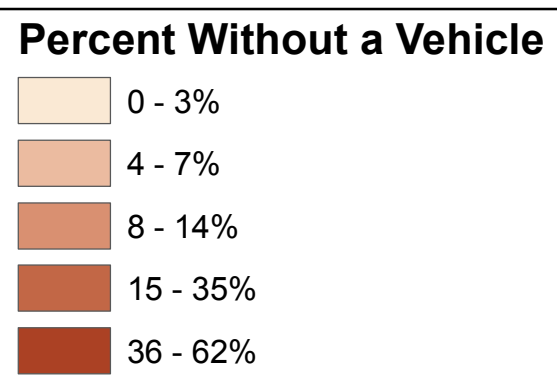
- 0 - 3%
- 4 - 11%
- 12 - 19%
- 20 - 25%
- 26 - 38%

**Percent Under 18
by Census Block Group**
2016 Bicycle & Pedestrian Plan



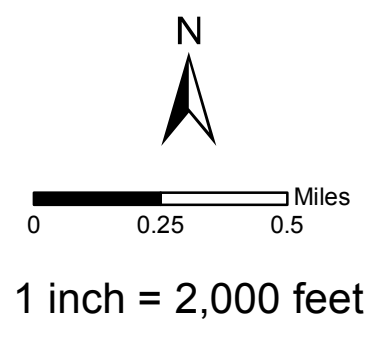


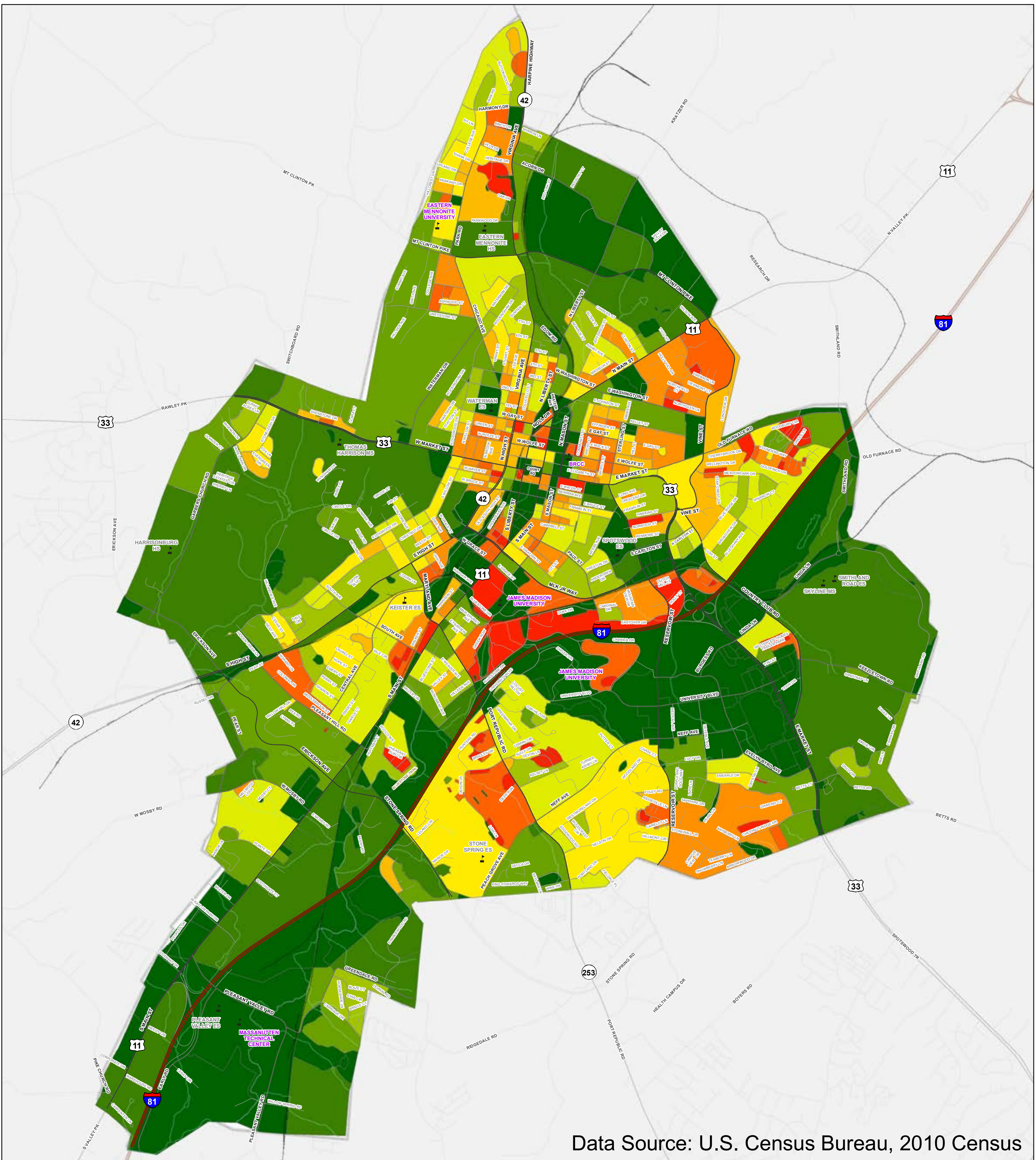
Data Source: U.S. Census Bureau, ACS 5-Year Estimates (2006-2010)



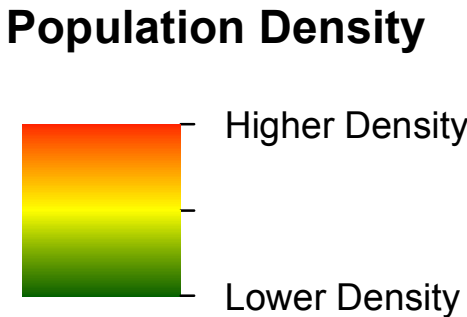
Households Without a Vehicle by Census Block Group

