

TOWN OF
BEDFORD
VIRGINIA

BIKE | WALK PLAN

December 9, 2019

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Preface

Disclaimer

This report was prepared by the staff of the Central Virginia Planning District Commission in cooperation with the United States Department of Transportation (USDOT), Federal Highway Administration (FHWA), and the Virginia Department of Transportation (VDOT), as funded in the FY 2018-19 Rural Transportation Planning Work Program.

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Explanation of Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State and Highway Transportation Officials
ATSSA	American Traffic Safety Services Association
CDBG	Community Development Block Grant Program
CTB	Commonwealth Transportation Board
CVMPO	Central Virginia Metropolitan Planning Organization
CVPDC	Central Virginia Planning District Commission
FHWA	Federal Highway Administration
HES	Hazard Elimination Safety Program
ITE	Institute of Transportation Engineers
MUTCD	FHWA Manual on Uniform Traffic Control Devices
NHS	National Highway System
TTC	Transportation Technical Committee
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation
VDOT	Virginia Department of Transportation

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Bedford County Tourism

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1. Introduction

The Bedford Pedestrian and Bicycle Plan provides a prioritized guide to the town's governing body on improving bicycling and walking in the town. The implementation of the plan will contribute to a healthier, safer, and dynamic community. The Town of Bedford's Comprehensive Plan—adopted in June of 2017—made the key recommendation for the development of a "Bicycle and Pedestrian Transportation Plan" to identify existing and potential infrastructure such as sidewalks, greenways, and multimodal pathways.

In addition, the comprehensive plan sets the ambitious goal of the town "examining its ability to install sidewalks on every public street." Excluding the road segments associated with U.S. 460, 37% of the town's public streets presently have sidewalk infrastructure. This remarkable percentage proves that pedestrian facilities have been identified as important elements of the town's transportation network in the past.

This project included extensive community input through a public survey and public meeting as well as an analysis of existing conditions. The prioritized recommendations presented in this plan will improve the walking and bicycling capacity and connectivity throughout the Town of Bedford and increase transportation options to residents of all ages. These investments will build upon the robust sidewalk network that Town citizens already enjoy.



Cyclists enjoying a stop in downtown Bedford before traveling a route through the back roads of Bedford County. (Peaks Coaching Group)

The Plan

The Bedford Bike | Walk Plan is organized into the following chapters:

- **Introduction**- project overview, goals, benefits of improving pedestrian and cycling infrastructure, and examples of types of infrastructure.
- **Existing Conditions**- a geographic overview of the Town of Bedford and an assessment of current assets and challenges.
- **Community Input**- a report of public engagement efforts and their outcomes.
- **Recommendations**- descriptions of projects aimed at improving walking and cycling conditions.
- **Implementation**- suggested strategies and funding mechanisms for executing the recommendations.

Project Scope & Goals

The Town of Bedford Bike | Walk Plan articulates a vision of creating a safe and efficient town-wide transportation network that meets the needs of the entire community. To meet this vision, the town has initiated this plan to ensure that pedestrian and bicycle travel are equally represented and encouraged as integral and anticipated modes of transportation for Bedford residents and visitors.

To realize this vision, the following goals have been developed:

- Make walking and biking a viable transportation mode in the community;
- Ensure the safety of pedestrians and cyclists;
- Support a range of users by considering variations in physical abilities, perceptions of safety, trip types, and trip purposes;
- Explore opportunities to connect parks, public spaces, shopping destinations, and cultural amenities; and
- Encourage coordination and partnerships to develop alternative transportation corridors.

While this plan includes suggestions for prioritizing certain projects (such as sidewalk infill), it does not rank each recommendation, as many proposed projects are significant in scope and cost. The planning commission, town council, and the community at large should engage in dialogue to determine the order in which projects should be tackled. In addition, this plan does not include a foot-by-foot list of facility (such as sidewalk) repairs that are needed, as the scope of this plan is to provide guidance for “bigger picture” improvements throughout town.

Planning Process

The planning process for this study included a number of activities. Relevant local and regional plans (going back several decades) were reviewed for recommendations and strategies. GIS (geographic information systems) data were reviewed. This included data on the location of roadways, railroads, streams,

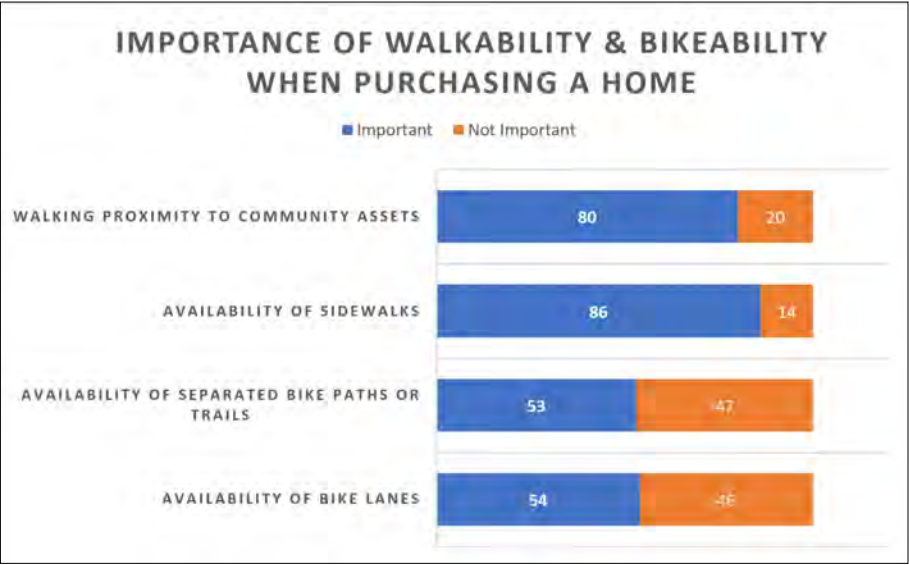
public utilities, schools, and other community destinations. In addition to collection of existing data, field work was conducted throughout the town to document existing conditions and evaluate future opportunities for walking and biking facilities. Lastly, but most importantly, stakeholders including citizens, organizational representatives, and elected officials were consulted for their input on challenges and opportunities.

Why Walk or Ride?

Walking and biking are forms of “active transportation” that people of all ages can enjoy. These healthy modes of transportation contribute greatly to the livability of communities and also helps citizens maintain their health. It is also important to note that nearly 1/3 of the entire U.S. population does not drive because of age, disability, or other reason therefore modes of transportation that don’t require a driver’s license are essential to the entire transportation system. In addition to being a healthy and viable mode choice, the table to the right shows that new homeowners desire walkability and bikeability when purchasing a new home (National Association of Realtors Survey 2017).

Residents of communities that foster these active transportation modes typically experience health benefits. According to the U.S. Department of Health, regular physical activity (such as walking and biking) reduces depression and helps prevent heart disease, obesity, diabetes, and other ailments.

Businesses (especially restaurants and retailers) in towns that have a strong pedestrian and bicycle network often report increased



customer traffic and profitability. Tourists are also attracted to communities with these amenities, and multimodal visits tend to equate to more money being spent. Bicycle-related tourism is also becoming increasingly popular. According to the nearby Central Shenandoah Planning District Commission, bicycle tourism was estimated to have generated sales of \$8.6 million in the Staunton, Waynesboro, and Harrisonburg region during 2015 alone.

Pedestrians & Cyclists as Transportation Network Users

The goal of the transportation system is to provide the public a safe and effective network that allows access to desired destinations. An effective system provides multiple transportation options to meet the needs of the entire community. The mode an individual uses to travel from one destination to another depends on many

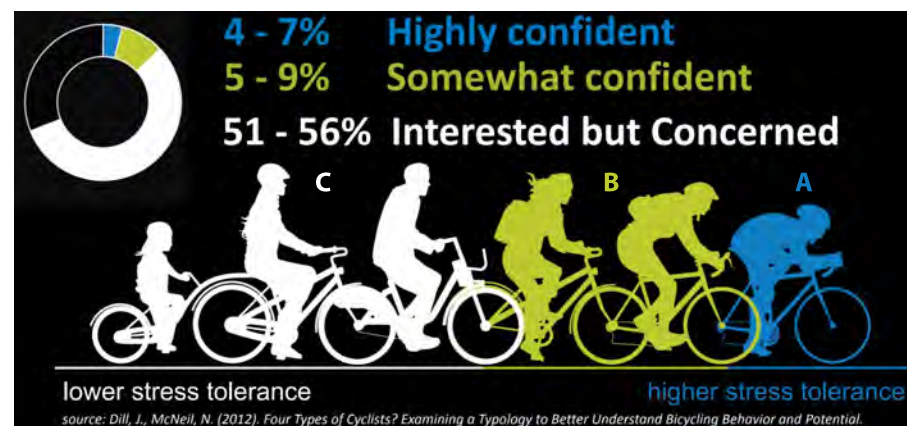
factors including physical limitations, socioeconomic situation, proximity to desired destination, and quality of the transportation infrastructure.

No matter the type of transportation method utilized, every mode involves being a pedestrian at some point with foot travel from one location to another. Further, every person is a pedestrian, even those who may utilize wheelchairs or other mobility assistance devices. Walking is the most basic travel mode for a community and is a fundamental component of an efficient network. A strong pedestrian and bicycle network ensures independent access to community destinations for all residents regardless of age, physical constraints, and income.

Types of Cyclists

While the type of environment shapes the focus of the bicycle plan, the targeted users of the bicycle facility influence the design. The Federal Highway Administration has defined three types of bicycle users (A, B, and C) to assist in determining the impact of different facility types and roadway conditions on bicyclists. Most recently, the American Association of State Highway and Transportation Officials (AASHTO) has provided the following definitions:

Group A- Advanced or experienced riders generally using their bicycles as they would a motor vehicle. They are riding for convenience and speed and want direct access to destinations with a minimum of detour or delay. They are comfortable riding with motor vehicle traffic; however, they need sufficient operating space on the traveled way or shoulder to eliminate the need for either themselves or a passing motor vehicle to shift position.



Group B- Basic or less confident adult riders using their bicycles for transportation, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway width to allow easy overtaking by faster motor vehicles. Thus, basic riders are comfortable riding on neighborhood streets and shared used paths and prefer designated on-road facilities such as bike lanes or widened shoulders.

Group C- Children, riding on their own or with their parents, may not travel as fast as their adult counterparts but still require access to key destinations in the community, such as schools, libraries, parks, and recreational facilities. Residential streets with low motor vehicle speeds, linked with shared used paths and busier streets with well-defined pavement markings between bicycles and motor vehicles, can accommodate children without encouraging them to ride in the travel lane of major arterials.

For the purposes of bicycle network planning and design, Group B and Group C bicyclists are often grouped together. This allows for a two-tiered approach to meeting bicyclists' needs.

Group A riders are best served by making every street as “bicycle-friendly” as possible. This may be accomplished by utilizing highway design standards that include wide outside lanes and paved shoulders to accommodate shared use by bicycles and motor vehicles throughout the roadway network. Signage can also be an effective measure to inform motorists of the presence of bicyclists within the corridor.

Group B/C riders are best served by a network of neighborhood streets and designated bicycle facilities that provide more protected access through key travel corridors and make significant connections to help encourage bicycling as a viable mode of transportation.

Facility Types

A well designed and executed alternative transportation network is comprised of many elements that combine to ensure a safe, efficient, and pleasant walking and bicycling experience for residents to reach desired destinations. A resident must feel safe in order to utilize a pedestrian or cycling network. They must have a safe place to walk or ride that does not pose too many physical barriers, provides protection and separation from motorists, a clear understanding of where they can walk or bike, and lastly a continuous route to reach their destination.

Pedestrian and bicycle facilities must be designed and constructed to meet various physical and site characteristics and must consider multiple user types and comfort levels. Much information on the design specifications for walkways, crossing, signage, bike lanes,

wide shoulders, and other components of an alternative transportation system is available. Specific pedestrian and bicycle facility design is determined by state and local standards, most of which are based on design and construction standards set by AASHTO and the Manual on Uniform Traffic Control Devices (MUTCD).

The following provides a general overview of the pedestrian and bicycle network components that may be necessary to create an effective alternative transportation system within the Town of Bedford. Some additional elements, such as public transportation and transit stops are vital system components in larger urbanized areas but are not currently viable transportation options for the town.

Pedestrian Accommodations

Sidewalks and Walkways – Sidewalks and walkways serve as the framework by which all other pedestrian components are accessed by pedestrians. Sidewalks are the actual space that pedestrians use to move from one location to another and should be constructed according to widths designated in AASHTO or local guidelines. ADA guidelines should be followed when constructing all sidewalk elements, including curb ramps and street crossings.

Pedestrian Crossings – Defined as “any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on a road surface” by the American Planning Association. Pedestrian crossings represent potential conflict points between pedestrians and vehicular traffic and must be designed according to the number and density of

users. Further, consistency in position within an intersection, color, marking pattern, and other design features throughout a locality or designated area is important to ensuring recognition and awareness by pedestrians and motorists alike.

Curb Extensions- Curb extensions are physical extensions of a sidewalk or island that increase visibility of pedestrians by motorists and shorten the pedestrian crossing distance and thus vehicle contact zone. Curb extensions, through their visual nature, often serve to slow motorist speed thus presenting an additional safety feature for pedestrians. Curb extensions are appropriate crossing locations in areas with on-street parking. They can also include visual and physical amenities such as trees or small plants. These additional features also can serve to slow traffic and present visual cues to be alert for pedestrians.



Curb extensions slow vehicular traffic and help pedestrians feel at ease.

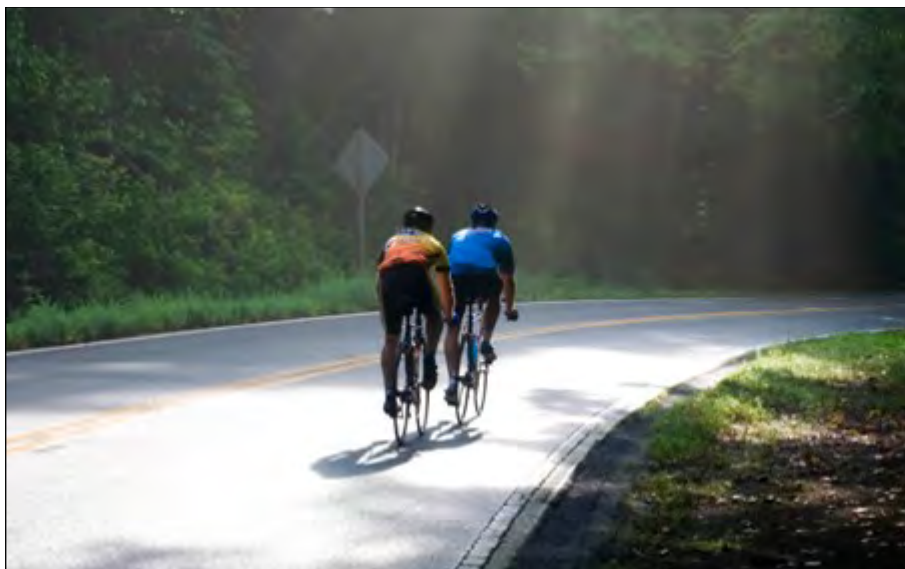
Signage- Signs are a key component to a well designed and safe alternative transportation system. In general, signage within the pedestrian and cycling transportation network is used to alert motorists of pedestrian and bicycling activity or to direct pedestrian or cyclist movement towards designated areas such as crosswalks or marked on-road corridors. While signage is vital to ensuring safety to pedestrians, cyclists, and motorists, it is important not to overuse signage to a point that it is ignored by motorists or that it provides a false sense of safety or awareness.

Pedestrian Signals – Similar to signs, electronic signals are primarily utilized for the purpose of warning or permitting safe crossing for pedestrians. These electronic devices, controlled through a number of manual or timed systems, are employed primarily at longer crossing distances or higher volume roads. Sight distance and advanced warning are often also needed for these devices. At multiple-lane crossings, pedestrian signals can also be combined with pedestrian refuges, raised medians, and curb extensions.



Bicycle Accommodations

Bicycle accommodations represent any on-road or off-road facility that provides a smooth, consistent surface and safe condition for bicyclists given the road traffic volume and allowable speed. Based on road conditions, bicycle accommodations represent specifically designed standards by which signage and recognition for cyclists is



Unless specifically prohibited, any Virginia roadway may be shared by automobiles and cyclists.

permissible and desired. On-road bicycle accommodations range from basic signage to marked routes designed exclusively for bicycle use. It should be noted that “every person riding a bicycle on a highway shall be subject to the provisions of the Code of Virginia section on motor vehicles and shall have the rights and duties applicable to the driver of a vehicle unless a provision clearly indicates otherwise” (Code of Virginia § 46.2-800).

Shared Roadways are those streets and roads that are used by both motorists and cyclists sharing the same travel lane. These streets are usually along corridors with low traffic volume or lower speeds and as such do not require special accommodation. Streets designed with wide outside lanes (13 to 14 feet) may also be



Sharrows help remind motorists that cyclists may travel with traffic by using the full lane.

considered shared roadways. By providing the outside lane width, there can be increased comfort for cyclists. One aspect that should be considered when utilizing a wide shoulder is that the increased width can potentially also encourage motorists to drive at higher speeds.

Shared Roadway with Signage or “Sharrows”- Awareness to motorists and cyclists that a roadway is shared can be enhanced through the use of special signage or pavement markings called “sharrows.” Bicycle signage or sharrows provide increased visibility and awareness for motorists to be aware of the likelihood of cyclists along the route. The use of signage or shared lane markings also serve to guide cyclists along designated bicycle routes.



An example of a paved shoulder.

Paved Shoulders- Improvement through additional width along the shoulder portion of the road can provide an effective “share the road” bicycle accommodation. However, in order to serve as a safe accommodation for cyclists, they need to be smooth, well-maintained, and consist of a uniform surface. A shoulder width of 4 feet is recommended in most cases to provide cyclist comfort. There are, however, certain instances where additional width may be advised:

- Steep climbing slope – cyclists may need more lateral room in order to pedal their bikes when traveling up hill;
- High bike usage is expected (along a primary route);

- Motor vehicle speeds are expected to be above 50 mph;
- Where there is a high volume of trucks, buses, or other commercial vehicles.

It should be noted that while a 4-foot shoulder is recommended, any additional shoulder width can provide for bicycle accommodation. Therefore, any additional width that can be provided will benefit a cyclist.

Bicycle Lane- A bicycle lane is a portion of the roadway that is designated through striping, signing and pavement markings for the preferential or exclusive use of bicycles. Bicycle lanes should be located on both sides of the road (except along one-way streets) and are intended to carry cyclists in the same direction as motorists. Bike lanes are established along roads where there is anticipated significant bicycle demand. The standard width for a bicycle lane is 5 feet however they can be designed to a minimum of 4 feet. The Virginia Bicycle Facility Resource Guide recommends the following bike lane minimum widths to meet specific road conditions:

- 4-foot minimum on roadways with gutter pan and curb;
- 5-foot minimum where adjacent to barrier curb or other;
- 5-foot minimum when adjacent to on-street parking; and
- 6-foot where substantial truck traffic is present or where motor speeds exceed 50 mph.



Bicycle lanes are commonly found on roadways with relatively high bicycle traffic.

Shared-Use Paths-- generally speaking, shared-use paths are off-road corridors separated from the road system by an open space or barrier. They are generally designed for multiple users which include pedestrians, cyclists, skaters, wheelchair users, joggers, and other non-motorized users. Shared-use paths should be designed for a minimum of 10 feet of width and constructed of a uniform and compactable surface that meets the specific surface needs of multiple users.



A separated shared-use path.

Obstacles for Pedestrians

While walking is the most basic form of transportation, there are often multiple obstacles that make utilizing the pedestrian system too unsafe or uncomfortable to make it a viable transportation option. Further, those residents who rely on the pedestrian network exclusively are often forced to walk along dangerous roads or uneven surfaces, and navigate amongst vehicular traffic that does not anticipate their presence. The following provides a summation of the types of conditions and obstacles often faced by pedestrians as they navigate throughout a community. Understanding and



While Bedford's sidewalks are generally in good condition, scattered issues like this (on Longwood Avenue near Peaks Street) can be found, and present challenges for pedestrians. (Note: this has since been repaired.)

recognizing these issues that can cause safety concerns and discomfort in utilizing the pedestrian network is an important step in developing strategies to eliminate current hazards, educating the motoring public to the needs of pedestrians, and ultimately energizing a community to recognize the value of active transportation.