2016 Bicycle & Pedestrian Plan



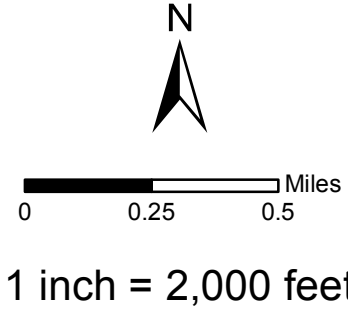


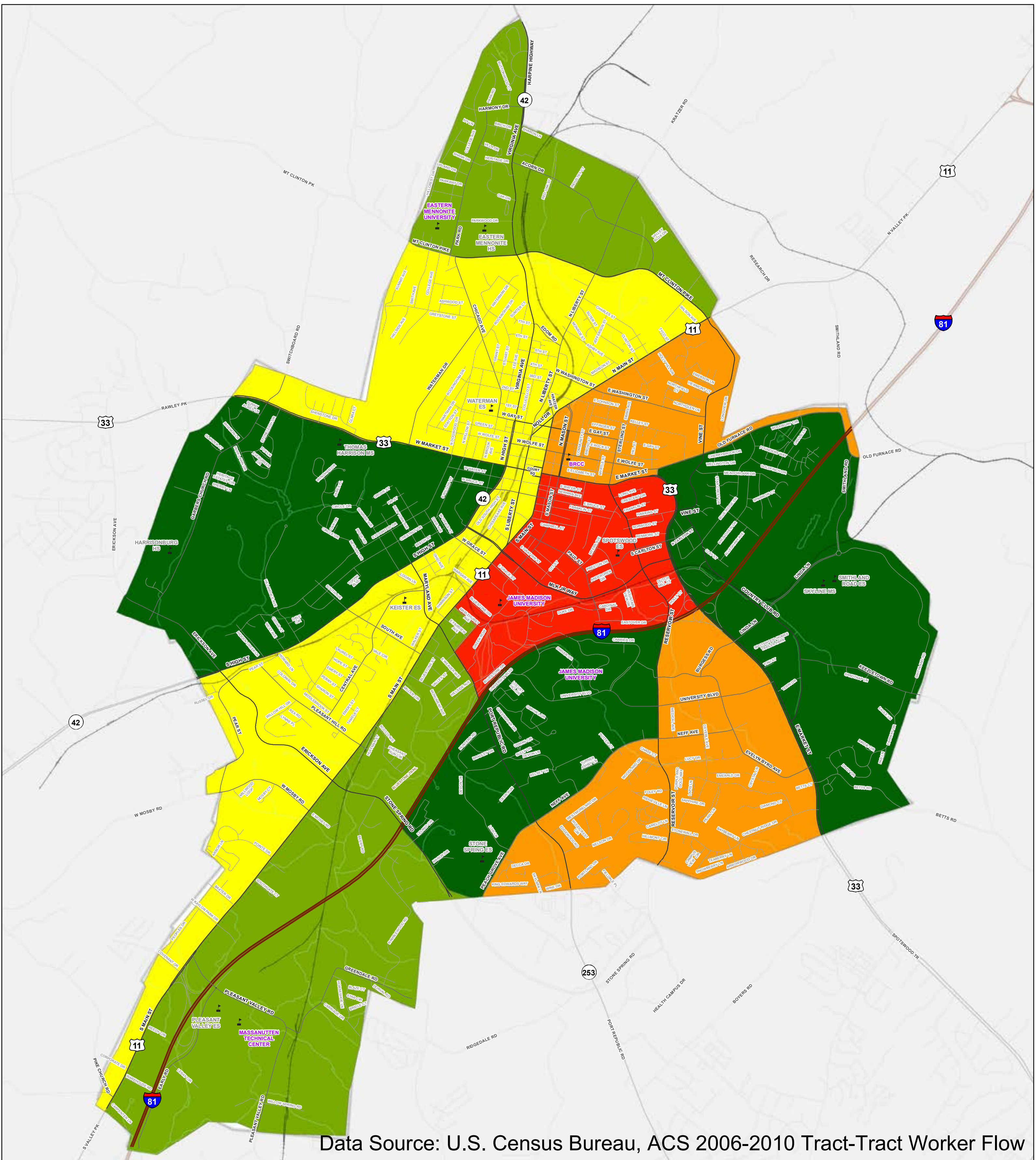
Data Source: U.S. Census Bureau, 2010 Census



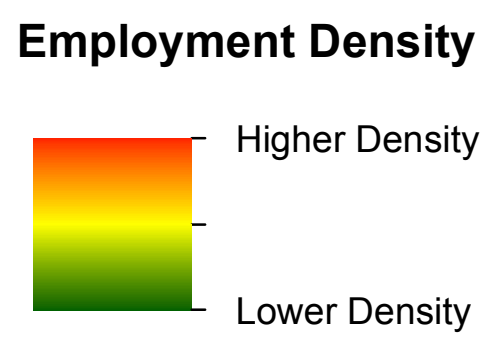
Population Density by Census Block

2016 Bicycle & Pedestrian Plan



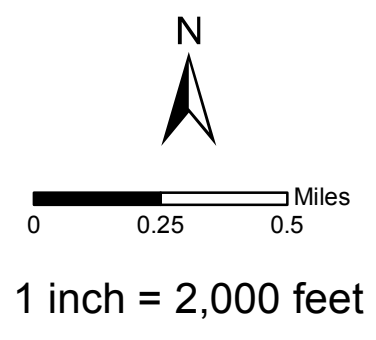


Data Source: U.S. Census Bureau, ACS 2006-2010 Tract-Tract Worker Flow



Employment Density by Census Tract

2016 Bicycle & Pedestrian Plan



Appendix F:

Network & Facility Recommendations



PEDESTRIAN SEGMENTS - ActiveTrans Priority Rank

ID	LOCATION	Stakeholder Input - score	Stakeholder Input - weighted score	Constraints - score	Constraints - weighted score	Existing Conditions - score	Existing Conditions - weighted score	Connectivity - score	Connectivity - weighted score	Equity - score	Equity - weighted score	Prioritization Score
PS-1	Virginia Ave-Mt Clinton Pk-North City Limits	6.1	18.2	7.8	77.8	8.4	84.0	5.0	30.0	5.4	32.2	242.2
PS-2	Erickson Ave-Garbers Church Rd-Erickson Ave Phase I Terminus	6.1	18.2	10.0	100.0	4.8	48.2	10.0	60.0	1.9	11.7	238.1
PS-3	E Market St-MLK Jr Way-Linda Ln	7.5	22.5	5.0	50.0	7.3	72.5	5.0	30.0	8.8	52.8	227.8
PS-4	S Main St-Mosby Rd-South City Limits	6.1	18.2	5.0	50.0	9.1	91.4	5.0	30.0	5.1	30.5	220.1
PS-5	Peach Gove Ave-King Edwards Way-Stone Spring Rd	5.4	16.1	7.8	77.8	3.0	30.4	10.0	60.0	5.4	32.2	216.5
PS-6	N Main St-Charles St-North City Limits	6.4	19.3	7.8	77.8	4.2	42.2	5.0	30.0	6.5	38.9	208.1
PS-7	Reservoir St-MLK Jr Way-Evelyn Byrd Ave	1.8	5.4	2.8	27.8	4.7	47.2	10.0	60.0	9.2	55.0	195.4
PS-8	Port Republic rd-Forest Hill Rd-Bluestone Dr	0.0	0.0	7.8	77.8	8.3	83.3	0.0	0.0	5.3	31.7	192.8
PS-9	Port Republic Rd-S Main st-Bluestone Dr	0.7	2.1	0.0	0.0	7.1	71.3	10.0	60.0	8.3	50.0	183.4
PS-10	Country Club Rd-Vine St-E Market St	10.0	30.0	2.8	27.8	3.9	38.6	10.0	60.0	3.8	22.8	179.1
PS-11	S High St-Maryland Ave-Erickson Ave	0.0	0.0	0.0	0.0	7.2	72.2	10.0	60.0	5.8	35.0	167.2
PS-12	Garbers Church Rd-Heritage Center Way-Park Lawn	5.7	17.1	2.8	27.8	4.8	48.2	10.0	60.0	1.9	11.7	164.8
PS-13	Reservoir St- Holly Ct-S Carlton St	0.4	1.1	0.0	0.0	4.7	47.2	10.0	60.0	9.2	55.0	163.3
PS-14	Portland Dr-Port Republic-End	5.4	16.1	7.8	77.8	0.8	8.3	5.0	30.0	5.0	30.0	162.2
PS-15	Chicago Ave-Mt. clinton Pike-Rockingham Dr	7.9	23.6	2.8	27.8	1.5	15.2	10.0	60.0	5.4	32.2	158.8
PS-16	University Blvd-Reservoir St-E Market St	6.4	19.3	2.8	27.8	5.5	55.1	5.0	30.0	4.3	25.5	157.7
PS-17	W Rock St-N High St-Green Street	0.0	0.0	5.0	50.0	4.5	44.8	5.0	30.0	5.1	30.5	155.3
PS-18	Ramblewood Rd-East of Mineral Springs Rd to South of Stone Spring Road	0.0	0.0	10.0	100.0	1.0	9.9	5.0	30.0	2.3	13.9	153.7
PS-19	Mt. Clinton Pike-CollegeAve-Virginia Ave	8.6	25.7	2.8	27.8	3.5	35.1	5.0	30.0	5.4	32.2	150.8
PS-20	Reservoir St-Myers Ave-S Carlton St	1.8	5.4	0.0	0.0	2.1	20.9	10.0	60.0	9.2	55.0	141.3
PS-21	E Gay St-Myrtle St-Summit St	5.0	15.0	5.0	50.0	1.1	11.0	5.0	30.0	5.3	31.6	137.7
PS-22	W Gay St-Rockingham Dr-Chicago Ave	5.4	16.1	5.0	50.0	0.9	9.4	5.0	30.0	5.4	32.2	137.6
PS-23	Sterilign St-E Elizabeth St-Effinger St	5.0	15.0	0.0	0.0	1.0	10.3	10.0	60.0	8.5	51.1	136.4
PS-24	Maryland Ave-S High St-Central Ave	0.0	0.0	5.0	50.0	1.9	18.6	5.0	30.0	6.1	36.6	135.2
PS-25	Lee Ave-W Gay St-7th St	5.4	16.1	5.0	50.0	0.8	8.3	5.0	30.0	5.0	30.0	134.4
PS-26	Reservoir St-Neff Ave-South City Limits	6.1	18.2	0.0	0.0	4.3	42.9	5.0	30.0	6.8	41.1	132.2
PS-27	Evelyn Byrd Ave-University Blvd-E Market St	6.8	20.4	0.0	0.0	5.5	55.1	5.0	30.0	4.3	25.5	131.0
PS-28	Vine St-N main St-E Market St	6.8	20.4	0.0	0.0	2.3	23.1	10.0	60.0	4.5	27.2	130.7
PS-29	MLK Jr Way-Mountain View Dr-Ott St	0.7	2.1	5.0	50.0	0.9	8.8	5.0	30.0	6.6	39.4	130.4
PS-30	S High St-Rockingham Square Shopping Center-Erickson Ave	0.4	1.1	0.0	0.0	7.1	71.0	5.0	30.0	4.4	26.1	128.2
PS-31	Central Ave-Pleasant Hill Rd- South Ave	5.0	15.0	0.0	0.0	1.1	11.0	10.0	60.0	6.9	41.6	127.7
PS-32	Rockingham Dr-Chicago Ave-Taliaferro Dr	5.4	16.1	5.0	50.0	0.8	8.3	5.0	30.0	3.8	22.8	127.2
PS-34	Pleasant Valley road-S Main St-South City Limits	0.0	0.0	2.8	27.8	4.2	42.1	5.0	30.0	4.4	26.1	126.0
PS-35	Norwood St-Reservoir St-Hawkins-St	0.4	1.1	0.0	0.0	0.8	8.3	10.0	60.0	9.2	55.0	124.4
PS-36	Hillside Ave-Greystone St-End	5.7	17.1	7.8	77.8	0.8	8.3	0.0	0.0	3.5	21.1	124.4
PS-37	Maryland Ave-Chesnut Dr-S Dogwood Dr	5.0	15.0	5.0	50.0	0.8	8.3	5.0	30.0	2.8	16.7	120.0
PS-38	Neff Ave-Reservoir St-Valley Mall	5.4	16.1	0.0	0.0	4.4	43.8	5.0	30.0	4.3	25.5	115.4
PS-39	Blue Ridge Dr-Old Furnace Rd-Country Club Rd	5.4	16.1	0.0	0.0	1.3	13.3	10.0	60.0	4.2	25.0	114.3
PS-40	E Bruce St-S Mason St-Federal St	5.7	17.1	2.8	27.8	1.0	10.1	5.0	30.0	4.8	28.9	113.9
PS-41	N Main St-N Mason St-Charles St	0.0	0.0	0.0	0.0	1.9	19.1	10.0	60.0	5.7	34.4	113.5
PS-42	Pleasant Hill Rd (entire length)	5.7	17.1	0.0	0.0	1.9	19.3	5.0	30.0	6.9	41.6	108.1
PS-43	W Rock St-N High St-N Liberty St	0.0	0.0	2.8	27.8	0.8	8.3	5.0	30.0	6.9	41.6	107.8
PS-44	W Mosby Rd-S Main St-Millwood Loop	0.4	1.1	0.0	0.0	4.4	43.6	5.0	30.0	5.1	30.5	105.2

PEDESTRIAN SEGMENTS (continued) - ActiveTrans Priority Rank

ID	LOCATION	Stakeholder Input - score	Stakeholder Input - weighted score	Constraints - score	Constraints - weighted score	Existing Conditions - score	Existing Conditions - weighted score	Connectivity - score	Connectivity - weighted score	Equity - score	Equity - weighted score	Prioritization Score
PS-45	S Dogwood Dr-W Market St-Hidden Creek Ln	5.4	16.1	0.0	0.0	1.0	9.7	10.0	60.0	3.1	18.9	104.6
PS-46	E Wolfe St-Sterling St-Vine St	0.0	0.0	0.0	0.0	1.3	12.7	10.0	60.0	5.3	31.6	104.3
PS-47	Ott St-Franklin St-E Water St	6.1	18.2	0.0	0.0	1.0	9.8	5.0	30.0	7.7	46.1	104.1
PS-48	South Ave-RR Tracks Closest to S High St	0.0	0.0	2.8	27.8	1.5	15.2	5.0	30.0	4.6	27.8	100.8
PS-49	Park Rd-Mt Clinton Pk-Harmony Dr	0.4	1.1	2.8	27.8	1.2	12.3	5.0	30.0	4.6	27.8	98.9
PS-50	Waterman Dr-W Market St-Chicago Ave	5.4	16.1	0.0	0.0	3.0	29.9	5.0	30.0	3.5	21.1	97.1
PS-51	Mountain View dr-S Carlton St-Myers Ave	6.1	18.2	0.0	0.0	0.9	8.8	5.0	30.0	6.6	39.4	96.5
PS-52	Myers Ave-Paul St-Mountain View Dr	5.7	17.1	0.0	0.0	0.8	8.3	5.0	30.0	6.6	39.4	94.9
PS-53	Harkins St-Reservoir St-E Market St	0.4	1.1	0.0	0.0	0.8	8.3	5.0	30.0	9.2	55.0	94.2
PS-54	Paul St-MLK Jr-Way-Duke Dr	0.7	2.1	0.0	0.0	0.8	8.3	5.0	30.0	8.8	52.8	93.2
PS-55	Mountain View Dr-MLK Jr-Way-S Carlton St	5.7	17.1	0.0	0.0	0.9	8.8	5.0	30.0	6.2	37.2	93.1
PS-56	W Wolfe St-N High St-N Liberty St	5.7	17.1	0.0	0.0	1.1	10.8	5.0	30.0	5.5	32.8	90.7
PS-57	Reservoir St-Long Ave-Myers Ave	0.0	0.0	0.0	0.0	1.8	18.2	5.0	30.0	6.9	41.7	89.9
PS-58	Greystone St-Smith Ave-Chicago Ave	5.4	16.1	0.0	0.0	0.8	8.3	5.0	30.0	5.7	34.4	88.8
PS-59	Ott St- E Grattan St-Franklin St	5.4	16.1	0.0	0.0	0.9	8.8	5.0	30.0	5.6	33.3	88.2
PS-60	Sterling St-E Market St-E Elizabeth St	5.4	16.1	0.0	0.0	1.0	10.3	5.0	30.0	4.9	29.4	85.8
PS-61	Pear St-Erikson Ave-Pleasant Hill Rd	5.4	16.1	2.8	27.8	0.8	8.3	0.0	0.0	4.7	28.3	80.5
PS-62	Paul St-Myers Ave-MLK Jr Way	1.1	3.2	0.0	0.0	1.0	9.7	5.0	30.0	6.2	37.2	80.1
PS-63	Stuart St-Taliaferro Dr-3rd St	5.7	17.1	0.0	0.0	0.8	8.3	5.0	30.0	3.8	22.8	78.2
PS-64	N Willow St-W Gay St-2nd St	5.0	15.0	0.0	0.0	0.9	9.5	5.0	30.0	3.5	21.1	75.6
PS-65	3rd St-Stuart St-N Dogwood Dr	5.4	16.1	0.0	0.0	0.8	8.3	5.0	30.0	3.5	21.1	75.5
PS-66	Smith Ave-Existing Sidewalk-Mt. Clinton Pike	5.7	17.1	2.8	27.8	0.8	8.3	0.0	0.0	3.5	21.1	74.4
PS-67	Greystone St (entire length)	0.4	1.1	0.0	0.0	0.8	8.3	5.0	30.0	5.7	34.4	73.8
PS-68	Jefferson St-Charles St-W Washington St	0.4	1.1	0.0	0.0	0.8	8.3	5.0	30.0	5.0	30.0	69.4
PS-69	Pear St-W Mosby Rd-Ruby Dr	0.0	0.0	2.8	27.8	1.3	13.0	0.0	0.0	4.4	26.1	66.9
PS-70	Central Ave-Greystone St-Shenandoah St	5.7	17.1	0.0	0.0	0.8	8.3	0.0	0.0	6.1	36.6	62.1
PS-71	Shenandoah St-College Ave-Chicago Ave	5.7	17.1	0.0	0.0	0.8	8.3	0.0	0.0	6.1	36.6	62.1
PS-72	S Willow St-W Market St-JMU Entrance	0.4	1.1	0.0	0.0	0.8	8.3	5.0	30.0	3.5	21.1	60.5
PS-73	Effinger St-Sterling St-Broad St	0.0	0.0	0.0	0.0	0.8	8.3	0.0	0.0	8.5	51.1	59.4
PS-74	Myrtle St-E Washington St-Kelley St	5.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	42.2	57.2
PS-75	Mt Clinton Pk-West City Limits-Chicago ave	0.0	0.0	0.0	0.0	1.7	16.6	0.0	0.0	5.4	32.2	48.8
PS-76	Kelley St-Simms Ave-Hill St	5.0	15.0	0.0	0.0	0.8	8.3	0.0	0.0	3.1	18.3	41.7
PS-77	Parkwood Dr-Virginia Ave-Park Rd	0.0	0.0	0.0	0.0	1.1	10.7	0.0	0.0	3.9	23.3	34.0