Common problems include:

- **No place to walk** – lack of sidewalks, paths, or trails providing connections to schools, parks, shopping, and places of worship.
- **Poor surfaces** – surfaces that are broken, uneven, or covered in weeds or obstacles.
- **Blocked pathways** – existing sidewalks blocked by barriers such as cars, trash, vegetation, utility poles, signs, etc.
- **Difficult street crossings** – long distances that cannot comfortably be crossed by all residents in a comfortable period and cause long exposure to vehicles. This also includes a lack of curb extensions or marked crosswalks.
- **Driver & pedestrian disregard for rules** – Pedestrians and motorists often contribute to pedestrian crashes through a disregard or lack of understanding for laws and safe driving or walking behavior.



Because of a lack of bicycling infrastructure in Bedford, the community's streets are often only used by experienced "Group A" cyclists.

Obstacles for Cyclists

Bicycle use on roadways is an appropriate, expected, and legal transportation mode. The only exception is in specific locations where bicycle use is stated as illegal; these locations are, in general, along high-speed, limited-access highways like the U.S. 460 Bypass. While almost any road may be used by cyclists for transportation purposes, there are a number of key obstacles that limit comfortable transportation use by most cyclists. Many of these obstacles are related to safety and the vulnerability that cyclists face by traveling on the same grade surface as motorized vehicles.

Below is an overview of the more common obstacles faced by cyclists when traveling along the road system. Addressing solutions

to elevate these conditions is vital to the creation of an atmosphere that supports a safe and efficient bicycle transportation network. The most common obstacles faced by cyclists include:

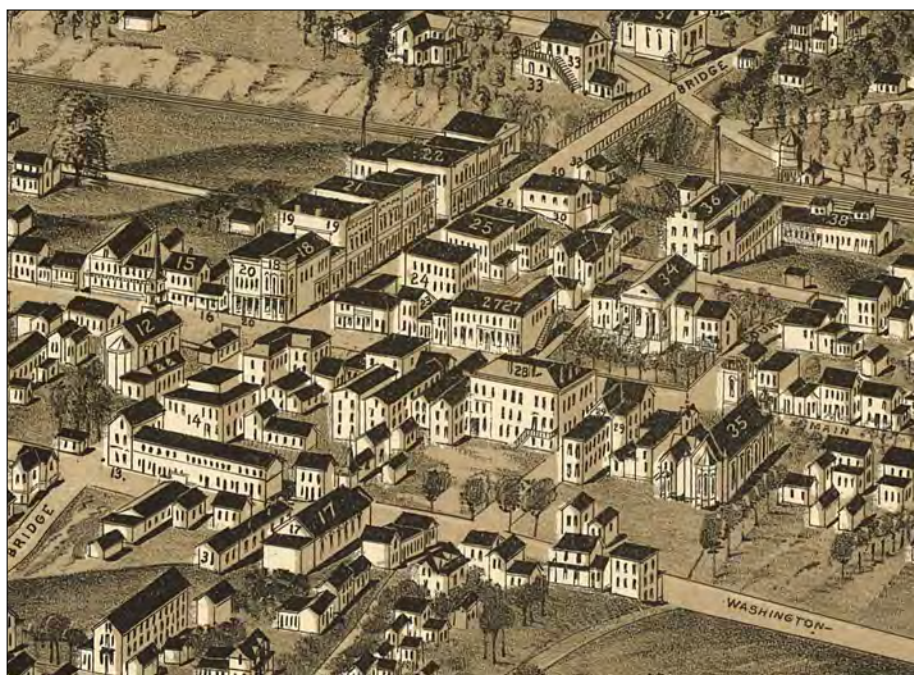
- **Not enough separation** from motorized vehicles or lack of effective width available for cyclists.
- **Speed of traffic** along road.
- **Volume of vehicles** along the road.
- **Surface conditions** of the pavement along the road.
- **Existence of parking** along the road.
- **Amount of large vehicles/trucks** that travel along the road.
- **Lack of understanding** by both cyclists and motorists regarding the rules of the road.

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2. Existing Conditions

Historical Overview

In 1781, the eastern portion of Bedford County was carved off to create the new Campbell County and the formerly centrally-located village of New London lost the title of county seat. A new location had to be found for this purpose and the village of Liberty was founded in 1782. Liberty remained a village until becoming a town in 1839. As a result of a devastating fire in the late 1880s, the citizens of Liberty undertook a massive revitalization campaign. While it remained designated as a town, the community was



A detail of an 1891 perspective map of Bedford shows the density of the downtown district. The court house is #34, just right of center. (Library of Congress)

renamed to "Bedford City" in 1890, and along with the name change came economic prosperity in the form of improved rail service, textile, and furniture manufacturing. Numerous new buildings and subdivisions were built, and the town created its own electric utility.

Bedford City continued to gain prestige as the agricultural, commercial, industrial and administrative center for the area, and it attracted several college preparatory schools during the late 1890s and early 1900s: Belmont Seminary, Jeter Institute, Randolph Macon Academy, and Virginia Business College. Not only did the opening of the schools bring new students into town, it also made the "Liberty Improvement" (one of the several subdivisions of Victorian-era middle-class homes built during the expansion) a perfect location for the school teachers. These homes can be seen today in the area around Historic Avenel.

Although the expansion was short-lived, Bedford City continued to be an agricultural and manufacturing center for many years to come, and evolved into a typical American small town. Bedford City was also home to some of the brave soldiers that fought at the D-Day Invasion; known as the "Bedford Boys," these men served with Company A, 116th Regiment, 29th Infantry Division, and lost the most soldiers of any town (per capita) during the invasion.

In 1968, the town became an independent city under the laws of the Commonwealth of Virginia, and was known as the City of Bedford until it reverted to town status in 2013. Another round of economic



Reenactors portraying the Bedford Boys march on East Main Street during the D-Day 70th Anniversary Commemoration in 2014.

expansion and change ensued, and today the Town of Bedford remains in transition, becoming a small cultural mecca, with art, music, and design taking center stage. Artists from all over the Blue Ridge are settling into the lofts and studios of Centertown Bedford, and live roots music can be found in the local restaurants several nights a week. The City is still home to several cutting-edge textile, specialty manufacturing, and graphics industries, and is working actively to recruit information technology, green power, and light manufacturing jobs.

Demographic Overview

As of the 2010 census, the population was 6,222 with a population density of 914.5 people per square mile. Marking modest growth in the town, the 2017 American Community Survey reports a population estimate of 6,500. Of that population, roughly 75% are white and 25% are African American. The median age of the town is 40 with a sex ratio of roughly 77 males per 100 females.

The per-capita income over the past 12 months in 2017 inflation-adjusted dollars is \$20,176. Roughly 30% of households earn less than \$20,000 per year in the town with about 20% of the households earning over \$75,000 per year. According to the town's 2018 Comprehensive Annual Financial Report, the community's top employers are Bedford Public Schools (440 employees), Centra Bedford Memorial Hospital (437), Wal-Mart (362), Sam Moore Furniture LLC (209), Bedford Weaving Mills (136), Cintas (130), Lowes (107), Smyth Companies Bedford (104), English Meadows (103), and Food Lion (63). These employers make up roughly 25% of the Town's total employment.

2023 Boundary Expansion

On July 1, 2023, the boundaries of the Town of Bedford will expand by approximately four square miles as part of the Voluntary Settlement Agreement known as "reversion." The population of the Town will grow by approximately 1,400 people as a result of the inclusion of the Phase II Boundary Adjustment Area. This area

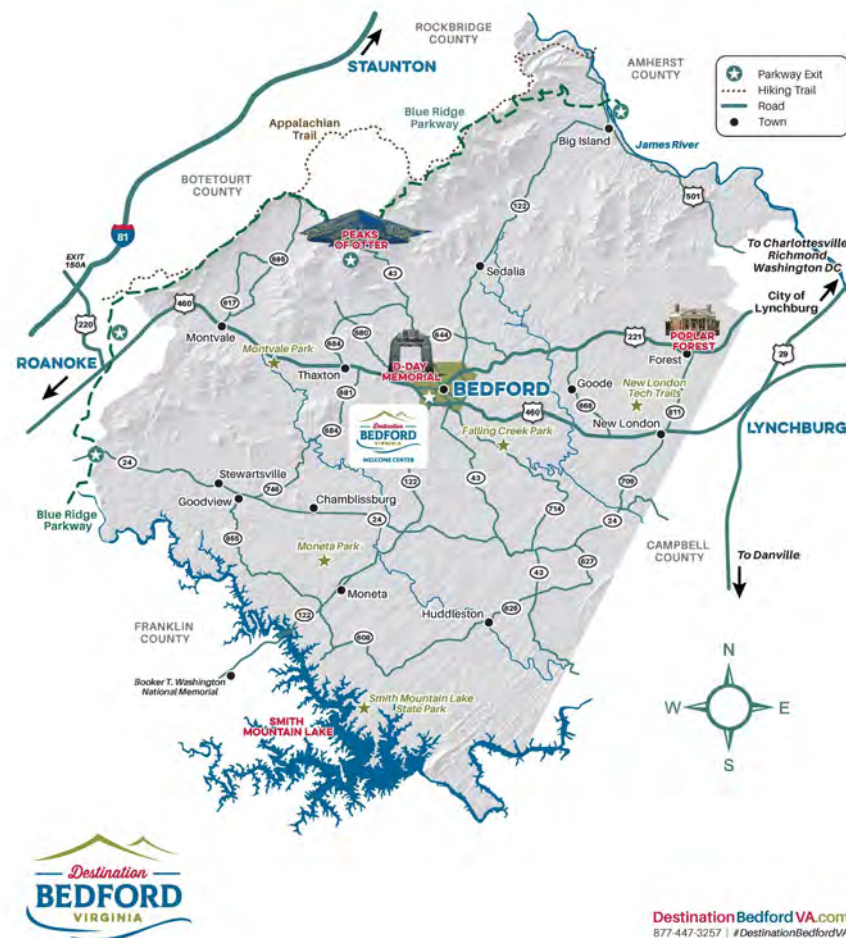
includes two subdivisions (North Hills and Town and Country), which are already substantially occupied, as well as several hundred acres of heretofore undeveloped land. The new northern boundary will be the Little Otter River, coinciding with the proposed Little Otter Greenway, as described elsewhere in this plan. Residents in the Phase II area will be joining existing residents as well as those within currently approved residential projects such as Harmony and Oakwood Villas. Depending upon the progress of those development projects, as well as continued infill activity (such as the Bedford Lofts and Bedford school redevelopment projects), the Town of Bedford could have an overall population of approximately 8,500 as of the 2023 date.

Geographic Overview

The Town of Bedford is centrally-located between the metropolitan areas of Roanoke and Lynchburg (twenty-five miles from each). Resting at the foot of the Peaks of Otter in the heart of Virginia's Blue Ridge Mountains, and only nine miles from the famous Blue Ridge Parkway, the Town of Bedford has a moderate climate and is surrounded by some of the most beautiful scenery in Central Virginia. The town is home to several historic landmarks including the National D-Day Memorial, the Elks National Home, and Historic Avenel. Nearby, visitors have a wide range of attractions: Thomas Jefferson's Poplar Forest, Smith Mountain Lake, the Blue Ridge Parkway and the Peaks of Otter, and the Sedalia Center for the Arts. There are a dozen wineries within a short drive out of the town, and plenty of antiques, horseback riding, hunting, fishing, and other

outdoor sports, making the Town of Bedford the perfect "home base" for a visit to the area.

For its first two centuries, the Town of Bedford followed a



The Bedford area is home to numerous attractions and points of interest.



Downtown Bedford with the Peaks of Otter in the background. (*Star City Skycams*)

traditional development pattern consisting of a commercial and governmental core later surrounded by industrial facilities (generally along the east-west running Norfolk & Southern Railroad corridor). Residential neighborhoods spread out from the downtown area, filling in open spaces between main roads. More recently, commercial areas have developed on the outer edges of town as neighborhoods spread into the countryside.

U.S. 460 (also known as the Lynchburg-Salem Turnpike, Main Street, and Blue Ridge Avenue) bisects the town on an east-west axis. U.S. 221 shares the path of U.S. 460 to the west and south of town, then becomes North Bridge Street, Longwood Avenue, and Forest Road as it meanders northward out of town. Virginia Primary Routes 122 and 43 both enter town from the south (the former from Moneta

and the latter from Altavista) and converge at downtown's central intersection of Main and Bridge Streets. Route 122 proceeds northward to Big Island, while 43 travels in a northwesterly direction over the Peaks of Otter to Buchanan.

Outside of the Town of Bedford (to the north and south) Route 43 is designated as a Virginia Scenic Byway. A four-lane, limited access bypass carries U.S. 460 traffic around the south side of town, and Independence Boulevard acts as a bypass in the town's northeastern quadrant, connecting traffic from U.S. 460 and East Main Street near Wal-Mart to the area known as "The Forks" (where Route 122 and 221 diverge as they leave town).

The Little Otter River, a relatively small waterway, flows around the northwest edge of the town. Bedford's two primary topographical features are Burks Hill and Wingfield Mountain (both on the southern side of town). Otherwise the town boasts a gently rolling landscape.

Bedford's commercial areas include the downtown district (sometimes called "Centertown"), the Westgate Shopping Center area along Blue Ridge Avenue, the Independence Boulevard/U.S. 460 area on the east side of town, and "The Forks" area on the north side of town. At the town's western outskirts (along U.S. 460) lies a loosely-connected grouping of businesses including two hotels, the Bedford YMCA, and a mixed-use, development-ready site called Harmony Town Center. All of Bedford's commercial areas are generally within reach (to some degree) of the town's existing sidewalk network, except for the last grouping mentioned, which is isolated by its position along U.S. 460 and on the other side of the



One of three walking trails at the sixty-acre Liberty Lake Park.

bypass' limited access ramps from the rest of town.

The Town of Bedford is home to several public recreational areas, including Liberty Lake Park on Burks Hill Road which boasts three walking trails. Other parks include Centertown Park at Main and Bridge Streets, Reynolds Park on East Main Street, and Town Pond on Lake Drive. Sports facilities can be found at Orange Street Park, Greenwood Park on Greenwood Street, and along Bedford Avenue. Just south of town on Falling Creek Road is Bedford County's Falling Creek Park, which includes a skatepark, walking trails, and is

a major regional destination for mountain bikers. Two large cemeteries in the town (Fairmont on East Main Street and the Oakwood/Longwood/Greenwood complex on Longwood Avenue) have trails suitable for walking as well.

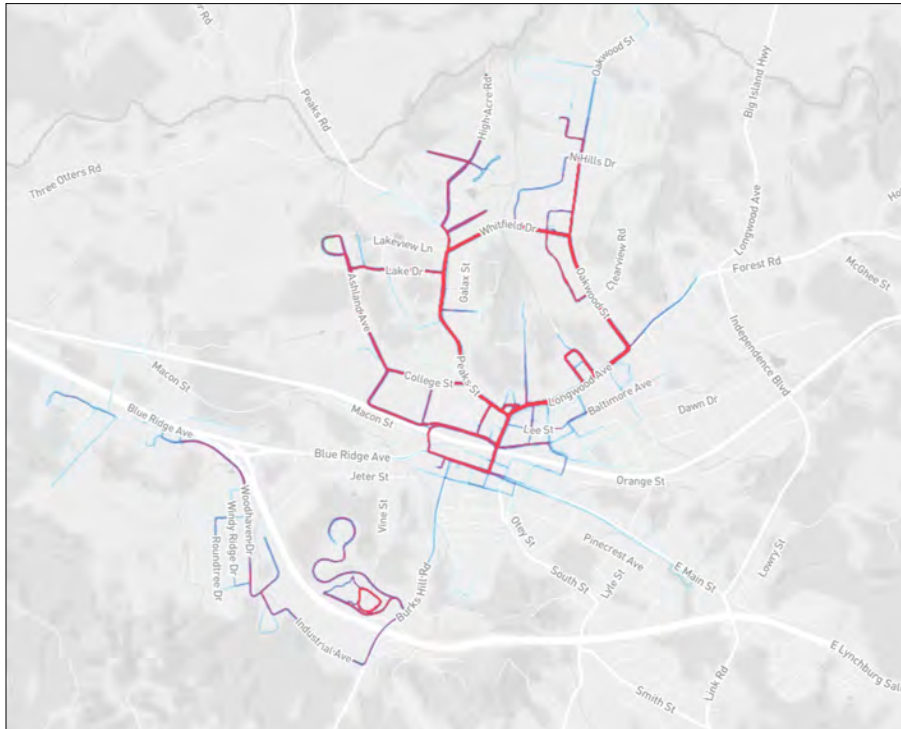
In addition to public parks, there are several private properties that welcome the public (some with an admission charge) during certain hours. These include the 160-acre English Meadows campus (formerly the Elks National Home), the 50-acre National D-Day Memorial (surrounded by another 35 acres of Town land), and the Wharton Garden on North Bridge Street.

Pedestrian Facilities

As previously mentioned, 37% of the town's roadways not associated with the U.S. 460 Bypass have sidewalks on at least one side. Not surprisingly, Bedford's downtown area boasts the most complete pedestrian network with sidewalks on both sides of most streets, crosswalks at the busier intersections, and even pedestrian signals along East Main Street at its intersections with North Bridge, Otey, and Court Streets.

The older residential neighborhoods to the north and south of downtown have generally adequate sidewalk facilities (at least on one side of the street), and crosswalks at certain key intersections. Some residential sidewalks are narrow (three feet in width), have failing concrete, or are partially overgrown by shrubs and groundcover plantings, but are overall in usable condition.

The Town of Bedford has six designated "walking loops" ranging in length from 1.29 to 2.74 miles (see Appendix XI). While not marked



This heatmap shows the relative intensity of walking and running traffic by users of the Strava App (generally for fitness) in Bedford. Red indicates higher intensity and lighter blue indicates lower intensity. See Appendix VIX for larger version.

on the ground, these routes are identified on a map available on the town's web site. The longest route is identified by locals as "The Loop," and follows a 2.74-mile course along Longwood Avenue, Oakwood Street, Whitfield Drive, and Peaks Street. The Loop (identified as "Loop A" on the town walking map) is heavily-used by walkers and joggers who often park at the old Bedford Middle School (corner of Peaks and Longwood) or at Bedford Memorial Hospital (corner of Oakwood and Whitfield) before beginning their

journey. The town has installed benches and trash cans along The Loop to help make it more comfortable and attractive to pedestrians and passers-by.

Also frequented by walkers is the 1.86-mile "Loop B," which follows Peaks Street, Lake Drive, Ashland Avenue, and College Street and "Loop D," and the 1.29-mile "Loop D," which circumnavigates the downtown district. Overlord Circle, the street that leads up Burks Hill to the National D-Day Memorial, and the adjacent walking paths at Bedford Elementary School are also popular destinations for exercise-seekers.

The U.S. 460 Bypass hampers pedestrian connectivity to the southern reaches of town by serving as a physical and psychological barrier. East Main Street underpasses the bypass and has a sidewalk on its west side, but a lack of crosswalks at the bottoms of the exit ramps create a feeling of uneasiness amongst pedestrians. The South Street overpass has a sidewalk on its west side, and this connects well to the Smith Street sidewalk. The Burks Hill Road overpass was constructed with narrow sidewalks on the bridge itself, but these do not connect to a greater pedestrian network at either terminus of the bridge. On the west side of town, Blue Ridge Avenue (U.S. 460 Business) joins in the bypass in a series of ramps and overpasses, the limited-access nature of which make pedestrian connectivity impossible. Thus, the hotel, motel, restaurant, YMCA, and apartments on the extreme west end of town are largely cut off from the core of the community.

A hotspot of pedestrian activity lies on U.S. 460 in the commercial area anchored by Wal-Mart on the east side of town. More than 100



Pedestrians regularly cross U.S. 460 in the Wal-Mart area to access shopping, banking, dining, and employment.