PEDESTRIAN INTERSECTIONS - ActiveTrans Priority Rank

ID	LOCATION	Stakeholder Input - score	Stakeholder Input - weighted score	Constraints - score	Constraints - weighted score	Existing Conditions - score	Existing Conditions - weighted score	Connectivity - score	Connectivity - weighted score	Equity - score	Equity - weighted score	Prioritization Score
PI-1	Port Republic Rd & S Main St	5.0	15.0	5.0	50.0	7.2	72.2	10.0	60.0	7.2	43.3	240.5
PI-2	N Main St & Gay St	8.0	24.0	5.0	50.0	3.0	29.8	10.0	60.0	7.7	46.1	209.9
PI-3	Peach Grove Ave & Lois Ln	0.0	0.0	5.0	50.0	4.1	40.7	10.0	60.0	7.6	45.5	196.2
PI-4	S Main St & Pointe Dr	0.0	0.0	7.8	77.8	4.8	48.0	5.0	30.0	5.8	35.0	190.8
PI-5	S High St & W Water St	0.0	0.0	2.8	27.8	6.5	65.1	10.0	60.0	5.4	32.2	185.1
PI-6	S High St & Pear St	0.0	0.0	5.0	50.0	4.1	41.2	10.0	60.0	5.5	32.8	184.0
PI-7	S Liberty St & W Water St	8.0	24.0	2.8	27.8	3.6	35.9	10.0	60.0	5.6	33.9	181.5
PI-8	S Main St & Pleasant Valley Rd	0.0	0.0	5.0	50.0	6.9	68.7	5.0	30.0	5.1	30.5	179.2
PI-9	S High St & W Bruce St	5.0	15.0	2.8	27.8	4.9	49.2	10.0	60.0	4.3	25.5	177.5
PI-10	N Mason St & E Wolfe St	8.0	24.0	0.0	0.0	5.5	55.5	10.0	60.0	6.3	37.8	177.2
PI-11	S Mason St & E Rock St	0.0	0.0	2.8	27.8	4.9	49.1	10.0	60.0	6.3	37.8	174.6
PI-12	S Liberty St & W Bruce St	8.0	24.0	2.8	27.8	4.1	40.6	10.0	60.0	3.4	20.5	172.9
PI-13	S Mason St & E Water St	0.0	0.0	2.8	27.8	4.3	42.9	10.0	60.0	6.7	40.0	170.7
PI-14	Virginia Ave & Mt Clinton Pk	2.0	6.0	5.0	50.0	5.5	55.0	5.0	30.0	3.9	23.3	164.3
PI-15	Liberty St & Market St	8.0	24.0	0.0	0.0	2.6	26.3	10.0	60.0	8.1	48.3	158.7
PI-16	E Market St & Reservoir St/Sterling St	2.0	6.0	0.0	0.0	4.6	46.2	10.0	60.0	7.7	46.1	158.3
PI-17	Port Republic Rd & Neff Ave	0.0	0.0	0.0	0.0	5.3	52.7	10.0	60.0	7.6	45.5	158.2
PI-18	Chicago Ave & Waterman Dr	5.0	15.0	2.8	27.8	3.0	29.9	10.0	60.0	3.5	21.1	153.8
PI-19	N Main St & Emerson Ln	0.0	0.0	2.8	27.8	4.7	47.2	5.0	30.0	7.2	43.3	148.3
PI-20	S High St & W Grace St	0.0	0.0	0.0	0.0	4.9	48.9	10.0	60.0	6.5	38.9	147.8
PI-21	N Liberty St & W Gay St	8.0	24.0	0.0	0.0	2.8	28.2	10.0	60.0	5.5	32.8	145.0
PI-22	Reservoir St & Norwood St	0.0	0.0	0.0	0.0	2.7	27.0	10.0	60.0	9.2	55.0	142.0
PI-23	S High St & South Ave	0.0	0.0	0.0	0.0	5.3	53.0	10.0	60.0	4.6	27.8	140.8
PI-24	S Main St & Baxter Dr	0.0	0.0	2.8	27.8	4.6	46.4	5.0	30.0	5.1	30.5	134.8
PI-25	S Main St & W Kaylor Park Dr	0.0	0.0	0.0	0.0	6.9	68.7	5.0	30.0	5.1	30.5	129.2
PI-26	S Main St & WLK Jr Way	1.0	3.0	0.0	0.0	5.0	50.3	5.0	30.0	7.1	42.8	126.1
PI-27	Virginia Ave & Harmony Dr	0.0	0.0	2.8	27.8	5.0	50.3	5.0	30.0	2.8	16.7	124.7
PI-28	Mt. Clinton Pike at Gift & Thirt	0.0	0.0	2.8	27.8	4.3	43.1	5.0	30.0	3.9	23.3	124.2
PI-29	Vine St & E Washington St	0.0	0.0	2.8	27.8	3.0	29.8	5.0	30.0	5.6	33.9	121.5
PI-30	Virginia Ave & Acorn Drive	8.0	24.0	0.0	0.0	4.6	45.5	5.0	30.0	3.5	21.1	120.6
PI-31	Park Rd & EMU Science Center	0.0	0.0	5.0	50.0	1.6	15.9	5.0	30.0	3.5	21.1	117.0
PI-32	Mt Clinton Pk & College Ave	0.0	0.0	2.8	27.8	1.8	18.3	5.0	30.0	5.0	30.0	106.0
PI-33	Vine St & Old Furnace Rd	0.0	0.0	0.0	0.0	3.9	39.4	5.0	30.0	5.3	31.6	101.0
PI-34	Erickson Ave at Bus Stop for Garbers Crossing	0.0	0.0	5.0	50.0	3.8	38.2	0.0	0.0	1.6	9.4	97.6
PI-35	Mt Clinton Pk & Chicago Ave	6.0	18.0	0.0	0.0	1.9	19.3	5.0	30.0	5.0	30.0	97.3
PI-36	Neff Ave & Arboretum Trail	0.0	0.0	0.0	0.0	3.0	30.0	5.0	30.0	6.1	36.6	96.6
PI-37	Burgess Rd & Harrisonburg Crossing	0.0	0.0	0.0	0.0	3.6	36.0	5.0	30.0	5.0	30.0	96.0
PI-38	Mt Clinton Pk & Summit Ave	0.0	0.0	0.0	0.0	1.6	16.2	0.0	0.0	3.1	18.9	35.1

BICYCLE SEGMENTS - ActiveTrans Priority Rank

ID	LOCATION	Stakeholder Input - score	Stakeholder Input - weighted score	Constraints - score	Constraints - weighted score	Existing Conditions - score	Existing Conditions - weighted score	Connectivity - score	Connectivity - weighted score	Equity - score	Equity - weighted score	Prioritization Score
BS-1	Early Rd (Pleasant Valley Rd to South City Limits)	0.0	0.0	10.0	100.0	10.0	100.0	5.0	30.0	1.6	9.4	239.4
BS-2	Erickson Ave (Garbers Church Rd to Erickson Ave Phase I)	7.1	21.4	5.0	50.0	10.0	100.0	10.0	60.0	0.8	5.0	236.4
BS-3	E Market St (Mason St to Reservoir St)	5.0	15.0	0.0	0.0	10.0	100.0	10.0	60.0	10.0	60.0	235.0
BS-4	Res. St (Neff Ave to E Market St)	6.4	19.3	0.0	0.0	10.0	100.0	10.0	60.0	9.2	55.0	234.3
BS-5	MLK (Mason St to East Market St)	7.1	21.4	0.0	0.0	10.0	100.0	10.0	60.0	8.1	48.3	229.7
BS-6	Waterman Dr (W Market St to Chicago Ave)	5.7	17.1	2.5	25.0	10.0	100.0	10.0	60.0	3.5	21.1	223.2
BS-7	University Blvd (Carrier Dr to E Market St)	7.9	23.6	0.0	0.0	10.0	100.0	10.0	60.0	6.5	38.9	222.4
BS-8	Reservoir St (Neff Ave to South City Limits)	7.1	21.4	0.0	0.0	10.0	100.0	10.0	60.0	6.5	38.9	220.3
BS-9	S High (Erickson Ave to Rockingham Square Shopping Center)	0.0	0.0	2.5	25.0	10.0	100.0	10.0	60.0	5.8	35.0	220.0
BS-10	N Main St (Wash St to North City Limits)	10.0	30.0	5.0	50.0	5.0	50.0	10.0	60.0	4.9	29.4	219.4
BS-11	Erickson Ave (WCL to Garbers Church Rd)	0.0	0.0	5.0	50.0	10.0	100.0	10.0	60.0	1.2	7.2	217.2
BS-12	E Market St (Reservoir St to Vine St)	0.0	0.0	0.0	0.0	10.0	100.0	10.0	60.0	6.9	41.7	216.7
BS-13	S High St (Erickson Ave to Garbers Crossing Shopping Center)	0.0	0.0	2.5	25.0	10.0	100.0	10.0	60.0	5.1	30.5	215.5
BS-14	Greendale Rd (entire length)	5.0	15.0	2.5	25.0	10.0	100.0	10.0	60.0	2.3	13.9	213.9
BS-15	Evelyn Byrd Ave (Res. St to E Market St)	6.4	19.3	0.0	0.0	10.0	100.0	10.0	60.0	5.4	32.2	211.5
BS-16	MLK extended (E Market to Country Club)	5.0	15.0	0.0	0.0	10.0	100.0	10.0	60.0	3.6	21.7	196.7
BS-17	Port Republic (Forest Hill to Bluestone Dr)	2.1	6.4	2.5	25.0	10.0	100.0	5.0	30.0	5.3	31.7	193.1
BS-18	W Market St (West City Limits to Market Street)	0.0	0.0	0.0	0.0	10.0	100.0	10.0	60.0	5.4	32.2	192.2
BS-19	N Liberty St (Harrisonburg City Limit to Mt Clinton Pike)	5.0	15.0	0.0	0.0	10.0	100.0	10.0	60.0	2.0	12.2	187.2
BS-20	N Liberty St (Rock St to W Market St)	5.7	17.1	7.5	75.0	0.0	0.0	10.0	60.0	5.1	30.5	182.7
BS-21	Keezletown Rd (Country Club Rd to East City Limits)	5.0	15.0	2.5	25.0	10.0	100.0	5.0	30.0	2.0	12.2	182.2
BS-22	Pleasant Valley Rd (entire length)	5.7	17.1	2.5	25.0	10.0	100.0	5.0	30.0	1.6	9.4	181.6
BS-23	Pear St (Erickson Ave to Pleasant Hill Road)	5.0	15.0	2.5	25.0	5.0	50.0	10.0	60.0	4.7	28.3	178.3
BS-24	S Liberty St (West Market to MLK)	5.7	17.1	5.0	50.0	0.0	0.0	10.0	60.0	7.1	42.8	169.9
BS-25	Peach Grove Ave (entire length)	5.7	17.1	0.0	0.0	5.0	50.0	10.0	60.0	6.5	38.9	166.0
BS-26	Maryland Ave (S High St to S Main St)	5.7	17.1	0.0	0.0	5.0	50.0	10.0	60.0	6.5	38.9	166.0
BS-27	Switchboard Rd (W Market St to North City Limits)	5.0	15.0	0.0	0.0	10.0	100.0	5.0	30.0	3.1	18.9	163.9
BS-28	Chicago Ave (Mt. Clinton Pike to Rock. Dr)	8.6	25.7	0.0	0.0	5.0	50.0	10.0	60.0	4.6	27.8	163.5
BS-29	Devon Ln/Lois Ln (Peach Grove Ave to east of Squire Hill)	5.0	15.0	0.0	0.0	5.0	50.0	10.0	60.0	4.2	25.0	150.0
BS-30	Mason St (N Main St to MLK)	6.4	19.3	0.0	0.0	0.0	0.0	10.0	60.0	10.0	60.0	139.3
BS-31	Mt Clinton (West City Limits to Chicago Ave/Park Rd)	0.0	0.0	0.0	0.0	5.0	50.0	10.0	60.0	4.6	27.8	137.8
BS-32	N Main St (Wolfe St to Gay St)	5.0	15.0	0.0	0.0	0.0	0.0	10.0	60.0	8.9	53.3	128.3
BS-33	Pleasant Hill Rd (entire length)	6.4	19.3	0.0	0.0	0.0	0.0	10.0	60.0	6.2	37.2	116.5
BS-34	W Grace St (S High St to S Main St)	6.4	19.3	0.0	0.0	0.0	0.0	10.0	60.0	6.1	36.6	115.9
BS-35	S Main St (MLK to Campbell St)	5.0	15.0	0.0	0.0	0.0	0.0	10.0	60.0	6.3	37.8	112.8
BS-36	Gay St (Chicago Ave to Broad St)	0.0	0.0	0.0	0.0	0.0	0.0	10.0	60.0	8.1	48.9	108.9
BS-37	E Wash St (N Main St to Vine St)	5.0	15.0	0.0	0.0	0.0	0.0	10.0	60.0	5.6	33.9	108.9
BS-38	Ramblewood Rd (entire length)	5.0	15.0	0.0	0.0	0.0	0.0	10.0	60.0	3.1	18.3	93.3