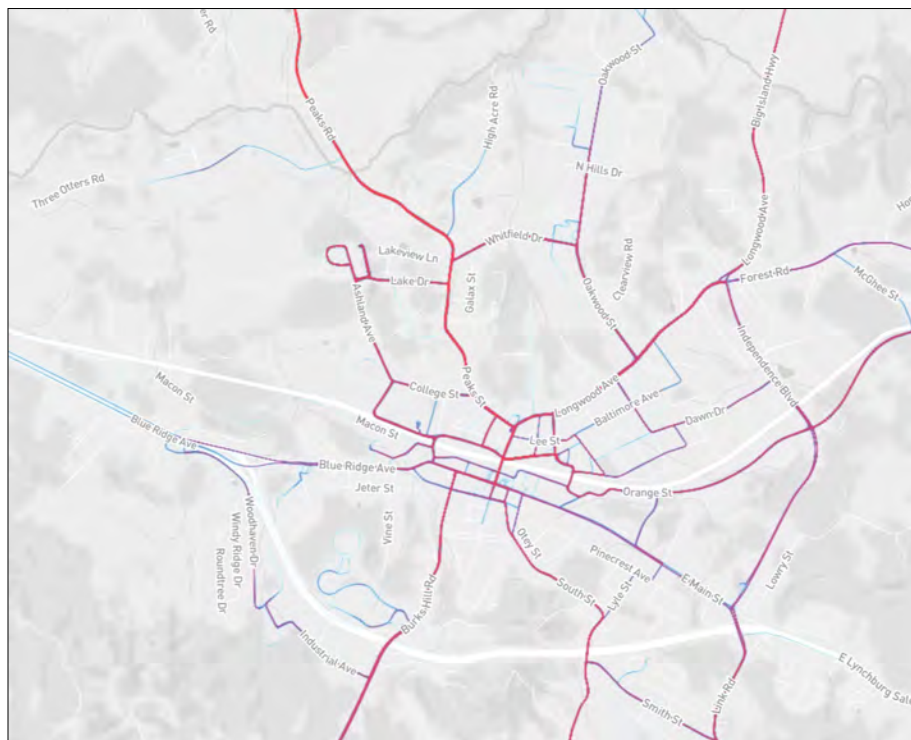
residences (most being mobile homes) lie just south of the highway between Link Road and Dillons Way. For reasons including convenience and lack of access to automobiles, many of these residents regularly cross 460 near (but not at) its intersection with Hull Street. When asked about why he crossed six-to-seven lanes of traffic on a U.S. highway, one resident said, “Because I can do everything I need to over there. I get groceries [at Wal-mart] and my parents use the bank.” Indeed, the options for these residents are limited: their only choice to cross the highway and stay on sidewalks (or at least off busy roadways) is to trek a total of one mile out of their way to Link Road/East Main Street and then return to

the business district via Boxwood Terrace. Surprisingly, no pedestrian crashes in this area have been recently reported despite high traffic speeds and volume and relatively high pedestrian volume.

The area of Bedford with the highest number of recent pedestrian-related crashes is “The Forks,” or the intersection of Longwood Avenue, Forest Road, and Independence Boulevard. With four crashes, it is the only area of town experiencing multiple pedestrian incidents during the 2012-2016 data-reporting period. Like the Wal-Mart area, The Forks is home to a grocery store, restaurants, retail establishments, and banking services. The area has some sidewalks, but they are only on one side of each roadway, and significant gaps exist. Similarly, crosswalks exist at some, but not all, heavily-traveled intersections.

Cycling Facilities

With its proximity to the Blue Ridge Parkway and scenic byways like Route 43, the Town of Bedford is poised to become a destination for road cyclists. A world-class coaching school for cyclists is located downtown, and many rides originate in town or pass through town. Situated just a half a mile outside of the town limits, Bedford County’s Falling Creek Park is host to a number of mountain biking events. These “Group A” cyclists (see Introduction Chapter) can often be seen coming into town from Dickerson Mill Road via Burks Hill Road, Route 43 via South Street and Peaks Street, Belltown Road via Orange Street, or from Big Island Highway (Route 122) via Longwood Avenue.



This heatmap shows the relative intensity of roadway use by cyclists using the Strava App (generally for fitness) in Bedford. Red indicates higher intensity and lighter blue indicates lower intensity. See Appendix X for larger version.

Within the town, a small group of recreational cyclists of all ages use pedal power for exercise or to reach school or work. While bicycle usage by group B and C riders (see Introduction) in Bedford is low, it is important to note that on each field visit made to Bedford during the development of this plan, project team members witnessed amateur cyclists, especially in and around the downtown area.

Because of this, it is somewhat surprising that there is very little

extant bicycling infrastructure in the Town of Bedford. Few, if any, signs alerting drivers to the presence of cyclists can be found in town, and there are no bike lanes in the area. Even amenities like bike racks are few and far between, with one of the few examples at the Bedford Welcome Center.

Previous Studies

Downtown to Burks Hill Connection

Bedford has long taken an interest in improving walkability and safety throughout town. Since the mid-1980s, most attention on this subject has focused on the downtown area and more recently, its connection to Burks Hill. The Burks Hill area contains the National D-Day Memorial (opened 2001) and Bedford Welcome Center (opened 2004) and also serves as a primary gateway to Bedford from U.S. 460 and Smith Mountain Lake. As World War II veterans age, the primary audience of the D-Day Memorial is trending younger, which opens up possibilities for more physically-active visitors to the area.

In 2005, the (then) City of Bedford, in partnership with Bedford Main Street, Inc., commissioned a study by Frazier Associates to improve pedestrian facilities downtown, and in particular, strengthen Crenshaw Street's role as a gateway between Downtown and the Bedford Welcome Center and National D-Day Memorial on Burks Hill. Recommendations included repairing or installing new sidewalks, crosswalks, curb ramps, and lighting on Crenshaw and East & West Washington Streets as well as landscaping on Crenshaw as it climbs Burks Hill. While some



An aerial view of the National D-Day Memorial with Downtown Bedford in the background (top of image). (*Star City Skycams*)

improvements were made to West Washington Street, the majority of the recommendations were not enacted.

Thirteen years later, in 2018, the Town of Bedford tasked Hurt & Proffitt with taking a fresh look at the downtown to Burks Hill connection. The firm developed a three-phase approach to improvements, the first being the construction of a five-foot sidewalk along the eastern side of Crenshaw Street/Burks Hill Road between West Main Street and the U.S. 460 interchange. A second phase would replace the existing three-foot sidewalk on the west side of Crenshaw Street/Burks Hill Road with a ten-foot multi-use path stretching between West Washington Street at the Bedford Welcome Center. Improvements recommended for Phase III included construction of a pedestrian path linking the National D-



Stop #1 on the "Bedford Boys Homefront Tour" at the intersection of West Main and Crenshaw Streets features an interpretive plaque, observation platform, and a pair of benches.

Day Memorial to Burks Hill Road and a sidewalk along Burks Hill Road between the U.S. 460 interchange and Liberty Lake Park.

In its 2018 master plan crafted by Glavé & Holmes Architecture, the National D-Day Memorial Foundation affirmed its position as both a destination and point of origin for pedestrians by including in the document conceptualized plans for a walking trail around Burks Hill and a footpath or multi-use trail connecting to Overlord Circle from the central grounds of the Memorial.

According to the National D-Day Memorial Foundation, the site receives an average of 60,000 visitors annually. Because of this, it is economically prudent to encourage these visitors to lengthen their stay in Bedford and explore the area by walking, cycling, or, of course, driving.

One example of such efforts is the “Bedford Boys Homefront Tour,” which features eight interpretive plaques throughout the greater downtown area. These plaques provide historical information on the community that the soldiers of Company A, 116th Infantry Regiment of the 29th Division left behind when they departed for service in World War II. Depending on the route taken, visiting the eight plaques and associated sites involves a walk or drive of approximately 1.5 miles. The tour brochure also highlights those World War II veterans who are buried in the Greenwood and Oakwood Cemeteries on Longwood Avenue. Visiting these graves adds another 1.25 miles (roundtrip) to the tour. Programs such as this are an excellent way of engaging visitors with the community.

“School to School” Area Plan

The Bedford School to School Area Plan is an integrated grassroots initiative that aimed to showcase, enhance, and rediscover the town’s greatest assets. The steering committee and planning team worked with community members to create a vision for the Bridge Street corridor – from the historic Bedford High School, on the north end, to the historic Susie G. Gibson High School on the south end.

The plan, which was developed by Hill Studio and released in early 2019, built upon Bedford’s rich traditions of education, architectural heritage, thriving arts and culture, natural beauty, and vibrant economy. This collaborative process resulted in the development of strategic initiatives to promote a vital community in which to live and work.

Because the geographic scope of the School to School plan was



Hundreds of citizens participated in the “School to School” initiative led by the Town of Bedford and conducted by Hill Studio in 2018. (*News & Advance*)

smaller than the Bedford Bike | Walk Plan, some of the bicycling and pedestrian-oriented recommendations in the former plan are more granular, or detailed, than what are found in this document. This is not to say, however, that the two plans are contradictory in any way. More about implementing the School to School Plan can be found in the Recommendations Chapter.

Comprehensive Plan

In its most recent (June 2017) Comprehensive Plan, Bedford’s Planning Commission and Town Council expressed support for several related projects and initiatives, including developing a greenway along the Little Otter River between Routes 43 and 122,



Self-styled as the “World’s Best Little Town,” Bedford has long-touted its walkability and charming, small-town atmosphere.

further implementing a long-term goal of installing sidewalks on at least one side of every public right-of-way, developing an annual fund for construction and maintenance of sidewalks, and finally, the development of this bicycle and pedestrian plan.

Regarding **transportation**, Page IV-12 of the plan states that:

“Generally speaking, there is a connotation of safety associated with streets in Bedford. This can be attributed to the relatively low speed of vehicular traffic within town and the presence of visible and well-defined pedestrian facilities such as sidewalks. The scale of most existing streets also lends itself to consideration of them as valuable public space in and of themselves. The frequent number of requests for street closures to accommodate special events

is a metric that seems to support this claim. Some events – most notably Centerfest – are essentially institutionalized at this point.”

“The Town of Bedford has good pedestrian facilities, but it would be good if the networks were expanded and there were more interconnection between them all. The use of buffers should be employed between pedestrians and automobile facilities (such as streets and parking lots) to promote connotations of safety and aesthetics. These buffers could include elements such as on-street parking, grass strips, fences, short walls, and/or street trees and other landscaping elements. The physical delineation of crosswalks by use of different textures or markings would also promote pedestrian safety.”

“Streets should be safe and economical for motorists and non-motorists alike, and be designed to reduce conflict between different types of users. Sidewalks should generally be wider to accommodate safe passage, comply with the Americans with Disabilities Act, and promote complementary uses of public space (such as seating and tables within commercial areas). Retrofitting of North Bridge Street between Main Street and the railroad could serve as a pilot project for this kind of design philosophy. If current on-street parking were eliminated, sidewalks in this area could be expanded to allow for safer passage of pedestrians as well as potential use of public space for outdoor seating. (And the relative loss of parking spaces in this corridor could be effectively abated by implementing Objective 15-CF-2).”

15-T-4: Develop Pedestrian Transportation Plan to identify existing and potential infrastructure (such as sidewalks, greenways, and multimodal pathways).

6-T-3: Assess Town's ability to allocate resources on an annual basis to develop a fund for construction and maintenance of sidewalks on every public street. Compile and publish results.

15-T-6: Following up on the recommendations of Objective 6-T-3, the Town should pursue a long-term mission of installing and maintaining sidewalks on at least one side of every public right-of-way.

Page IV-6 of the plan deals with **conservation**, and states:

"As a matter of policy, opportunities to increase landscaping and 'soft' features throughout Town should be pursued. To initiate that process, Bedford should find a way to contribute and participate in the 2003 Region 2000 Greenways and Blueways Plan."

The specific recommendation of this section is:

15-C-5: Develop and implement a plan for a greenway along Little Otter River connecting Highway 43 and Route 122. This would serve a practical purpose as a bicycle and pedestrian connection between these two thoroughfares as well as providing a passive recreational facility in the northern portion of Town.

3. Community Input

Community Meeting

A community workshop was held at the Bedford Welcome Center on Tuesday, October 2, 2018 from 4:00 - 7:00 p.m. While thirty-six attendees indicated their presence on the sign-in sheets, project staff estimated a total attendance of forty-five to fifty citizens. The event was promoted by flyers displayed throughout the community, posts on social media and web sites, and was covered in local newspapers.

Workshop attendees had the opportunity to view maps with existing traffic volume and crash data, review types of improvements that might be recommended by the plan, and indicate problem areas or suggestions on large maps of the town. The citizen survey was also available in hard copy as well as on an iPad kiosk.

Survey

A 15-question survey ran from October 2 to December 3, 2018 and was promoted through social media, television news, local newspapers, and word-of-mouth. 134 unique respondents completed the survey (111 completed the online version and 23 filled-in the paper version).

Complete results of the survey can be found in Appendix XIV.

Pedestrian-Oriented Responses

When asked how often they walked in Bedford and for what purpose, 25% responded that they walked for exercise on a daily



Stakeholders give input on pedestrian and cycling challenges at the October 2018 public meeting at the Bedford Welcome Center.

basis, and 42% did so regularly. A smaller, but not insignificant, percentage (16%) of respondents walked to school at least regularly, and 14% walked to work at least regularly.

The most recent American Community Survey Data (ACS 2016) shows that 6.5% of Town residents walked as their primary means of journeying to work. ACS data is gathered annually during a one-week period in April which could influence lower levels of walking given the potential for cold weather.

According to the respondents, the top three impediments to walking in Bedford are: missing sections of sidewalk (46%), uneven sidewalk surfaces (39%), and narrow sidewalks (32%).

The top three improvements that would encourage respondents to walk more are: better or more sidewalks (62%), better or more trails (53%), and better maintenance of existing sidewalks and paths (47%). Two additional items that were close to top three were to add more shade trees, benches, and other amenities (44%) and improved street lighting (39%).

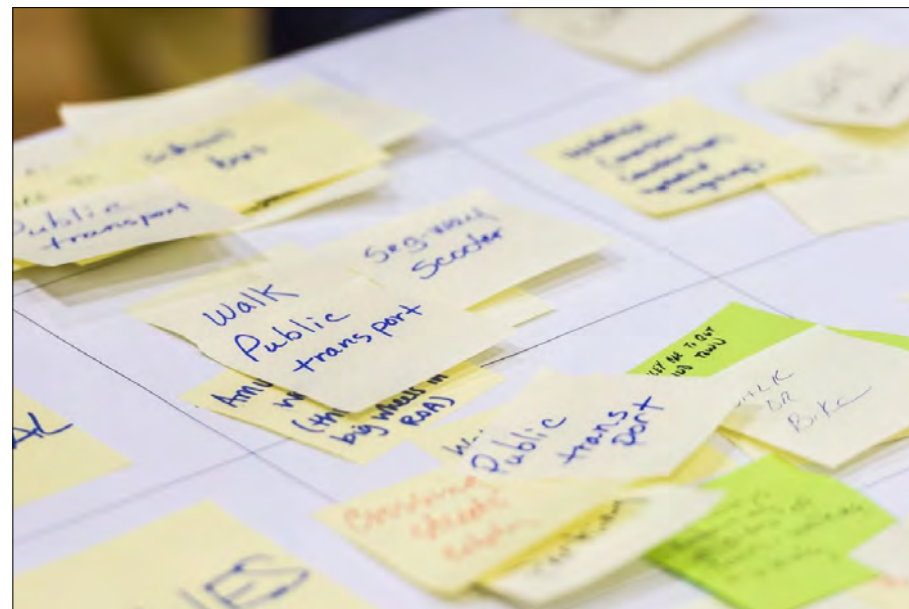
Overall, respondents rated the walkability of the Town of Bedford as 3.4 out of 5. Only 5% of survey respondents considered the town to be “excellent” in terms of walkability. In contrast, only 2% viewed the town to be “very poor” in terms of walkability with the majority of citizens rating walkability as “fair” or “good.”

Bicycle-Oriented Responses

The majority of survey respondents (67%) indicated that they did not ride a bicycle, but just under half of that group expressed interest in cycling if safe places to ride were created.

18% of respondents would be classified as “Group C” cyclists (see Introduction Chapter), in that they only ride bikes in locations that are separated from traffic. 8% would be classified as “Group B,” and expressed that they are comfortable riding with slower-speed traffic. The remaining 7% were comfortable riding with traffic on most streets, which placed them in “Group A.”

Most respondents indicated that they did not use a bicycle to commute to school or work with any regularity, but 17% rode for



Biking and walking were major topics raised during the 2018 “School to School” initiative. (*News & Advance*)

recreation or exercise at least regularly. The survey’s commute-related responses are backed up by 2016 American Community Survey data, which found that 0% of respondents used bicycling as a means of journeying to work in the Town of Bedford.

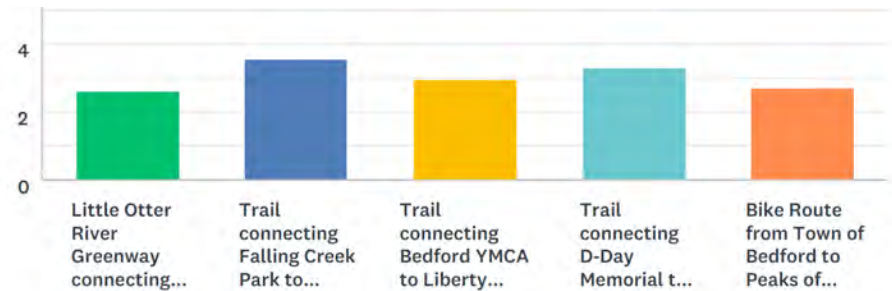
Of those respondents who own or ride bicycles, the top three factors that limited their riding in Bedford were: discomfort with sharing the road with fast-moving vehicles (50%), lack nearby of bicycle-friendly streets or trails (39%), and a lack of bike racks and safe places to park bikes (30%). It is important to note that a third of respondents didn’t own a bicycle and 10% said their weren’t enough options in Bedford for purchasing bicycles, equipment, or

repair services.

A large majority (72%) of respondents said that creating bike lanes would encourage them to ride more often, while 62% said that having access to better or more trails would have the same effect. 39% reiterated the need for more bike racks or other designated bike parking locations.

Not surprisingly, respondents gave the Town of Bedford a lower rating for “bike friendliness” than they gave for walkability: 2.52 out of 5 stars.

Respondents had several opportunities on the survey to provide freeform text responses, and 219 such responses were received. While they are not analyzed in this chapter, the individual comments can be seen in Appendix XIV, and many played a role in the development of the recommendations outlined in Chapter 5.



A final biking and pedestrian-related question asked respondents to rank, in order of priority, five large projects that had been proposed through various forums over the past several years. These projects, along with their scores, are:

- **First (Score of 3.54)** Trail connecting Falling Creek Park to Liberty Lake Park

- **Second (Score of 3.31)** Trail connecting D-Day Memorial to Downtown Bedford
- **Third (Score of 2.95)** Trail connecting Bedford YMCA to Liberty Lake Park
- **Fourth (Score of 2.71)** Bike Route from Town of Bedford to Peaks of Otter along Route 43
- **Fifth (Score of 2.62)** Little Otter River Greenway connecting Routes 43 and 122

It should be noted that on the online survey (which was used by 83% of the total respondents), this question was set up to randomize the order of projects presented to each respondent. This was done in an effort to prevent “ballot position bias,” whereby an individual might simply rank the items as listed rather than exerting effort to rank each item according to its own merit. Based on the remarkably-small variation between project score and feedback received from some respondents, it is likely that this randomizing technique did not serve its intended purpose, and that the ranking may not be statistically valid.

Stakeholder Meetings

In addition to receiving input from the public via the community workshop and survey, the project team met with several key stakeholders to discuss specific needs, ideas, and recommendations. These stakeholders included the National D-Day Memorial Foundation, English Meadows (Elks Home Campus), and the Bedford County Department of Planning & Zoning.

Presentation of Findings

Following data gathering and preparation of the plan, the document was reviewed by Town of Bedford and Virginia Department of Transportation (Salem and Lynchburg District) staff. After necessary edits were made, the plan and its recommendations were presented to the Town of Bedford Planning Commission.

4. Recommendations

Policies & Programs

Bike Safety Education

In 2017, the Bedford County Sheriff's Office hosted its first annual Bike Rodeo for Kids at the Bedford Elementary School. Fourteen children participated in the event. Each child received a new safety helmet and a bike safety inspection. The event was designed to educate children on the importance of bicycle safety and proper riding habits. Participants went through a series of riding courses to improve their control and safe riding ability. The training was conducted by Bike Patrol Officers from the Bedford County Sheriff's Office, Town of Bedford Police Department and Department of Game and Inland Fisheries and the Virginia State Police.

This type of event is an excellent way to help build skills in young cyclists to make them more confident when riding in appropriate locations. The participants will also grow up to be more attentive and responsible motorists. It is recommended that this become an annual event.

Bike Library

A number of survey participants expressed the desire to ride a bike, but did not own one. Several public meeting attendees suggested that the town look into a bike share program similar to the Zagster system operated by Ride Solutions in Roanoke. A community the size of Bedford is probably not a good fit for a sophisticated program like this, but other options exist to make bikes available to residents and visitors alike.



The 2017 Bedford Bike Rodeo was a success and should be repeated annually.

The City of Galax, Virginia operates a "bike library," whereby residents and students can "check out" a bike and helmet at no charge for use during the day. Galax's program is housed at its Parks & Recreation Department during normal business hours and requires no additional staff to operate.

Other communities have implemented various models of bike libraries. Golden, Colorado's library operates out of a shed adjacent to its municipal building. Bikes and helmets are available to residents and visitors, and the library is operated by a mix of

employees and volunteers.

A bike library may be a viable option to explore in Bedford if operating costs could be kept low. Potential locations for such a facility might be adjacent to the Municipal Building or the Bedford Central Library/Wharton Garden.

Infrastructure

Details on many of these recommendations, including cost estimates, can be found in Appendices 1A and 1B. These recommendations are presented in no particular order.

Little Otter River Greenway

The Town of Bedford's 2017 Comprehensive Plan calls for the development and implementation of a plan for a "greenway along Little Otter River connecting Highway 43 and Route 122." According to the plan, the greenway would "serve a practical purpose as a bicycle and pedestrian connection between these two thoroughfares as well as providing a passive recreational facility in the northern portion of Town."

Many participants in the public input process for this Bike | Walk Plan expressed a strong desire for the development of additional walking opportunities, especially paths or trails that were off-street (some noted being tired of the same scenery along "The Loop" and other routes, while others expressed a desire for a greater connection with nature).

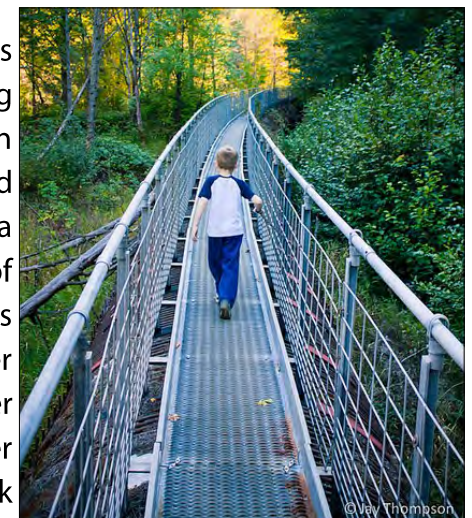
The route recommended in the Comprehensive Plan would travel approximately 14,750' (2.79 miles) along the riparian zone of Little

Otter River between Route 122 (Big Island Highway) and Route 43 (Peaks Street). There are a number of options for creating a greenway, ranging from a single-track dirt trail to a 10' wide multi-use paved trail.

One promising model to explore is that of the Rivanna Trail in Charlottesville (see Case Study on page 35), which employs a variety of trail types through private (via recreational easement) and public lands.

It is recommended that this initial **First Phase** of 2.79 miles be followed by a **Second Phase** stretching 8,000' (1.51 miles) from Route 43/Peaks Street along the South Fork of Little Otter River to Macon Street and then to Blue Ridge Avenue. This second phase would extend the total trail to just over 4 miles in length and would provide a vital link to the town's existing sidewalk network and additional neighborhoods in need of recreation and fitness opportunities.

Phase II is not without its complications, namely crossing the Norfolk Southern railroad on the west side of town. This could be achieved by constructing a pedestrian walkway (a catwalk of sorts) through the pair of tunnels that carry the South Fork under the railroad and then under Macon Street (which is a former railroad bed itself). This catwalk



CASE STUDY: The Rivanna Trail, Charlottesville, Virginia

The Rivanna Trails Foundation, a non-profit organization, formed in 1992 with the “dream to create a trail system throughout the greenbelt of the Rivanna river and its tributaries.” The goal of the foundation is to establish a footpath encircling Charlottesville.

Through a combination of volunteer-maintained paved multi-use paths, single-track dirt trails, and use of the city’s existing sidewalk network, the Rivanna Trail makes a 19.55-mile loop around town through woods, fields, neighborhoods, industrial areas, and commercial corridors.

The trail is made possible through numerous easements through private property as well as segments that use public land (parks and other facilities) as well as public right-of-way. Some sections of the trail are ADA-accessible, while others are not. Some sections are navigable by mountain bikes, but much of the trail is for foot travel only. Creeks are crossed in a variety of ways, ranging from stepping stones to steel or timber bridges. The trail is generally



marked with small metal signs (see above), and a similar logo is stenciled along streets and sidewalks when appropriate. Parking is available at numerous points along the trail route: some in designated trail lots, but most shared with parking for schools, parks, and cooperating businesses.

While the trail is in a generally-urban setting, hikers can easily lose track of the fact that they’re often only a few hundred yards from a freshly-brewed espresso. On the other hand, the urban sections can be a fun challenge to navigate to stay on course. The trail’s spirit is best explained by co-founder John Conover. “You don’t want people to get lost, but you want people to have the feeling that they might get lost.”

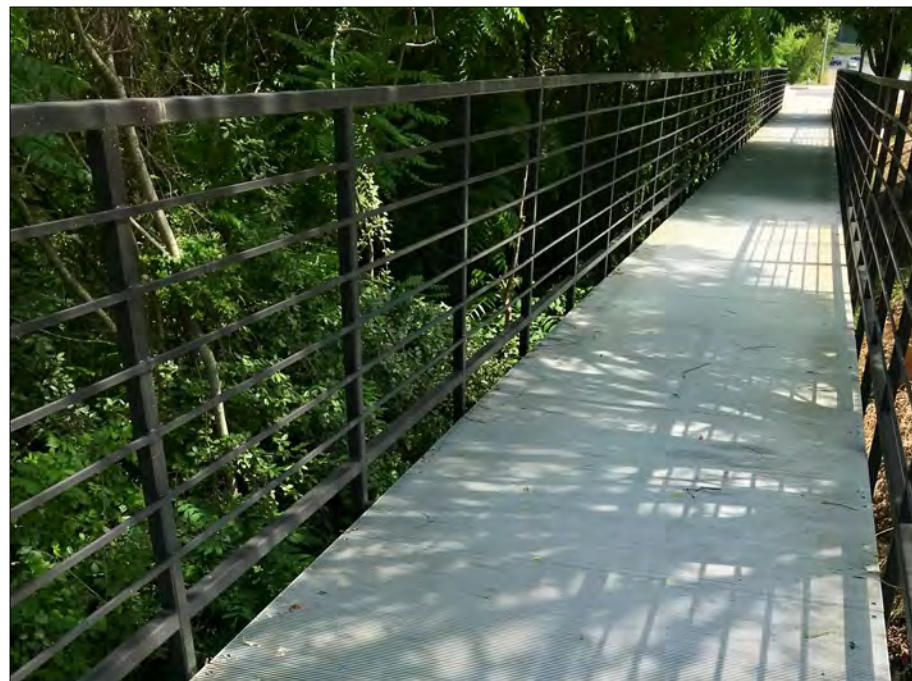
For more information: Rivanna Trails Foundation, P.O. Box 1786, Charlottesville, VA 22902, www.rivannatrails.org



This older stone culvert carries what is now Macon Street across the South Fork. The newer concrete culvert carrying the current NS railroad can be seen in the distance. A town sewer pipe currently utilizes the passage.

would be a unique highlight of the trail network, and should be constructed of open but strong materials to withstand occasional high water and allow for drainage. One example (pictured on page 36) can be found on the Hood River Pipeline Trail in Oregon.

Generally speaking, both phases of the greenway would follow little-used land along the riparian zone, and existing sewer easements could perhaps be renegotiated to allow for public trail access.



The aluminum-decked pedestrian path along Wards Road in Lynchburg is an example of a possible solution for carrying the Little Otter River Greenway under Macon Street and the Norfolk Southern rail line.

Big Island Road Pedestrian Connector

Assuming Phase I of the Little Otter River Greenway is constructed, a natural pedestrian connection would involve construction of a sidewalk or multi-use path along Route 122 (Longwood Avenue/Big Island Highway) from the greenway to the existing sidewalk just south of town limits. This connection would help complete a larger nine-mile loop that would follow the greenway, the town's sidewalk network, and pedestrian accommodations along Independence Boulevard.



This “goat trail” is evidence of significant pedestrian traffic between Boxwood Terrace and the Independence Boulevard/East Main Street intersection.

Independence Boulevard Improvements

Citizens repeatedly emphasized that this corridor is important to the town’s pedestrian network. The corridor connects the commercial land uses along US 460 and US 221. When the roadway was initially constructed, enough right-of-way was obtained to permit a future expansion to four lanes, but development and

traffic forecasts do not suggest that this will be necessary. A pedestrian accommodation along this 1.5-mile stretch of Independence Boulevard within this existing right-of-way could also connect the sidewalk infrastructure of Longwood Avenue and East Main Street—essentially creating another, large, recreational walking “loop” of approximately four miles in length. On an even larger scale, pedestrian connectivity on Independence Boulevard paired with a future Little Otter River Greenway and the town’s sidewalk network could create a nine-mile circuit around the community.

Short-term improvements include constructing a 5’ sidewalk on the west side of Independence Boulevard filling gaps between East Main Street and Southern States, constructing a crosswalk across Independence Boulevard at Freedom Lane, and constructing a 5’ sidewalk on the east side of Independence Boulevard between East Main Street and the existing Freedom Lane sidewalk.

There are two concepts for long-term improvements along the corridor. One calls for a combination of sidewalk and bike lanes along the entire length of Independence Boulevard. A second would be the construction of a 10’ wide multi-use path that would be separate from Independence Boulevard itself. Because of traffic speeds along the corridor, this would likely be safer than bike lanes, and it would open up the corridor for Group B and C cyclists to comfortably move from one side of town to the other.



Incremental upgrades of the existing pedestrian amenities along “The Loop” should be considered. Possibilities include comfortable metal benches and metal trash receptacles that stand up to the elements.

East Main Street Improvements

A sidewalk stretches along the south side of East Main Street from downtown to Independence Boulevard, but there is no support for pedestrians wishing to connect to the Independence Boulevard or Wal-Mart business areas. A “goat trail” from this intersection up the bank towards Boxwood Terrace confirms that pedestrians would use this route if constructed. This recommendation goes hand-in-hand with the short-term Independence Boulevard Improvements.

East Main Street is the major entry gateway into Bedford from the east, and is a 4-lane facility with long sight distances and a relatively

low speed limit of 35 MPH for most of its length. Because traffic volumes are low (2017 AADT of 6,600), a “road diet” is recommended to increase functionality, calm traffic, and help motorists maintain the posted speed limit.

Long-term recommendations include creating a boulevard-style roadway with a planted median. Shorter-term solutions could be achieved with restriping following normal paving operations. This would involve restriping to create one travel lane in each direction, one center bidirectional turn lane, and a bike lane in each direction.

Improving the Condition of “The Loop”

The famed 2.8-mile “loop” is a walking path that nearly every town citizen mentioned during the public input meeting. Continuous pedestrian infrastructure including sidewalks and crosswalks combined with sweeping views of the Peaks of Otter make this a highly popular destination for walkers and runners in the town. General sidewalk maintenance was often cited as an impairment on the loop. It is recommended that the town survey the sidewalks, crosswalks, and curb cuts to ensure that they are in good condition. In addition, the town should work with property owners along the course to keep bushes, trees, and sprawling groundcovers from blocking portions of the sidewalk. An informational kiosk could be placed somewhere along The Loop to help keep citizens informed of events and other walking opportunities in the town.

A number of survey participants expressed concern about safety at the intersection of Whitfield Drive and Peaks Street. An intersection study could be completed as a follow-up to this plan. This study could be conducted by the Central Virginia Planning District

Commission or by VDOT Salem District planners.

Town Pond/Lake Drive Improvements

Sidewalk infrastructure exists along Lake Drive between Peaks Street and Ashland Avenue. However, two factors that affected the feeling of pedestrian safety along this corridor were that cars speed through this residential street in excess of the 25MPH speed limit and the lack of a grass median or grade separation between the road and the sidewalk. Many residents expressed a desire for a walking path around Town Pond, and, in true Bedford fashion, expressed willingness to help keep the area clean. A walking path around Town Pond would likely be about 1,500 feet in length, and could include a bridge or causeway over the marshy area at the head of the pond.

Access to Falling Creek Park from the Town

This beautiful 370-acre park complex is separated from Bedford's sidewalk network by just 0.4 miles (connection to Smith Street sidewalk) or 0.9 miles (connection to East Main Street sidewalk via Link Road/Falling Creek Road).

Falling Creek Road, or State Route 714, is a highly-traveled road with narrow paved shoulders. Currently the combination of traffic count, existing speed, narrow shoulders, and lack of continuous sidewalks makes non-motorized access to the park largely limited to Group A cyclists.

Connecting the town to the park is recommended in the 2012 Region 2000 Greenways, Blueways, and Trail Plan, and is reiterated here. Construction of a sidewalk, appropriate crosswalks,

installation of signage, and creation of a bike route would help connect town residents to this recreational gem.

Improvements at “The Forks”

Despite there being a sidewalk along the southern side of Forest Road (US 221) from Independence Boulevard to McGhee Street, this segment of road has the highest incidents of crashes involving pedestrians in the Town of Bedford. Survey respondents suggested studying locations along this segment for pedestrian crosswalks/signals—such as near the DMV office (it is noted that the DMV is moving to Bedford Plaza). Because of the complexity of this (essentially five-way) intersection, a follow-up intersection study will be conducted during the 2019-20 fiscal year and will be funded by rural planning funds by the Central Virginia Planning District Commission and VDOT.

Bike Routes

A series of six bike routes is recommended to help cyclists navigate their way through and around town. In keeping with the D-



Color-coded bike route signage in New Kent County, VA



The trailhead of the Jackson River Scenic Trail in Covington, VA offers clean restrooms and a watering station that features a bottle filler and separate water fountains for people and pets.

Town of Bedford, Virginia



One of Lynchburg's "Artful Bike Racks." (*News & Advance*)

Day theme, they could be identified by the beaches that Allied forces stormed at Normandy (Gold, Sword, Utah, etc.) and also by color. Unlike previous proposed bike routes, the routes proposed below reflect actual bicycle usage on certain streets in town that has been determined by interviews with cyclists and verified by location-sharing app data on mobile phones. This type of data is only recently available, and can be viewed in Appendix X.

- **Omaha/Red Bike Route:** Follows Route 122 from Dickerson Mill Road to the south to Big Island Highway to the north.
- **Utah/Blue Bike Route:** Follows Route 43 through town.
- **Gold/Yellow Bike Route:** Begins at North Bridge Street and



A bike repair station in use on Grounds at the University of Virginia. (*UVA Today*)

follows Jackson Street to Orange Street to Belltown Road.

- **Juno/Purple Bike Route:** Follows Independence Boulevard.
- **Sword/Orange Bike Route:** Begins at Falling Creek Park and follows Falling Creek Road/Link Road/East & West Main Street/Blue Ridge Avenue to the apartment complexes on Blue Ridge Avenue (just west of this point, the avenue becomes a limited access facility where bikes are prohibited).
- **Blue-Orange Connector:** Follows Smith Street between Link Road and Route 43.

Pedestrian & Bike Amenities

The town is in an excellent position to improve the quality of and increase the number of facilities that support active transportation throughout town. The downtown district has numerous benches, trash receptacles, and pedestrian-scaled street lighting fixtures. Plazas for rest and reflection are currently located in front of the court house, at Centertown Park, and at the Crenshaw and West Main intersection. Centertown Park is also home to an information kiosk, and the Farmer's Market has restroom facilities. Numerous survey respondents expressed the need for public restrooms along popular walking routes. Establishing route hours of operation for the Farmer's Market restrooms as well as a safety check and cleaning schedule will go a long way towards providing facilities to visitors and residents alike. Once this schedule is in place, the existence of the restrooms should be promoted on brochures, maps, and other locations.

Currently, bike racks are only found at the Bedford Welcome Center. It is recommended that bike racks be added to public locations throughout town. Suggestions include Municipal Building, Bedford Museum, Court House, Centertown Park, Bedford Central Library, and public schools and parks. Destination businesses and attractions should also be encouraged to install bike racks. Examples include the National D-Day Memorial, Beale's Brewery, Olde Liberty Station, Wharton Garden, Central Bedford Memorial Hospital, Wal-Mart, English Meadows, and other dining and shopping destinations.

While traditional bike racks purchased from street furniture vendors

are sturdy and functional, there are other options that help reinforce the character of the community. Because Bedford has such a vibrant arts scene, replicating a program like the City of Lynchburg's "Artful Bike Racks" program is recommended. The James River Council for the Arts and Humanities solicited designs from the community. Four finalists were selected from over thirty submissions, and those winning designs were fabricated. In addition to serving as bike racks, the pieces instantly created public art installations.

Because many touring cyclists route through Bedford on their way to the Peaks of Otter and other points of interest, installing at least one bike repair station would help attract visitors and may encourage them to stay in town to visit before continuing on their journey. These bike repair stations often include heavy-duty tools attached by flexible cable, a stand for working on the bike, and occasionally air pumps. Since Bedford does not currently have a

business that offers bike sales and repair, a repair station would be an appreciated element for touring cyclists away from their base camp and town residents who may not own tools and pumps.

Woolen Mills District Pedestrian Improvements

The Jackson Street area has seen recent development in the way of loft apartments and additional businesses such as Beale's Brewery. As pedestrian traffic increases, improvements such as sidewalk repair, crosswalks, and signage are needed to support safety in the district.

US 460 Pedestrian Safety

The Walmart Supercenter and other stores in the Bedford Plaza Shopping Center have sufficient sidewalk access from the west, but lack access from south of US 460—specifically the neighborhoods of Hulls Street and Phillips Park Drive. A pedestrian signal and timing at the Hull Street / US 460 intersection was suggested as a needed improvement. Because 460 is a relatively high-volume US highway, it is recommended that the town meet with VDOT's Bedford Residency to determine what, if any, measures may be appropriate.

School to School Plan Implementation

Completed in 2019, the School to School Plan makes a number of excellent recommendations regarding bicycle and pedestrian infrastructure. Because the plan's study area was much smaller than that of the Bike | Walk Plan, some recommendations within are more granular than the suggestions found in this document. For example, the School to School Plan calls for bike lanes on West



A park on Depot Street is one of the catalyst projects suggested in the School to School Plan.

Depot, Edmund, and southern South Bridge Street, whereas bicycle facilities along these streets are not called for in the Bike | Walk Plan due to estimated pavement width and vehicular traffic counts. If bike lanes fit along these streets, there is certainly no harm in installing them, but the Bike | Walk Plan does not recommend bike lanes for most similar streets in other areas of town.

Catalyst projects outlined in the School to School Plan are particularly appropriate for the town's overall active transportation efforts, as they provide additional destinations for pedestrians and cyclists and offer locations at which amenities such as benches, bike racks, and bike repair stations can be placed.