SHARED USE PATHS - ActiveTrans Priority Rank

ID	LOCATION	Stakeholder Input - score	Stakeholder Input - weighted score	Constraints - score	Constraints - weighted score	Existing Conditions - score	Existing Conditions - weighted score	Connectivity - score	Connectivity - weighted score	Equity - score	Equity - weighted score	Prioritization Score
SU-1	Norfolk Southern Rail Line	5.4	16.2	2.8	27.8	7.0	70.3	10.0	60.0	9.2	55.0	229.3
SU-2	Trail Connection: Walnut Ln-MLK Jr Way	0.2	0.6	7.8	77.8	5.9	58.8	3.3	20.0	6.4	38.3	195.5
SU-3	Bluestone Trl/Northend Greenway: Mt Clinton Pk: Park Rd-Virginia Ave	10.0	30.0	0.0	0.0	5.9	59.1	10.0	60.0	6.5	38.9	187.9
SU-4	Bluestone Trl/Northend Greenway: Downtown (N Main St-Downtown Farmers Market)	7.4	22.2	0.0	0.0	4.5	45.5	10.0	60.0	9.6	57.8	185.4
SU-5	Bluestone Trl/Northend Greenway: Downtown (Downtown Farmers Market-MLK Jr Way)	7.4	22.2	0.0	0.0	5.5	55.5	10.0	60.0	7.5	45.0	182.7
SU-6	Market St: ECL-University Blvd	1.6	4.8	0.0	0.0	8.1	81.5	10.0	60.0	5.7	34.4	180.7
SU-7	Country Club Rd: Vine St-E Market St	8.0	24.0	0.0	0.0	6.9	68.8	10.0	60.0	4.6	27.8	180.5
SU-8	Trail Connection: Mt Clinton Pk-Parkwood Dr-VMRC	0.2	0.6	5.0	50.0	5.4	53.5	6.7	40.0	5.4	32.2	176.3
SU-9	Old Furnace Rd: Vine St-Smithland Rd	5.8	17.4	0.0	0.0	5.5	55.1	10.0	60.0	7.1	42.8	175.2
SU-10	Trail Connection: Devon Ln-Stone Spring Rd	5.2	15.6	5.0	50.0	3.9	39.0	6.7	40.0	3.8	22.8	167.3
SU-11	Trail Connection: Roosevelt St-Cheapeake Ave	0.2	0.6	5.0	50.0	3.0	29.6	6.7	40.0	7.2	43.3	163.5
SU-12	Bluestone Trail/Northend Greenway: JMU (MLK Jr Way-Port Republic Rd)	8.4	16.2	0.0	0.0	4.7	46.7	10.0	60.0	6.7	40.0	162.9
SU-13	Bluestone Trail/Northend Greenway: (Virginia Ave-N Main St)	5.4	25.2	0.0	0.0	5.8	58.3	6.7	40.0	6.1	36.6	160.1
SU-14	Trail Connection: S Dogwood Dr-Erickson Ave	0.2	0.6	5.0	50.0	5.3	53.3	6.7	40.0	2.7	16.1	160.0
SU-15	Trail Connection: Garbers Church Rd-Hillandale Park	6.4	19.2	2.8	27.8	5.2	52.3	6.7	40.0	2.7	16.1	155.4
SU-16	Trail Connection: Devon Ln-Hunters Rd	0.4	1.2	5.0	50.0	3.9	39.0	6.7	40.0	3.8	22.8	152.9
SU-17	Mt. Clinton Pk: Virginia Ave-N Main St	6.6	19.8	0.0	0.0	6.2	61.9	6.7	40.0	5.0	30.0	151.7
SU-18	THMS-Wyndham Dr	5.2	15.6	5.0	50.0	3.0	29.6	6.7	40.0	2.7	16.1	151.3
SU-19	Garbers Church Rd: Erickson Ave-heritage Center Way	5.6	16.8	0.0	0.0	5.3	53.4	10.0	60.0	3.4	20.5	150.7
SU-20	Trail Connection: Neff Ave-Arborctum Trail-University Blvd	0.2	0.6	5.0	50.0	6.7	67.5	3.3	20.0	1.9	11.7	149.7