Two recommendations in the School to School Plan that particularly align with the Bike | Walk plan are the creation of two multi-use trails to create a connected network of parks and open space destinations. Both trails connect to different points of the informal walking "Loop" and use Bridge Street as a central corridor to link to all three trails. The **west trail** (depicted by a green dashed line on the map to the right) begins at the intersection of Peaks Street and College Street, traveling west and south to connect to South Bridge Street at Franklin Street. This route is approximately 1.6 miles long. The **east trail** (depicted by a blue dashed line on the map to the right) begins at the intersection of North Bridge Street and Jackson Street, traveling east and south to the Susie G. Gibson School (BSTC) and circulating back north on Edmund Street back to Bridge Street. The east trail route is approximately 2.4 miles long.



Crenshaw Street Plan Implementation

Establishing a safe and convenient bicycle and pedestrian connection between downtown Bedford and the National D-Day Memorial and Bedford Welcome Center is critical to further tourism and economic development efforts. In particular, the proposed shared-use path (Phase II) likely provides the best “bang for the buck,” as it completely separates pedestrian and bicycle traffic from vehicular traffic, which is key to safety along the curvy and hilly Crenshaw Street/Burks Hill Road corridor.

Phase III, which calls for a shared path connection to the National D-Day Memorial itself as well as a sidewalk extension to Liberty Lake Park, is important for both tourism efforts as well as providing better access for town residents to recreational and fitness facilities.

Infrastructure Support of Bedford Boys Homefront Walking Tour

This walking tour is an excellent collaboration between community organizations aimed at providing a richer experience for visitors to the National D-Day Memorial by encouraging them to experience historic sites in and around the downtown area. A colorful tour brochure has been created and is widely available, and some infrastructure improvements have been made along the tour route. The most prominent example of this is the viewing platform at the intersection of Crenshaw and West Main Streets. However, attention is needed along other portions of the walking route.

For example, some survey respondents noted that stone ballast and other debris from the overhead railroad tracks on Fourth Street (pictured to the upper right) often create hazardous conditions for



pedestrians and cyclists. Increasing the frequency of street and sidewalk sweeping operations in the area may correct the problem, or perhaps the town could work together with Norfolk Southern Railroad to develop a more permanent solution.

Crosswalks along the route should be considered, including at the intersection of West Depot and Fourth and at the entrance to Olde Liberty Station restaurant.

In addition to the existing eight plaques marking D-Day-related points of interest, the partner organizations may consider route signage or sidewalk markings to help reassure visitors that they are on the correct route. These can be as simple as stenciled spray-paint markings as found on the Civil Rights Walking Tour in Farmville, VA (see image to lower right on previous page) or as permanent as brass markers inlaid into the sidewalk as found on the Freedom Trail in Boston.

Sidewalk Completion

The Town of Bedford's 2017 Comprehensive Plan directs elected and appointed officials to "assess [the] Town's ability to allocate resources on an annual basis to develop a fund for construction and maintenance of sidewalks on every public street." Currently, over a third of the town's eligible streets have sidewalks on at least one side. If the town committed to unconditional fulfillment of this goal, it would have to build an additional 59 miles of sidewalk.

The authors of this plan recommend a critical approach to the Comprehensive Plan's goal that first focuses on highest need sidewalk segments. For example, many of the town's streets have very low traffic volumes or end in cul-de-sacs (i.e., have no

connectivity), which basically makes them operate as rural subdivision streets. The cost-benefit ratio of installing sidewalks on all of these streets is not favorable in this climate of constrained financial resources.

Using GIS data, aerial photographs, and field work, the project team developed a list of all town streets that are lacking a sidewalk on at least one side. Then, each street was evaluated based on its vehicular traffic count, proximity to a major destination, role as a connector to additional streets with sidewalks, and broad likelihood of use by pedestrians.

Streets were then placed into one of four groups, generally indicating a prioritization hierarchy. Streets with high traffic counts that serve as connectors to destinations are ranked first (and labeled in red in Appendix IB). Streets that connect residential neighborhoods were ranked second and labeled in orange. Streets that serve commercial areas were labeled in blue and ranked third. Lastly, the lowest priority streets (with low speeds, low traffic volumes, and little connectivity) were labeled in green.

See Appendix IB for the full list and a map of streets included on the lists.

Bicycle Accommodations During Routine Repaving Projects

Whenever practicable, the Town of Bedford should coordinate with VDOT during periodic repaving projects to evaluate whether bicycle accommodations are appropriate for the particular street. If so, bike lanes, sharrows, or other markings should be included in the repaving project scope.

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5. Implementation

Setting Priorities

This plan does not recommend which facility installations should be implemented first. However, best practices advise that a work plan for project phasing and selection should be coordinated based on the League of American Bicyclists' "5 E's Program":

Engineering

The most visible and perhaps most tangible evidence of a great place for walking and bicycling is the presence of infrastructure that welcomes and supports it. Survey after survey shows that the physical environment is a key determinant in whether people will walk or get on a bike and ride to a destination. The most successful communities have well-connected bicycling and pedestrian networks, consisting of quiet neighborhood streets, effective and well-maintained sidewalks, conventional and protected bike lanes, shared use trails, and policies to ensure connectivity and maintenance of these facilities. Secure, convenient and readily-available bike parking is also a key component.

Education

Offering a lot of ways for people to be comfortable walking and get the skills and confidence to ride is key to building great communities for active transportation. At the community level this begins with bicycle-safety education being a routine part of public education. It is also vital to make motorists, pedestrians, and cyclists aware of their rights and responsibilities on the road through public education campaigns.

Encouragement

Communities, businesses and schools play a critical role in encouraging people to walk and ride by giving them a variety of opportunities and incentives. This can be done through the celebration of National Bike Month, producing community biking and walking maps, wayfinding signage, and bicycle or walking-themed events or celebrations. Many places are investing in public bike sharing systems or "libraries," which are a convenient, cost effective, and healthy way of encouraging people to make short trips by bike.

Enforcement

Basic laws and regulations need to govern walking and bicycling and the rules of the road to ensure safety for all road users. With a good set of laws and regulations in place that treat pedestrians and bicyclists fairly within the transportation system, the next key issue is enforcement. Law enforcement officers must understand these laws, know how to enforce them, and apply them equitably to ensure public safety. A good relationship between the walking and bicycling community and law enforcement is essential. Similarly, having more police officers on bikes helps increase understanding of pedestrian and cyclists' issues.

Evaluation & Planning

Metrics are essential. A comprehensive walking & biking master plan, in combination with dedicated funding and active citizen/organizational support is the foundation of a great walking and bicycling community-- indeed, progress without it is difficult. A successful plan focuses on developing a seamless active

transportation network that emphasizes short trip distances, multi-modal trips and is complemented by encouragement, education and enforcement programs to increase usage. An effective Walking and/or Bicycle Advisory Committee can play an important role in helping decision makers create, implement, and prioritize those programs and policies.

Funding Programs

Transportation Alternatives Program (TAP)

The Transportation Alternatives Program (TAP) is a federally funded program most recently authorized as part of the Fixing America's Surface Transportation (FAST) Act. Funding to the State must be distributed to specific population areas and projects are selected by both the Commonwealth Transportation Board and the Metropolitan Planning Organizations (MPOs) which receive funding allocated to Transportation Management Areas (TMAs). TAP requires a 20% nonfederal match for each project.

The program is intended to help fund projects that expand non-motorized travel choices and enhance the transportation experience by improving the cultural, historical, and environmental aspects of transportation infrastructure. Below are the 10 transportation alternatives eligible activities:

- Construction, planning and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.
- Construction, planning, and design of infrastructure related

projects and systems that provide safe routes for non-drivers.

- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
- Construction of turnouts, overlooks, and viewing areas.
- Inventory, control, or removal of outdoor advertising.
- Historic preservation and rehabilitation of historic transportation facilities.
- Vegetation management practices in transportation rights-of-way.
- Archeological activities relating to impacts from the implementation of a transportation project eligible under Title 23.
- Environmental mitigation activities including abatement and prevention activities to address water pollution related to highway runoff.
- Environmental mitigation activities to reduce vehicle-caused wildlife mortality or to restore and maintain habitat connectivity.

Additional information about the Transportation Alternatives Program, the application process and eligible projects is available at <http://www.virginiadot.org/business/prehancegrants.asp>.

Safe Routes to School (SRTS)

The Federal-aid Safe Routes to School (SRTS) Program was created by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU Section 1404) in 2005. Under SAFETEA-LU, SRTS funds were made available for infrastructure and non-infrastructure projects that promote walking and biking as a safe and convenient travel option for elementary and middle school children in grades K-8. Recent federal-aid highway and transit reauthorization acts, the latest being Fixing America's Surface Transportation Act (FAST Act), has changed the funding structure for SRTS activities, shifting funding from the SRTS program to a Surface Transportation Block Grant Program (STBG) set-aside. VDOT distributes the STBG funds for local projects, including SRTS projects, through a competitive grant process for the Transportation Alternatives Set-Aside Program.

The purposes of the SRTS program are:

- to enable and encourage children, including those with disabilities, to walk and bicycle to school;
- to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

Applying for funding for SRTS activities is a competitive process.

VDOT administers two types of funds:

- Non-infrastructure funds are for education, encouragement, enforcement (law), and evaluation activities which further the stated purposes of SRTS
- Infrastructure project funds are for improvements that provide bicycle and pedestrian accommodations or safety enhancements

All SRTS infrastructure projects will be implemented using the Transportation Alternatives Set-aside Program selection process.

All non-infrastructure projects are administered directly by the SRTS program through a competitive annual application process, which requires applicants to create an Activities and Programs Plan for the affected school(s). The plan is a written document stating the school community's intentions for making walking and bicycling to school(s) sustainable and safe and must include a formal endorsement by a school or school division representative. The plan must be submitted to VDOT and approved in advance of the submittal of applications for funding. Information about non-infrastructure applications and other SRTS materials can be found on the VDOT SRTS website at: www.virginiadot.org/saferoutes

Highway Safety Improvement Program (HSIP)

Federal transportation legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21), was signed into law July 2012; and, increases funding for the Highway Safety Improvement Program (HSIP). The HSIP is structured to make significant progress in reducing highway fatalities and severe injuries. The HSIP funding

implements the engineering (infrastructure) improvements to address highway crashes related to roadway departures, intersections and speeding, and bicycle and pedestrian safety.

VDOT has developed a Highway Safety Improvement Program (HSIP) for the Commonwealth of Virginia that involves the identification of high crash locations, an analysis of crash trends, a safety assessment of existing conditions and feasible countermeasures, and the prioritization and scheduling of improvement projects. This program includes the **Highway Safety Program** (HSP), the **Bicycle and Pedestrian Safety** (BPS) Program, and the **Highway-Rail Grade Crossing** (H-RGC) Program.

The VDOT Traffic Engineering Division (TED) serves as the focal point for administration of the safety programs (HSIP) within the Commonwealth of Virginia. VDOT Districts identify safety problems and prioritize improvements to mitigate crashes. Local governments should submit and coordinate safety improvement proposals for locations they recommend for improvement to local District liaisons. The proposals are evaluated on a statewide basis or district basis to ensure that locations in need of improvement have a better opportunity to be selected and funded. The candidate projects are selected based on an economic analysis (Benefit/Cost ratio), number and type of target crashes, project cost and schedule or based on documented risk assessments for non-motorized and highway-rail grade crossing improvements.

The intent of the HSIP is to expend federal funds on safety improvements that can be designed and constructed within three years. Projects should not require acquisition of significant rights of

way, nor should they require extensive environmental review and mitigation.

Details on HSIP application guidelines, deadlines and project selection can be found on the VDOT TED website at <http://www.virginiadot.org/business/trafficeng-default.asp>

Recreational Access Program

The purpose of the Recreational Access Program is to provide adequate access to recreational areas or historic sites operated by the Commonwealth of Virginia, a local government, or authority. Both roads and bikeways are eligible for program funding.

The program is administered by the Commonwealth Transportation Board, and funding is provided under the authority of Section 33.2-1510 of the Code of Virginia, with the appropriate designation and recommendation by the Director of the Department of Conservation and Recreation for access to recreational areas or by the Director of the Department of Historic Resources for access to historical sites. Roads constructed under this program become a part of the appropriate highway system. Separate bikeways constructed outside the right of way of the road become the responsibility of the locality, authority, or agency maintaining the site, which they serve.

Prior to the allocation, the governing body of the county, city, or town must, by resolution, request the access funds. Recreational Access Program funding may not be used for the acquisition of rights of way or adjustments of utilities, and the governing body must state in its resolution that these items will be provided at no cost to the program. The road or bikeway should be located to

provide the most direct, cost-effective, access to the site. The access project should end either at the entrance to the area or at an internal parking lot serving the park facility or historical area.

Recreational access roads and bikeways are expected to be open to the public at all times; however, they may be closed during specific hours for security purposes. No fee may be charged for the use of these roads or bikeways.

A maximum of \$400,000 may be allocated for an access road to a facility operated by a state agency. For a bikeway to a facility operated by a state agency, the maximum allocation is \$75,000. These funds are intended for eligible costs associated with design and construction of access roads and bikeways. For an access road to a facility operated by a locality or authority, the maximum unmatched allocation is \$250,000. Up to an additional \$100,000 may be allocated if matched dollar-for-dollar from other than highway sources. An unmatched maximum of \$60,000 may be allocated for a bikeway to a facility operated by a locality or authority.

Up to an additional \$15,000 may be requested if matched on a dollar-for-dollar basis by the locality or authority. There is no annual limit on the number of recreational access projects per jurisdiction. The funding maximums apply only to individual projects. Also, if the appropriate criteria are met, both an access road and a bikeway may be funded separately to serve the same facility.

The agency, locality, or authority operating the facility will be responsible for the appropriate environmental studies and permits, if applicable. Additional information is available in the current

guide for the Recreational Access Program and on the VDOT website at <http://www.virginiadot.org/business/local-assistance-access-programs.asp>

Revenue Sharing Program

The purpose of the Revenue Sharing Program is to provide additional funding for use by a county, city, or town to construct, reconstruct, improve, or maintain the highway systems within such county, city, or town, and for eligible additions in certain counties of the Commonwealth. Locality funds are matched with state funds with statutory limitations on the amount of state funds authorized per locality. The program is administered by VDOT in cooperation with participating localities under the authority of Section 33.2.357 of the Code of Virginia. Applications are accepted biennially via VDOT's SMART Portal and allocations are made annually by the Commonwealth Transportation Board.

Application for program funding must be made by resolution of the governing body of the jurisdiction requesting the funds. If a locality requests funds for a project outside its jurisdiction, concurrence from the affected jurisdiction must be provided. Towns not maintaining their own streets are not eligible to receive revenue sharing funds directly; their requests must be included in the application of the county in which they are located. Project funding is allocated by resolution of the Commonwealth Transportation Board. Construction may be accomplished by VDOT or by the locality under agreement with VDOT.

The Revenue Sharing Program is typically used to provide funding for immediately needed highway systems projects or to

supplement existing projects. Localities should seek funds only when ready to begin work. Projects receiving Revenue Sharing funds are to be initiated utilizing at least a portion of the funds within one year of the allocation. Funds will be indentified for potential deallocation if the project is not initiated within three years or if the project is not progressing. The Board may elect to not provide additional funding in a cycle if a project has not been initiated within that one year.

Below is a list of eligible project types:

- **Construction Projects** are those projects that change or add to the characteristics of a road, facility or structure to provide a new or significantly modified transportation facility.
- **Reconstruction Projects** are those projects that completely replace an existing facility or significantly improve the functionality of an existing facility. (Examples: replacement through the sub-base of a pavement structure, complete replacement of bridge, or widening a road or bridge).
- **Improvement Projects** are those projects that facilitate or control traffic or pedestrian flow, such as intersection improvements, turn lanes, channelization of traffic, traffic signalization and installation of new sidewalks, trails, curb & gutter, any new installation that will enhance traffic flow or safety, or projects that alleviate roadway drainage issues.
- **Maintenance Projects** are those projects that involve work in preserving or restoring the roadway, facility, or structure to its original condition, as nearly as possible. This includes the removal and replacement of a pavement course.

Details on application deadlines and project selection can be found on the VDOT website at http://www.virginiadot.org/business/local-assistance-access-programs.asp#Revenue_Sharing

Appendix IA: Recommendations

PROJECT	PLANNING-LEVEL ESTIMATES	
	LOW	HIGH
<p>Independence Boulevard Improvements: Citizens repeatedly emphasized that this corridor is important to the Town's pedestrian network. The corridor connects the commercial land uses along US 460 and US 221. A pedestrian accommodation along this 1.5-mile stretch of Independence Blvd. could also connect the sidewalk infrastructure of Longwood Ave. and East Main St.—essentially creating another recreational walking “loop.”</p> <p style="text-align: right;">Short-Term</p> <p>5' sidewalk on west side of Independence Blvd. filling gaps between E. Main St. and Southern States (552')</p> <p style="text-align: center;">Crosswalk across Independence Blvd. at Freedom Ln.</p> <p>5' sidewalk on east side of Independence Blvd. between E. Main St. and existing Freedom Ln. sidewalk (550')</p> <p style="text-align: right;">Long-Term</p> <p style="text-align: center;">5' Sidewalk between Freedom Ln. and Longwood Ave. (8448')</p> <p style="text-align: center;">Construct Conventional Bike Lanes (both sides)</p> <p style="text-align: center;">Restripe to include Conventional Bike Lanes (both sides)</p> <p>Construct 10' wide multi-use path in (mostly) existing ROW on either side (east may be preferable) of Independence Blvd. between Freedom Ln. and Longwood Ave. (8448')</p>	<p>\$32,568</p> <p>\$20,000</p> <p>\$32,450</p> <p>\$498,432</p> <p>\$840,000</p> <p>\$84,480</p> <p>\$1,976,832</p>	<p>\$105,984</p> <p>\$30,000</p> <p>\$105,600</p> <p>\$1,622,016</p> <p>\$1,260,000</p>
<p>East Main & Independence Improvements: A sidewalk stretches along the south side of E. Main St. from downtown to Independence Blvd., but there is no support for pedestrians wishing to connect to the Independence Blvd. or Wal-Mart business areas. A “goat trail” from this intersection up the bank towards Boxwood Terr. confirms that pedestrians use this route. This recommendation goes hand-in-hand with the Short-Term Independence Blvd. Improvements (above).</p> <p style="text-align: center;">Crosswalk on E. Main St. from Bedford Church of God to CVS</p> <p style="text-align: center;">Crosswalk across Independence Blvd from CVS to east side of Independence</p> <p style="text-align: center;">Pedestrian signal phase at E. Main & Independence</p> <p style="text-align: center;">Stairs up bank from Independence Blvd. to Boxwood Terr.</p>	<p>\$20,000</p> <p>\$20,000</p> <p>\$50,000</p> <p>\$15,000</p>	<p>\$30,000</p> <p>\$30,000</p> <p>\$60,000</p> <p>\$25,000</p>
<p>Improving the condition of “The Loop:” The famed 2.8-mile “loop” is a walking path that nearly every town citizen mentioned during the public input meeting. Continuous pedestrian infrastructure including sidewalks and crosswalks combined with sweeping views of the Peaks of Otter make this a highly popular destination for walkers and runners in the Town. General sidewalk maintenance was often cited as an impairment on the loop.</p> <p style="text-align: center;">Crosswalk at Longwood Ave between Lee St. and North St.</p> <p style="text-align: center;">Sidewalk widening/improvements along Peaks St.</p> <p style="text-align: center;">Informational Kiosk</p> <p style="text-align: center;">Intersection Study at Whitfield Dr./Peaks St. (SPR-funded by CVPDC)</p>	<p>\$20,000</p> <p>\$156,500</p> <p>\$8,000</p> <p>\$10,000</p>	<p>\$30,000</p> <p>\$506,500</p> <p>\$15,000</p> <p>\$15,000</p>

PROJECT	PLANNING-LEVEL ESTIMATES	
	LOW	HIGH
Town Pond/Lake Drive Improvements: Sidewalk infrastructure exists along Lake Dr. between Peaks St. and Ashland Ave. However, two major complaints that affected the feeling of pedestrian safety along this corridor were that cars sped through this residential street in excess of the 25MPH speed limit and the lack of a grass median or grade separation between the road and the sidewalk. Many residents expressed a desire for a walking path around Town Pond, and expressed willingness to help keep the area clean. <div> Sidewalk widening/improvements \$156,500 Create walking path around Town Pond (1500') \$351,000 </div>		\$506,500
East Main Street Improvements: E. Main St. is the major entry gateway into Bedford from the east, and is a 4-lane facility with long sight distances and a relatively low speed limit of 35 MPH for most of its length. Because traffic volumes are low (2017 AADT of 6,600), a “road diet” is recommended to increase functionality, calm traffic, and help motorists maintain the posted speed limit. Long-term recommendations include creating a boulevard-style roadway with a planted median. <div> Short-Term Restripe E. Main St. between Independence Blvd. and Orange St. to create one travel lane in each direction, one center bidirectional turn lane, and a bike lane in each direction (4800') \$72,000 Restripe E. Main St. between Orange St. and Otey St. to include a bike lane in each direction (1000') \$10,000 Long-Term Planted median with turn lanes between Independence Blvd. and Orange St. (4800') PER Needed </div>		
Access to the Falling Creek Complex via Falling Creek Rd.: This beautiful 370-acre park complex is separated from Bedford’s sidewalk network by 0.4 miles (connection to Smith St. sidewalk) or 0.9 miles (connection to E Main St. sidewalk via Link Rd.). <div> Short-Term Sidewalk connection to Falling Creek Complex from Smith St. (1912') \$112,808 Crosswalk across Falling Creek Rd. At County Farm Rd. \$20,000 Long-Term Sidewalk along Falling Creek Rd./Link Rd. From E. Crest Dr. To Smith St. (2402') \$141,718 Pedestrian crossing at E Main Street/US 460 Ramps \$40,000 Crosswalk across E. Crest Dr. \$20,000 </div>		\$367,104 \$30,000 \$461,184 \$60,000 \$30,000
Sidewalk addition on Grove St. to connect to Orange St./E. Main St.	\$43,820	\$141,820
Improvements at “The Forks:” Despite there being a sidewalk along the southern side of Forest Rd. (US221) from Independence Blvd. to McGhee St., this segment of road has the highest incidents of crashes involving pedestrians in the Town of Bedford. Survey respondents suggested studying locations along this segment for pedestrian crosswalks/signals—such as by the Bedford Community Center or DMV. <div> Add pedestrian crosswalk for access to DMV \$20,000 Roundabout at Independence Blvd./Forest Rd. (221) \$1,850,000 Recommend full intersection study \$30,000 </div>		\$30,000 \$2,600,000 \$35,000

PROJECT	PLANNING-LEVEL ESTIMATES	
	LOW	HIGH
Little Otter River Greenway (Phase I) - Construct walking path along the Little Otter River between Route 122 and Route 43. <div> Short-Term Single-track Dirt Trail (14750') </div> <div> Long-Term 10' Unpaved Multi-Use Trail (14750') 10' Paved Multi-Use Trail (14750') </div>	 \$368,750 \$1,460,250	
Little Otter River Greenway (Phase II) - Construct walking path along the South Fork of Little Otter River between Route 43 and Macon St., then to Blue Ridge Ave. <div> Short-Term Single-track Dirt Path (8000') Catwalks through RR & Macon St. Tunnels </div> <div> Long-Term 10' Unpaved Multi-Use Trail (8000') 10' Paved Multi-Use Trail (8000') </div>	 \$75,000 \$200,000 \$792,000	 \$100,000
Town Pond/Little Otter River Greenway Connection <div> Short-Term Single-track Dirt Path (3000') </div> <div> Long-Term 10' Unpaved Multi-Use Trail (3000') 10' Paved Multi-Use Trail (3000') </div>	 \$75,000 \$297,000	
Whitfield Drive/Little Otter River Greenway Connection <div> Short-Term Single-track Dirt Path (4600') </div> <div> Long-Term 10' Unpaved Multi-Use Trail (4600') 10' Paved Multi-Use Trail (4600') </div>	 \$115,000 \$455,400	
Big Island Road Pedestrian Connector - Construct sidewalk or multi-use path along Route 122 from proposed Little Otter River Greenway (Phase I) to existing sidewalk just south of town limits. <div> 5-foot Sidewalk (2500') 10' Paved Multi-Use Path (2500') </div>	 \$147,500 \$247,500	 \$480,000
The Walmart Supercenter and other stores in the Bedford Plaza Shopping Center have sufficient sidewalk access from the west, but lack access south of US460—specifically the neighborhoods of Hull St. and Phillips Park Dr. A pedestrian signal and timing at the Hull St. / US460 intersection was suggested as a needed improvement. <div> Add pedestrian signal phase at intersection Crosswalk across US 460 </div>	 \$50,000 \$40,000	 \$60,000 \$60,000

PROJECT	PLANNING-LEVEL ESTIMATES	
	LOW	HIGH
Grove Street / Mill District		
Install signage & crosswalk across Grove Street at Church Street	\$20,000	\$30,000
Install crosswalk/curb ramps across Jackson Street on south side of intersection with Grove Street	\$20,000	\$30,000
Install signage & crosswalk across Jackson Street at Beale's Brewery	\$20,000	\$30,000
Sidewalk along Grove & Orange from RR to E. Main St. (1125')	\$66,375	\$216,000
School to School Plan		
West Trail (necessary sections of 10' multi-use trail only)(2500') (does not include trail in Crenshaw Street recommendation)	\$62,500	\$247,000
Retroreflective Trail Marking Signage	\$10,000	\$15,000
East Trail (necessary section of 10' multi-use trail only)(1600')	\$40,000	\$158,400
Retroreflective Trail Marking Signage	\$10,000	\$15,000
Implement 2018 Crenshaw Street Plan		
Phase I	\$572,000	
Phase II	\$976,000	
Phase III	\$360,000	
Omaha/Red Bike Route: Burks Hill Rd./Crenshaw St. from Dickerson Mill Rd. To W. Main St. Then along W. Main St., N. Bridge St., Longwood Ave., Big Island Rd.		
Install sharrows on Longwood Avenue between 200' north of Walnut Street and northern town limits (5175')	\$41,400	
Restripe Longwood Avenue between Elm Street and 200' north of Walnut Street to include: one southbound travel lane from Oakwood to Elm, one northbound travel lane from Oakwood to northern terminus, one bike lane in each direction, and retaining northbound and southbound turn lanes onto Oakwood (2300')	\$34,500	
Install sharrows on Longwood Avenue between Peaks Street and Elm Street (2060')	\$16,480	
Install sharrows on North Bridge Street from Main Street to Peaks Street (1500')	\$12,000	
Install sharrows on Crenshaw Street/Burks Hill Road between West Main Street and Dinwiddie Drive (5280')	\$42,240	
Restripe Burks Hill Road between Dinwiddie Drive and 400' south of Activity Place to create one travel lane in each direction, one center bidirectional turn lane, and a bike lane in each direction (2525')	\$37,875	
Install sharrows from a point 400' south of Activity Place to Dickerson Mill Road (625')	\$5,000	
Utah/Blue Bike Route: Virginia Byway to South St. to E. Main St. to N. Bridge St. to Peaks St.		
Install sharrows on Route 43/South Street from southern town limits to East Main Street (5755')	\$46,040	
Install sharrows on Peaks Street between western town limits and North Bridge Street (8185')	\$65,480	
Gold/Yellow Bike Route: Jackson St. to Grove St. to Orange St. to Belltown Rd.		
Install sharrows on Jackson Street between North Bridge Street and Grove Street (1280')	\$10,240	
Install sharrows on Grove Street between Jackson Street and Orange Street (1500')	\$12,000	
Install sharrows on Orange Street/Belltown Road between Grove Street and eastern town limits (9768')	\$78,144	

PROJECT	PLANNING-LEVEL ESTIMATES	
	LOW	HIGH
Juno/Purple Bike Route: Independence Blvd. See Independence Blvd. Improvements above		
Sword/Orange Bike Route: Falling Creek Rd./Link Rd./E. Main St./W. Main St./Blue Ridge Ave. from Falling Creek Park to apartment complexes. Install sharrows on Route 714/Link Road/East Main Street from Falling Creek Park to intersection with Independence Boulevard (5600') Install sharrows on East Main between Otey and North Bridge and on West Main between North Bridge and just west of 4th Street (2490') Restripe bike lanes on each direction of Blue Ridge Avenue/West Main Street between the apartment complexes (300' west of Spruce Street) and just west of 4th Street (2270')	\$44,800 \$19,920 \$22,700	
Utah/Blue-Orange Connector: Smith Street from Virginia Byway to Falling Creek Rd. Install sharrows on Smith Street between Link Road and Route 43/Virginia Byway (3775')	\$30,200	
Signage to mark bike routes	\$25,000	\$60,000
Look for opportunities to establish/promote public restrooms, water fountains		
Install Bike Racks and Tool Stations		
Bike Racks (each)	\$700	\$3,000
Tool Stations (each)	\$1,250	\$2,250
Pedestrian Improvements to Support Bedford Boys Homefront Tour		
Ballard St & W Main St Crosswalk	\$20,000	\$30,000
W Depot St & 4th St Crosswalk	\$20,000	\$30,000
Painted Stencil Trail Markings	\$500	\$1,000
Custom Brass Sidewalk Inlay Trail Markings (markers every 50') (does not include installation)	\$6,800	\$10,200
Retroreflective Trail Marking Signage	\$10,000	\$15,000
Implement Town Council's goal of sidewalk on at least one side of all public streets See Appendix 1B		

Improvement	Cost Per Linear Foot	
	LOW	HIGH
Construct Conventional Bike Lanes (4' both sides)	\$106	\$159
5 ft. sidewalk	\$59	\$192
10 ft. Paved Multi-Use Trail***	\$99	
10 ft. Unpaved Multi-Use Trail***	\$25	
Mill existing markings and restripe (per lane)**	\$5	
	Cost Per Project	
Provide pedestrian crosswalk	\$20,000	\$30,000
Provide pedestrian signal phase	\$50,000	\$60,000
Roundabouts (1 Lane)	\$1,850,000	\$2,600,000
Install sharrow or other on-pavement marking**	\$300	
Downtown signage	\$50,000	\$60,000
Install railroad warning lights & gates with pedestrians	\$297,000	\$371,000

Table 1. Unless otherwise noted, all costs in table reflect VDOT Planning Level Cost Estimator for Lynchburg District 2017.

*Cost per mile estimate for a shared use path accommodation was taken from the Town of Northbrook (Illinois) Bike Ped Plan.





**2017 VDOT Traffic Calming Guide for Neighborhood Streets. Guide recommends sharrows every 50-100'. Project costs above assume sharrows every 75'.

***Costs for Pedestrian & Bicycle Infrastructure Improvements, University of North Carolina at Chapel Hill Highway Safety Research Center, 2013 (costs increased by 9% to reflect inflation from 2013 to 2018 per U.S. Bureau of Labor Statistics)

Appendix IB: Sidewalk Completion Prioritization

Item 6-T-3 of the Town of Bedford's 2017 Comprehensive Plan directs elected and appointed officials to "assess [the] Town's ability to allocate resources on an annual basis to develop a fund for construction and maintenance of sidewalks on every public street."

The tables below give an inventory of all road segments in the Town of Bedford that are not serviced by sidewalk infrastructure on at least one side. The inventory is sorted into 4 categories:

	High Traffic/Destination Road
	Residential Connector
	Commercial Connector
	Cul-de-sac/Rural/No Destination

The Town of Bedford has a robust sidewalk network. Currently the Town maintains nearly 48 miles of sidewalks throughout the Town. Some roads have sidewalks on both sides, therefore the total length of sidewalks needs to be considered separately from the total network of roads in the town that would be safe for sidewalk infrastructure. For this study, roads that had a speed limit higher than 45mph were not considered safe for pedestrian infrastructure. Filtering roads in this manner removed 221 and the 460 Bypass. The length of "sidewalk-worthy roads" in the Town of Bedford came to approximately 59 miles. Therefore, approximately 37% of the Town's road network that is safe for pedestrian infrastructure is currently serviced by a sidewalk.

This categorization of streets without sidewalks (on at least one side) is intended to assist local decision-makers in identifying projects that will have the most impact on pedestrian safety and accessibility. Street segments within each category are alphabetized, not prioritized.

Street Name	MPH	AADT*	LENGTH (ft.)
Activity Pl	25	0	390
American Way Ct	25	0	480
Burks Hill Rd	35	9500	3810
Link Rd	25	0	5120
Longwood Ave	35	0	2610
Overlord Cir	25	0	6480
Peaks St	35	2600	3290

Street Name	MPH	AADT*	LENGTH (ft.)
Ashland Ave	25	0	1700
Baltimore Ave	25	0	2130
Bedford Ave	25	0	1650
Boone Dr	25	0	1860
Bowling Dr	25	0	650
Church St	25	0	400
E Main St	25	4500	170
Elm St	25	0	830
Emerald Crest Dr	25	0	200
Fairview Dr	25	0	1600
Galax St	25	0	1400
Grandview Rd	25	0	160
Greenwood St	25	0	920
Hampton Ave	25	0	360
Industrial Ave	25	0	2400
Jeter St	25	0	2680
Judd St	25	0	210
Lakeview Ln	25	0	1270
Laurel St	25	0	1060
Locust St	25	0	280
Lyle St	25	0	1440
Madison St	25	0	320
Maybeury Dr	25	0	1010

Street Name	MPH	AADT*	LENGTH (ft.)
Mill St	25	0	930
Morgan St	25	0	640
Newton Cir	25	0	2350
Otey St	25	390	650
Park St	25	0	750
Peakview St	25	0	2250
Pine St	25	0	670
Pinecrest Ave	25	0	5140
Quarles St	25	0	580
Ridge St	25	390	230
Ridge St	25	0	530
S Bridge St	25	0	110
Shady Knoll Ave	25	0	2430
Spruce St	25	0	510
Talbott St	25	630	280
Terra Ln	25	0	110
Vine St	25	0	2750
W Cook St	25	0	280
Walnut St	25	0	1200
Westview Ave	25	0	1070
Woodcrest Dr	25	0	1360
Woodhaven Dr	35	0	1940

Street Name	MPH	AADT*	LENGTH (ft.)
Ballard St	25	0	320
Court St	25	0	70
Dawn Dr	25	1300	3130
Edmund St	25	0	1900
Grove St	25	1400	780
Grove St	25	0	140
Harmony Crossing Dr	25	0	260
Independence Blvd	45	10000	8960
Market Sq	25	0	300
Railroad Ave	25	0	1500
Stone St	25	0	540
Summit St	25	0	970
W Depot St	25	0	880

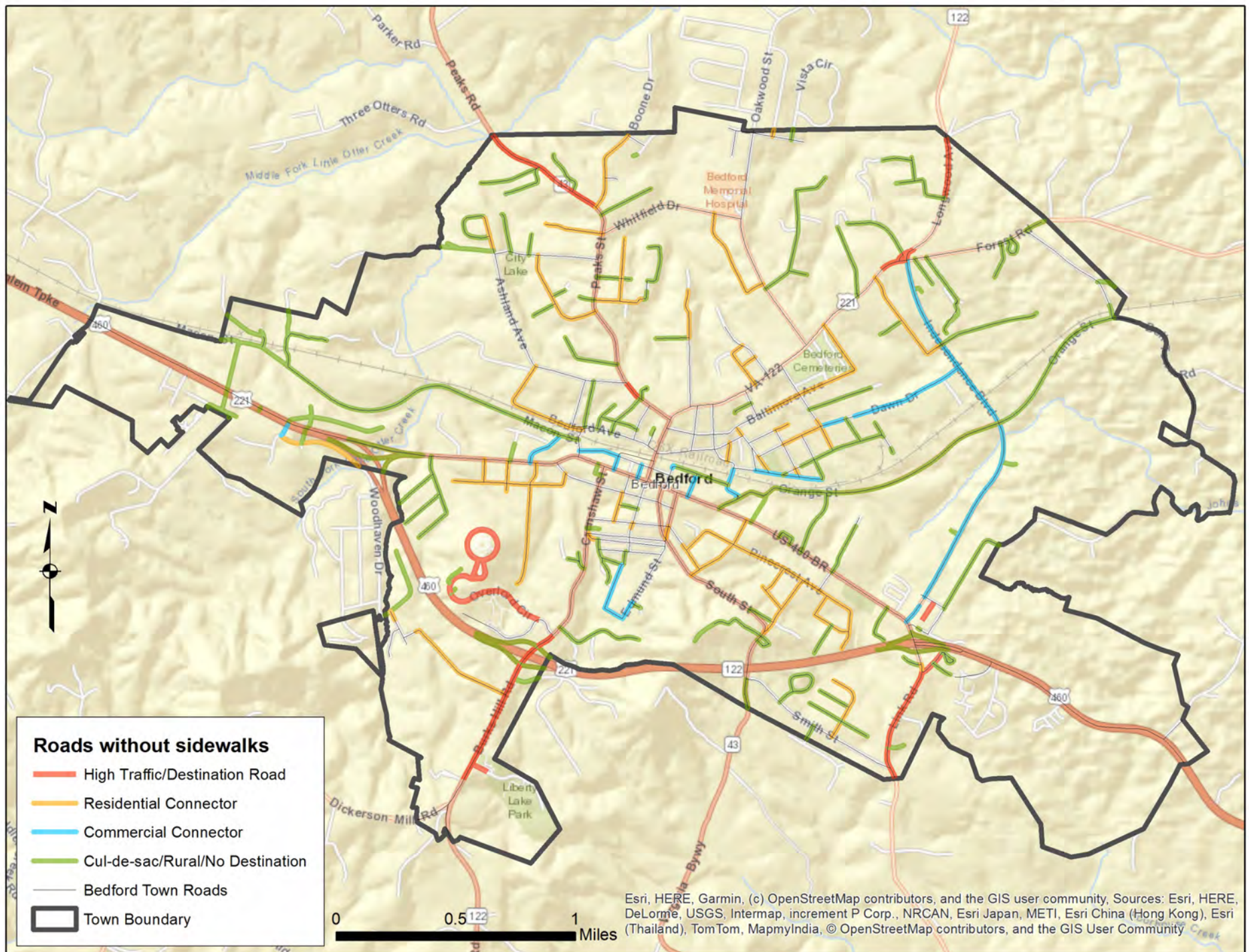
Street Name	MPH	AADT*	LENGTH (ft.)
2nd St	25	0	1000
3rd St	25	0	670
4th St	25	10	1020
Ashland Cir	25	0	1340
Baldwin St	25	0	1530
Belle View St	25	0	530
Belmont Dr	25	0	1600
Bondurant Aly	25	0	270
Broad St	25	0	600
Broadway Ave	25	0	680
Brunmore Cir	25	0	700
Brunmore Ct	5	0	450
Burwell Way	25	0	840
Cassell Ln	25	0	570

Street Name	MPH	AADT*	LENGTH (ft.)
Cedar Crest Dr	25	0	710
Cedar Hill Ct	25	0	360
Cheatham Park Dr	25	0	200
Clearview Rd	25	0	2460
Colonial Ln	25	0	230
Comer Cir	25	0	570
Commerce St	25	0	300
Coolbrook Rd	25	700	140
Coolbrook Rd	25	0	1590
Crestview Pl	25	0	280
Dean Dr	25	0	2070
Dinwiddie Dr	25	140	600
Dogwood Ln	25	0	1020
E Crest Dr	25	0	430
Earnhart Dr	25	0	590
Elkton Way	25	0	430
Essex Rd	25	0	320
Forest Rd	25	6500	460
Gold Rd	25	0	1450
Grand Arbre Dr	25	0	1790
Granite Dr	25	0	1460
Griffin Pl	15	0	420
Gum St	25	0	730
Helm St	25	0	1770
Hill Crest Dr	25	0	900
Jefferson Ter	25	0	80
Kingston Cir	25	0	750
Liberty St	25	0	1230
Lindsay St	25	0	320
Lowry St	25	0	2080