SU-21	Trail Connection: Chesapeake Ave-Farmers Market	0.2	0.6	2.8	27.8	3.9	38.8	6.7	40.0	6.8	40.5	147.7
SU-22	Trail Connection: Maryland Ave-W Fairview Ave	0.2	0.6	2.8	27.8	3.8	38.2	6.7	40.0	6.8	41.1	147.7
SU-23	Trail Connection: Wainsaw Ave-Ohio Ave/New York Ave	0.4	1.2	2.8	27.8	3.3	32.6	6.7	40.0	7.6	45.5	147.1
SU-24	Trail Connection: South Ave-Keister ES	0.2	0.6	2.8	27.8	3.7	37.1	6.7	40.0	6.5	38.9	144.3
SU-25	Linda Ln: E Market St-Country Club Rd	5.4	16.2	0.0	0.0	6.4	64.3	6.7	40.0	3.1	18.9	139.3
SU-26	Smithland Rd: Old Furnace Rd-SUP at Smithland Soccer Fields	6.0	18.0	2.8	27.8	4.0	40.4	6.7	40.0	2.0	12.2	138.4
SU-27	Trail Connection: Bluestone Trail-Boxwood Ct	0.4	1.2	5.0	50.0	3.0	29.6	6.7	40.0	2.7	16.1	136.9
SU-28	Trail Connection: Maryland Ave-W Grace St	0.2	0.6	2.8	27.8	4.1	40.7	6.7	40.0	4.6	27.8	136.8
SU-29	Trail Connection: Newland Dr-Cale Trail	0.2	0.6	5.0	50.0	3.0	29.6	6.7	40.0	2.7	16.1	136.3
SU-30	W Market St: Dogwood Dr-Westover Park Entrance	0.2	0.6	0.0	0.0	6.4	64.1	6.7	40.0	5.0	30.0	134.7
SU-31	Trail Connection: Hunters Rd-Rockingham Hall (JMU)	0.2	0.6	5.0	50.0	3.0	29.6	3.3	20.0	5.3	31.7	131.9
SU-32	Trail Connection: Woodleigh Ct Terminus-Mt Clinton Pk	0.2	0.6	2.8	27.8	3.0	29.6	6.7	40.0	5.6	33.9	131.9
SU-33	Forest Hill Rd: University Blvd-Port Republic Rd	6.0	18.0	0.0	0.0	5.2	51.6	6.7	40.0	3.4	20.5	130.1
SU-34	Bluestone Trail/Northend Greenway Connection: Stone Spring Rd- South City Limits	7.2	21.6	0.0	0.0	5.0	50.2	6.7	40.0	2.7	16.1	127.9
SU-35	Trail Connection: W Market St-THMS	5.6	16.8	0.0	0.0	5.2	51.7	6.7	40.0	2.7	16.1	124.6
SU-36	N Liberty St: Edom Rd-Acordin Dr	0.0	0.0	0.0	0.0	4.3	43.3	6.7	40.0	5.7	34.4	117.7
SU-37	Trail Connection: S Dogwood Dr-Rocktown Trails/hillandale Park	0.2	0.6	5.0	50.0	3.1	30.8	3.3	20.0	2.7	16.1	117.5
SU-38	Trail Connection: Bluestone Trail-Keylor Park Dr	0.4	1.2	5.0	50.0	3.0	29.6	3.3	20.0	2.7	16.1	116.9
SU-39	Trail Connection: Hillandale Park-THMS	5.4	16.2	2.8	27.8	3.0	29.6	3.3	20.0	2.7	16.1	109.7
SU-40	Trail Connection: A Dream Come True Playground-Surrounding Neighborhoods	5.4	16.2	0.0	0.0	3.0	29.6	3.3	20.0	6.1	36.6	102.5
SU-41	Trail Connection: Bluestone Trail-Ramblewood Park/Greendale Rd	0.4	1.2	0.0	0.0	3.1	31.3	6.7	40.0	4.9	29.4	101.9
SU-42	Trail Connection(Cale Trail):Westover Park-THMS	6.0	18.0	2.8	27.8	0.0	0.0	6.7	40.0	2.7	16.1	101.9
SU-43	Trail Connection: Ott St-Myers Ave	0.2	0.6	0.0	0.0	3.0	30.4	3.3	20.0	4.8	28.9	79.9