Street Name	MPH	AADT*	LENGTH (ft.)
Macon St	25	0	8720
Maiden Ln	25	0	1000
Maxwell Cir	25	0	610
Maymont Dr	25	0	1230
Meadowbrook Dr	25	0	750
Minter St	25	0	400
Monroe St	25	0	2130
Nichols Rd	25	0	1350
Norfolk Ave	25	0	1450
Oakcrest St	25	0	1320
Old Mill Rd	25	0	370
Ole Dominion Blvd	25	0	330
Ole Turnpike Dr	25	0	2440
Oliver St	25	0	650
Omaha Beach Cir	25	0	520
On Time Rd	25	0	960
Orange St	35	770	10030
Panorama Ln	25	0	1140
Piedmont St	25	0	1150
Plunkett St	25	0	1260
Poindexter Ln	25	0	410
Pony Acre Rd	25	0	90
Poplar St	25	0	250
Randolph St	25	0	1440
Rendezvous Ln	25	0	870
Reserview St	25	0	260
Roberts Ln	25	0	1990
Robinson Way	25	0	140
Ruff Dr	25	0	1580
Salem Tpke	25	0	700

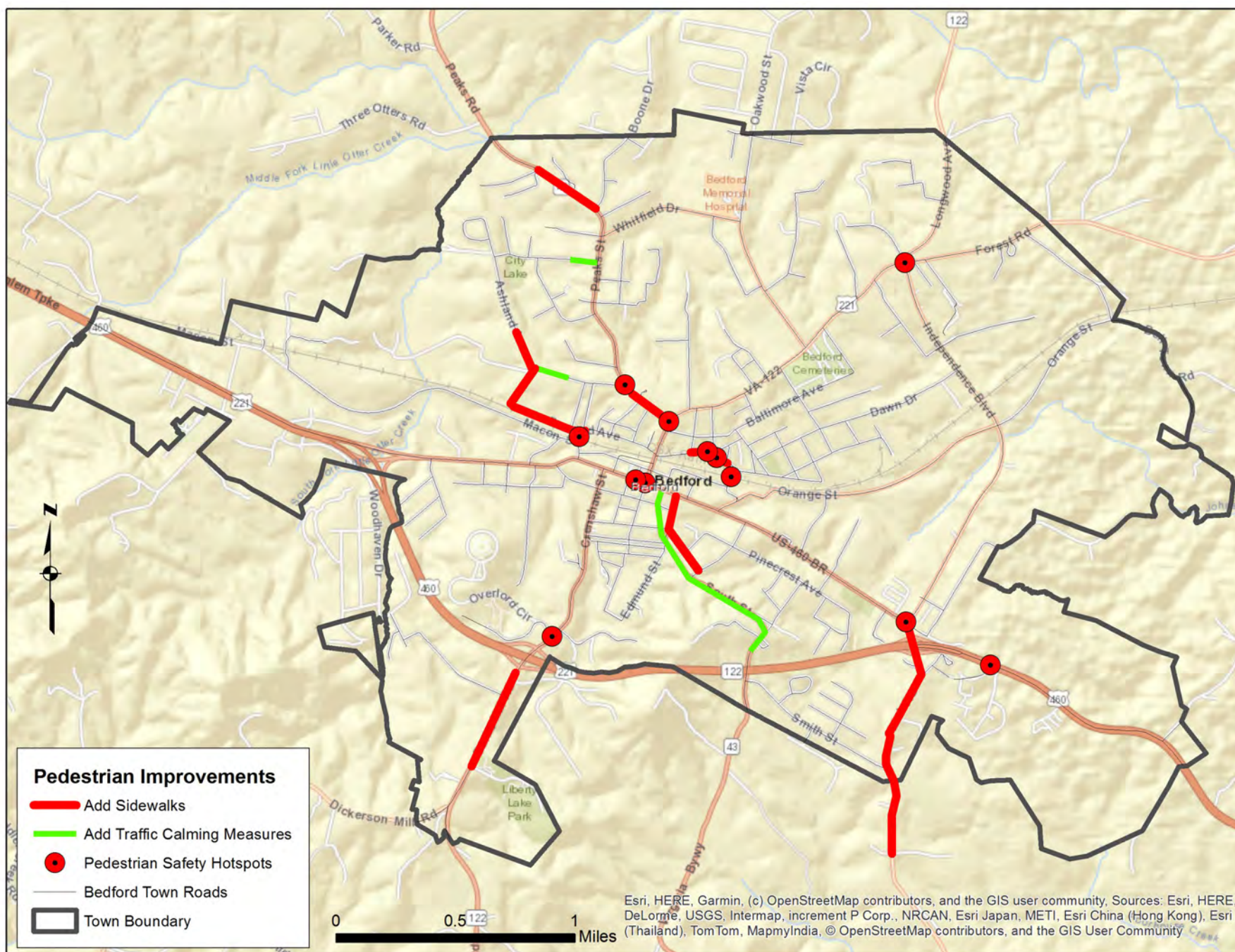
Street Name	MPH	AADT*	LENGTH (ft.)
Scott Pl	25	0	430
Shearer Ave	25	0	320
Short St	25	0	600
Sunset Dr	25	0	740
Sword Beach Ln	25	0	250
Valleyview Dr	25	0	1580
Venable Dr	25	0	460
Venture Blvd	25	0	2250
Village Ct	25	0	370
Vista Cir	25	310	250
W Hill Dr	25	0	810
Watson Pl	25	0	560
Westchester St	25	0	950
Windsor Dr	25	0	1170
Woodland Rd	25	0	1080
Woodside Ave	25	0	800
Woodside Ct	25	0	780

***Annual average daily traffic**, abbreviated as AADT, is a measure used primarily in transportation planning, transportation engineering and retail location selection. Traditionally, it is the total volume of vehicle traffic of a highway or road for a year divided by 365 days



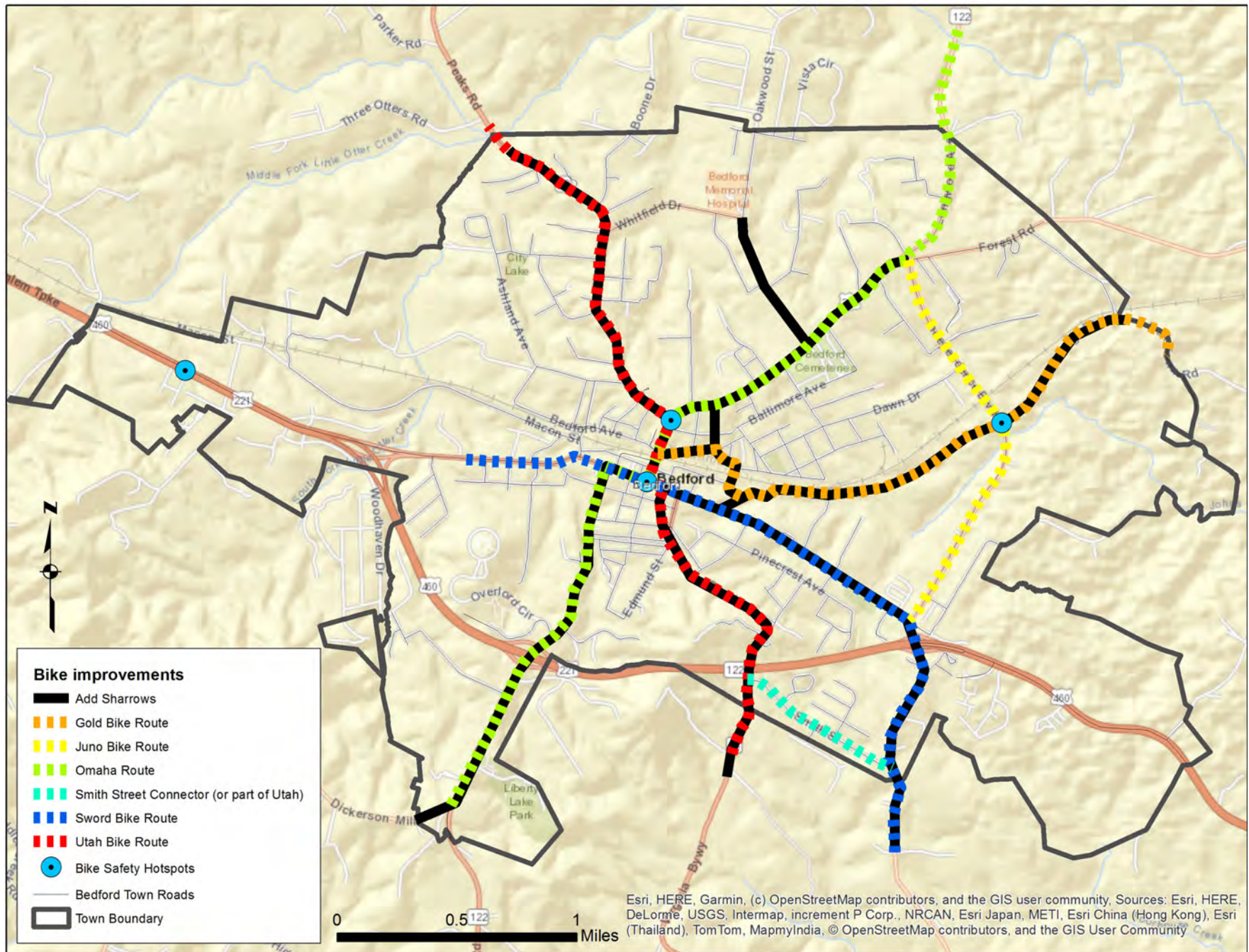
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Appendix II: Proposed Pedestrian Improvements



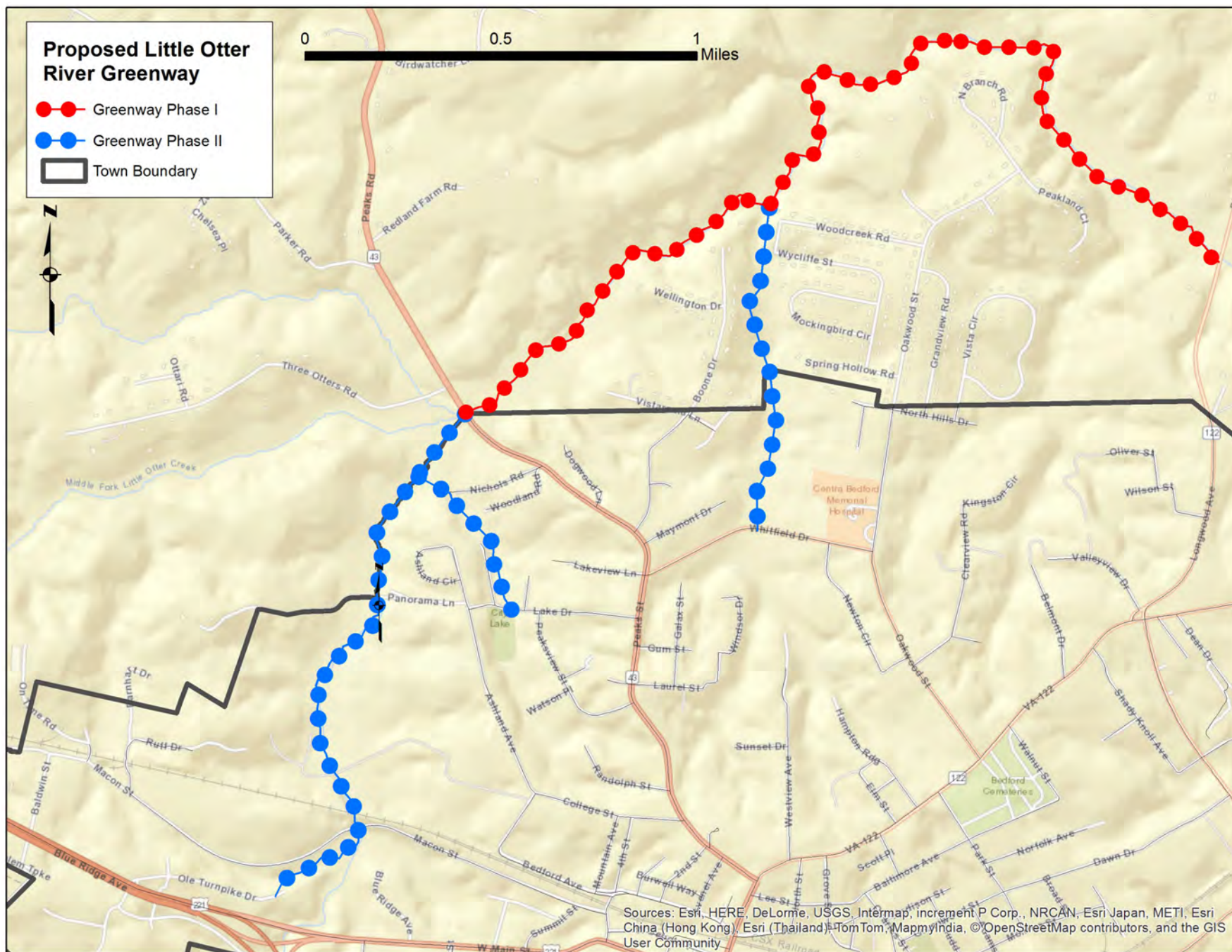
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Appendix III: Proposed Bike Routes



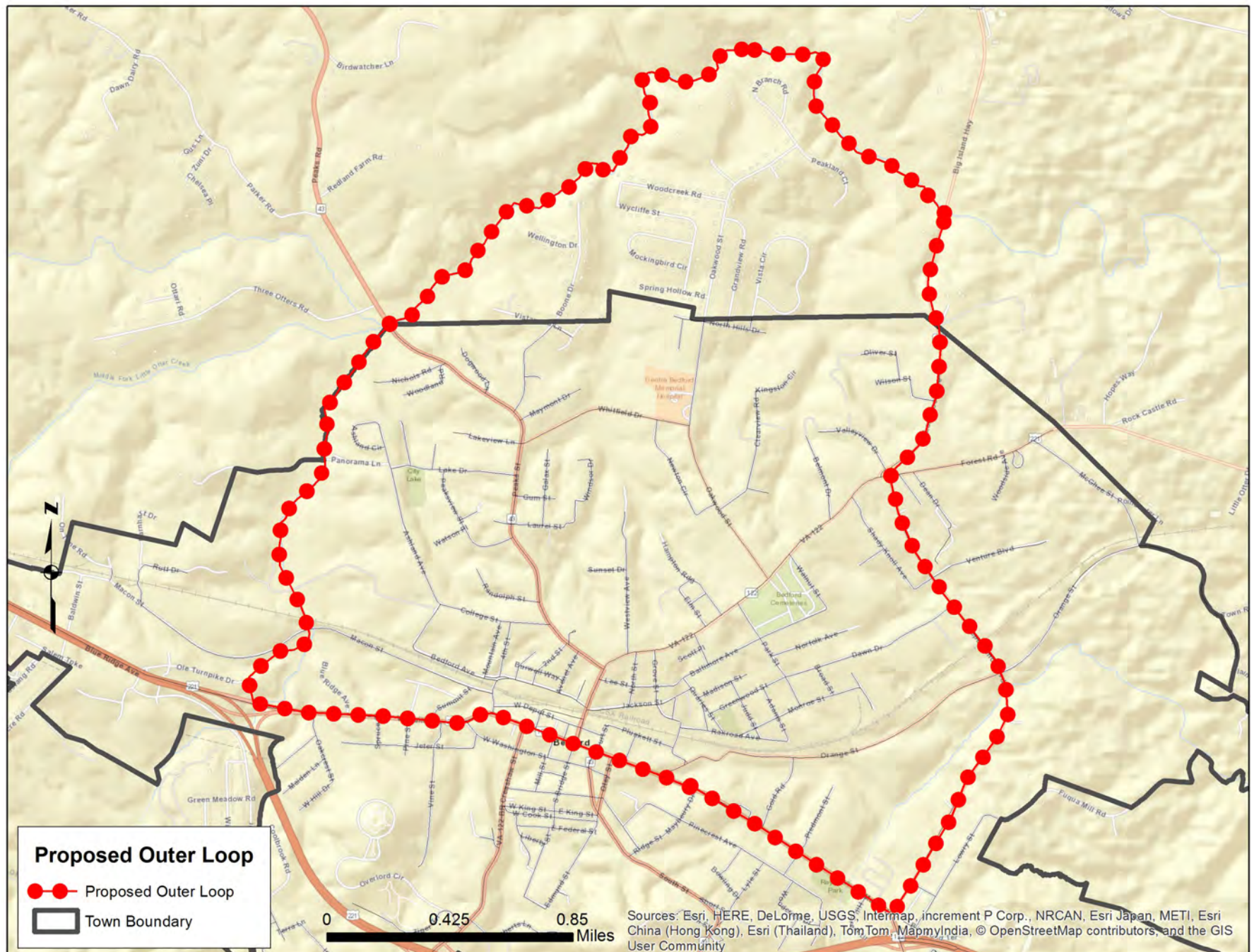
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Appendix IV: Proposed Little Otter River Greenway



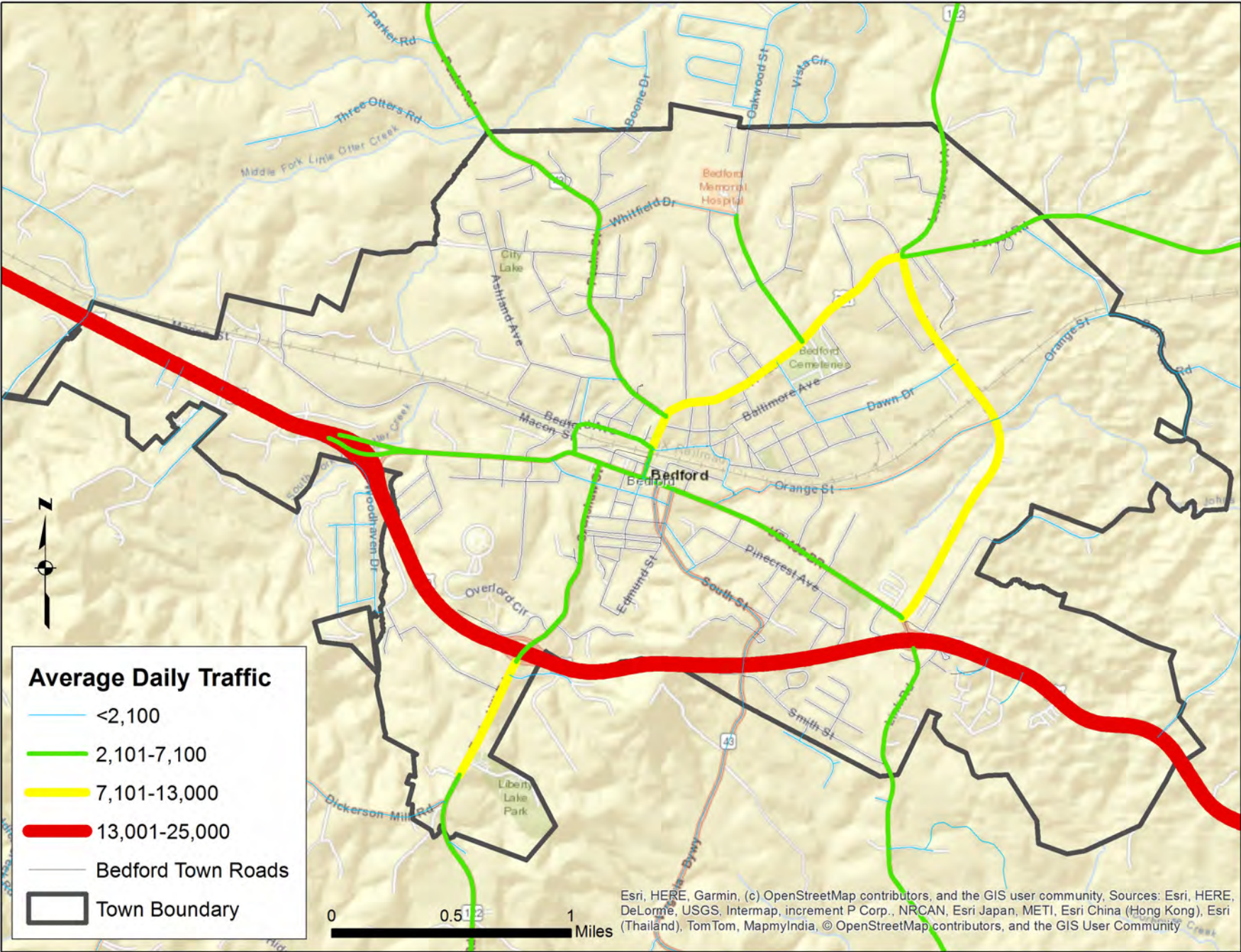
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Appendix V: Proposed Outer Loop



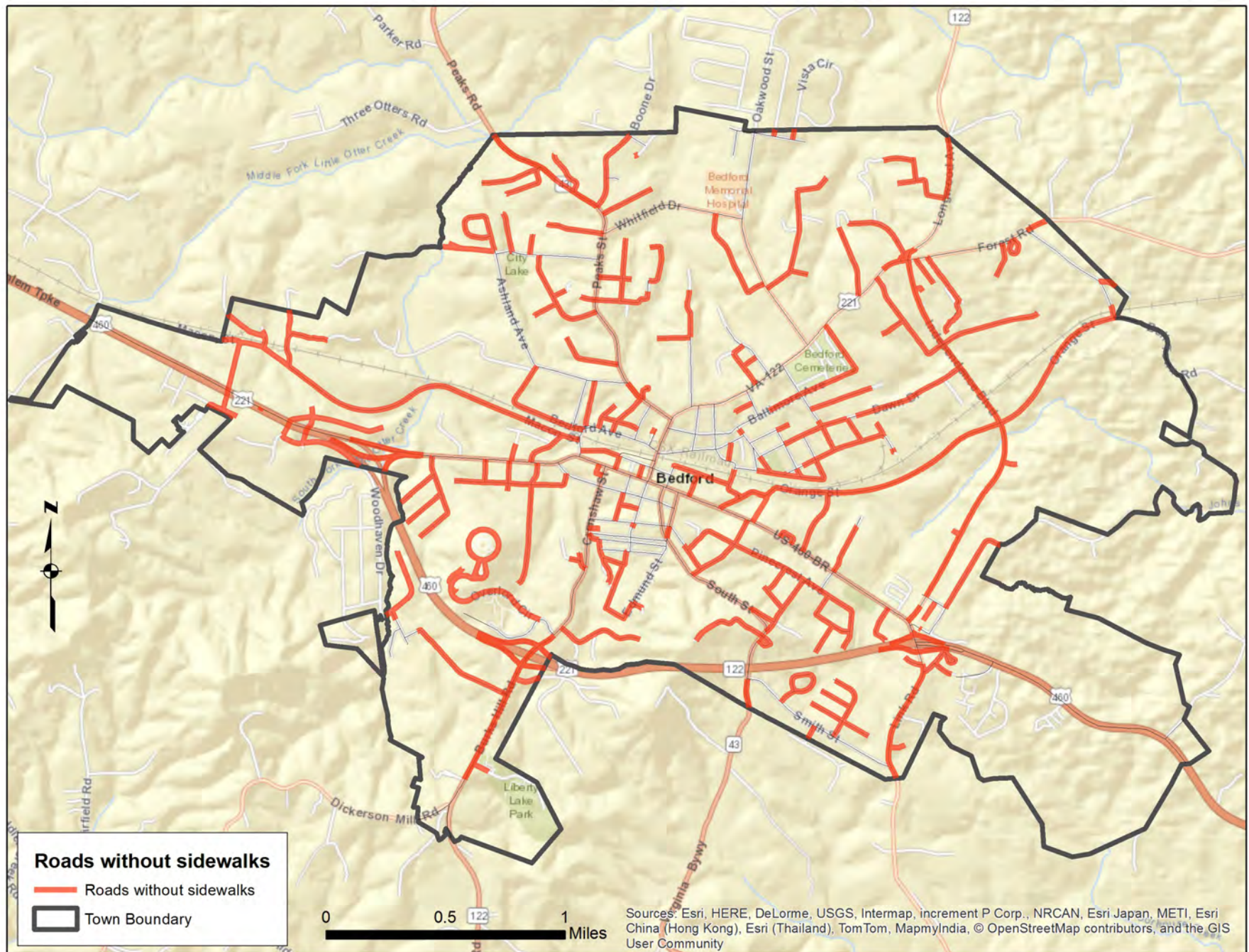
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Appendix VI: Average Daily Traffic Counts (AADT)



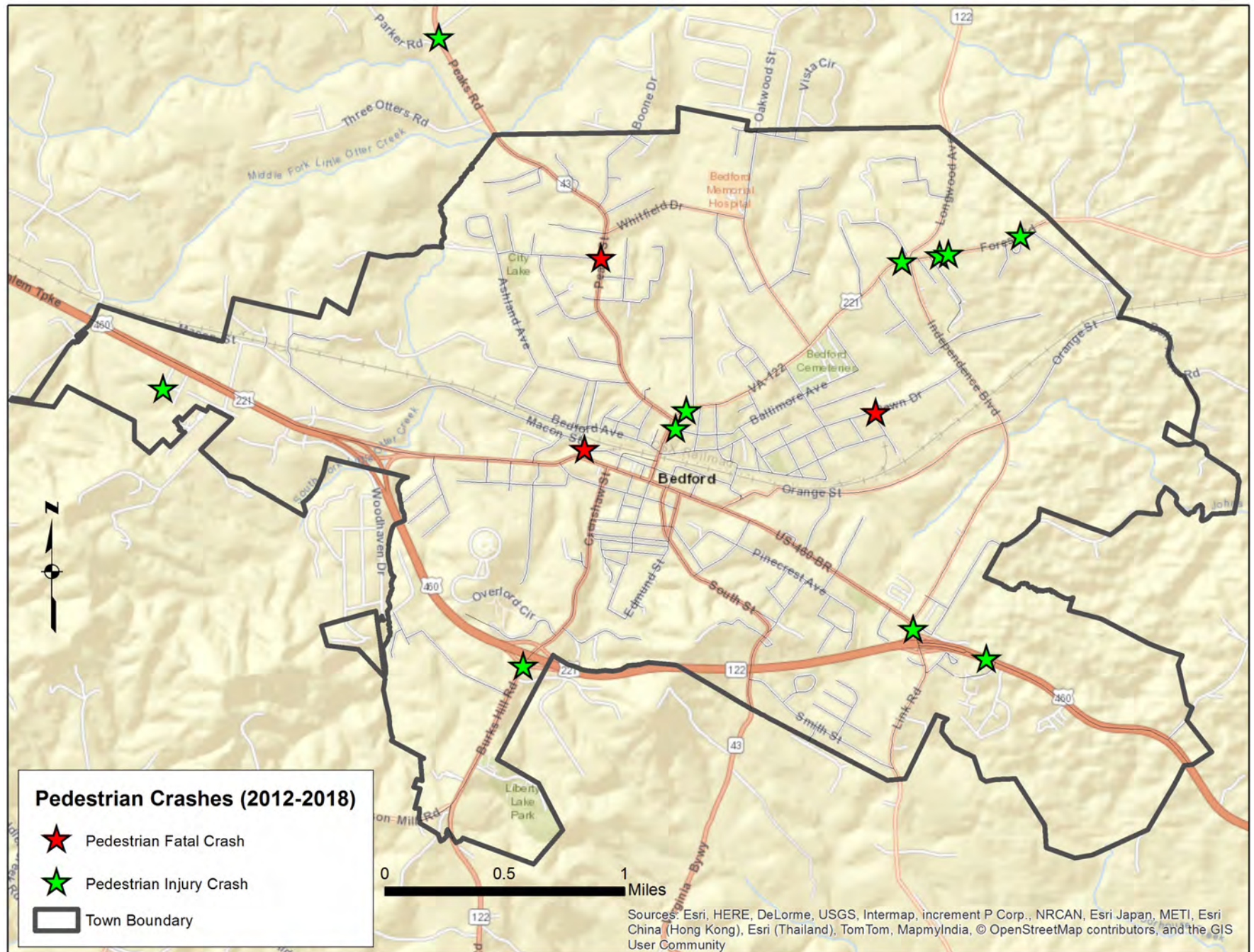
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Appendix VII: Streets without Sidewalks (on at least one side)



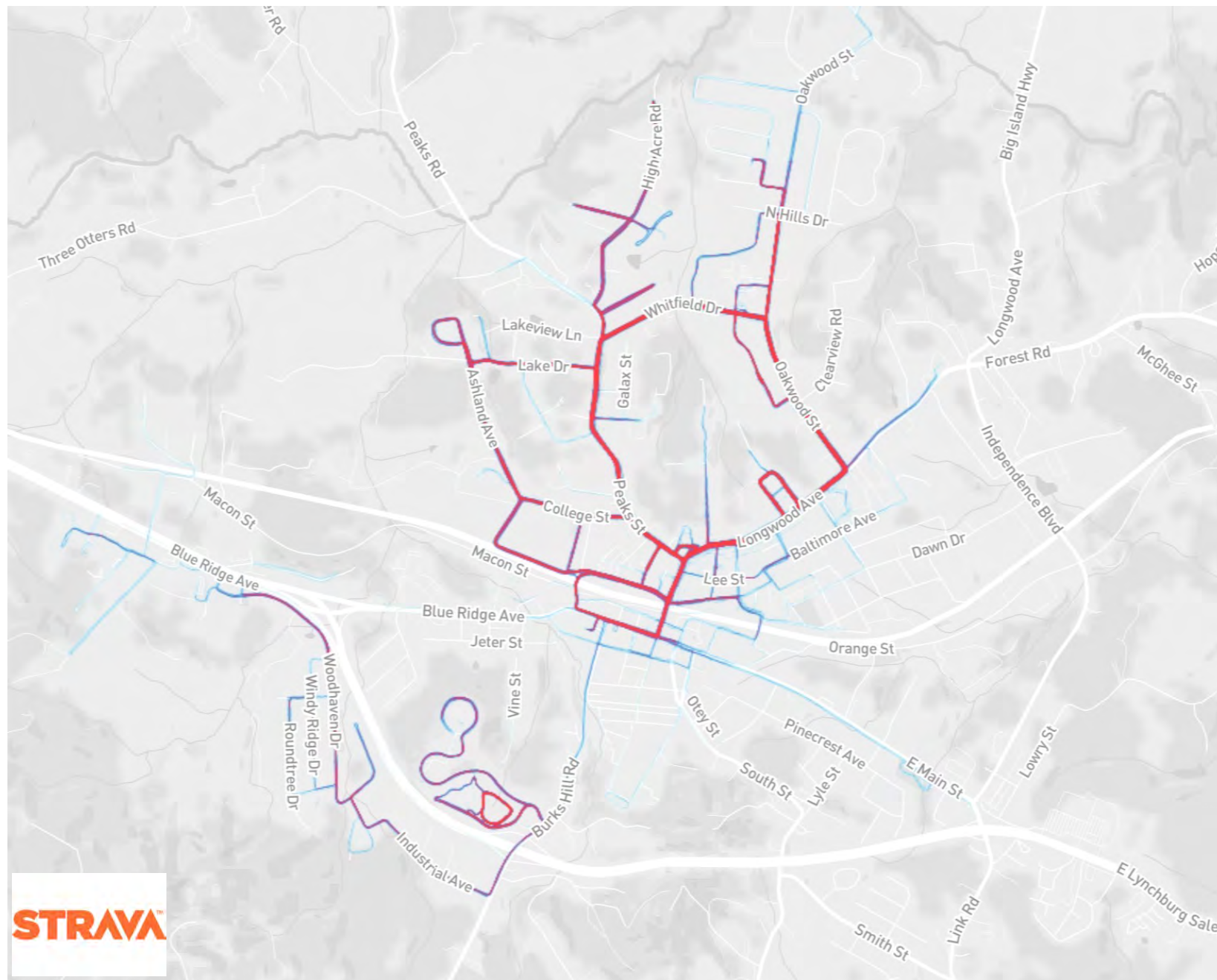
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Appendix VIII: Pedestrian Crashes (2012-2018)



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Appendix IX: Pedestrian Activity Heat Map



Data is provided by users of Strava, a mobile app that tracks exercise activity.

This heatmap shows two years worth of usage data.

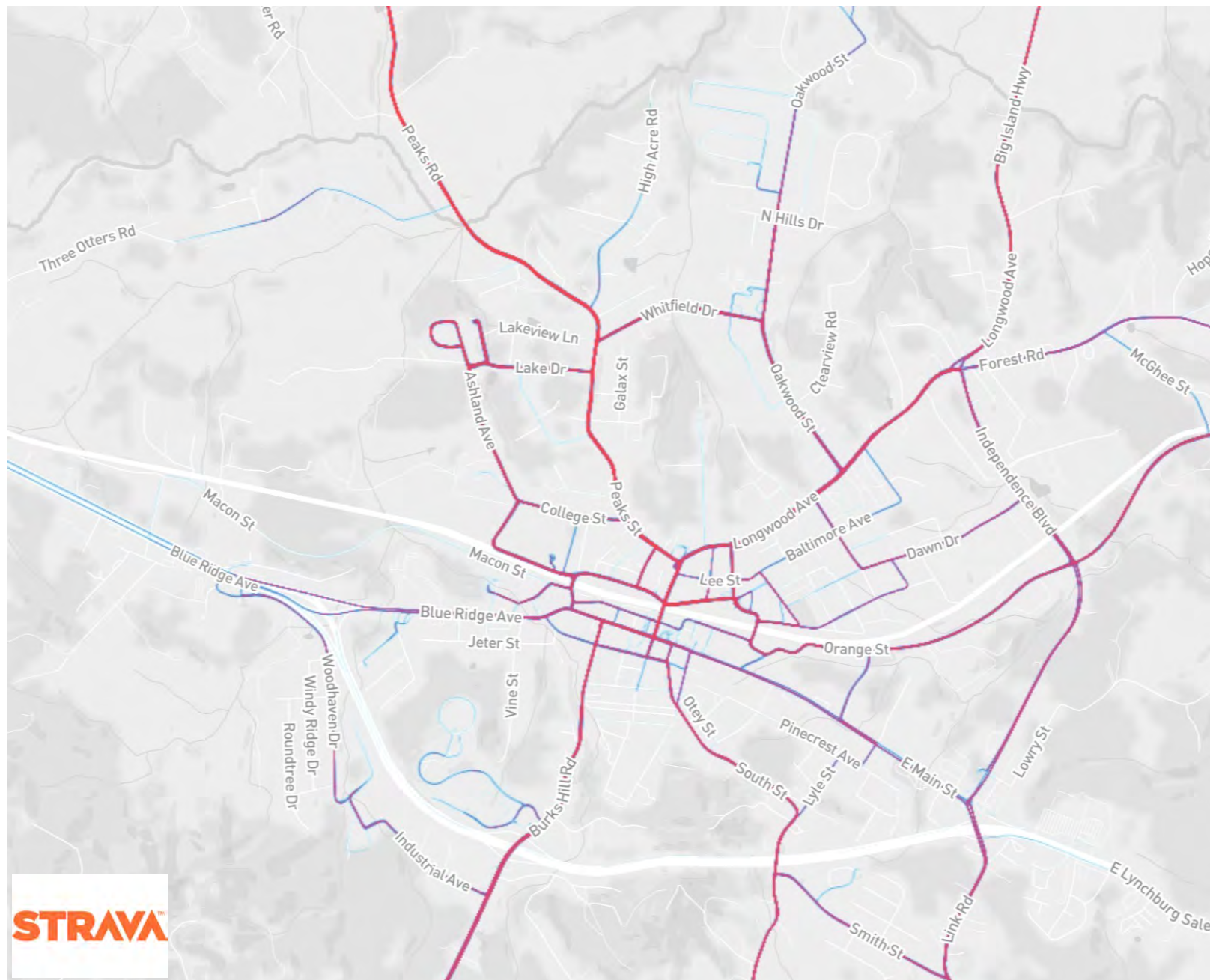
Roads and trails with very little activity will not show "heat" until several different users upload activities in that area.

Because users must consciously use the app (it does not run in the background), it can be assumed that the usage shown here is for recreational or fitness activities, and not commuting or shopping.



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Appendix X: Cyclist Activity Heat Map



Data is provided by users of Strava, a mobile app that tracks exercise activity.

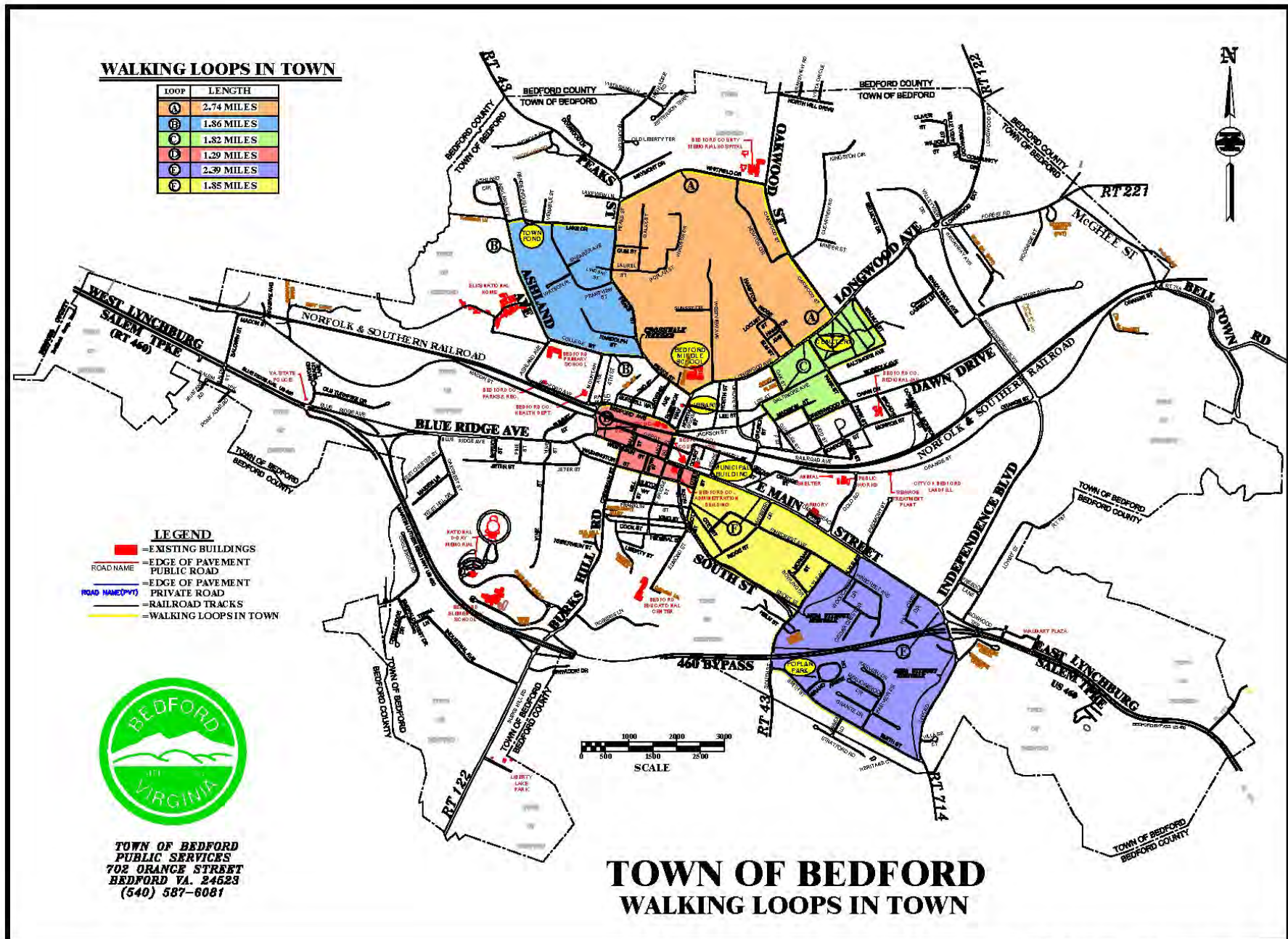
This heatmap shows two years worth of usage data.

Roads and trails with very little activity will not show “heat” until several different users upload activities in that area.

Because users must consciously use the app (it does not run in the background), it can be assumed that the usage shown here is for recreational or fitness activities, and not commuting or shopping.

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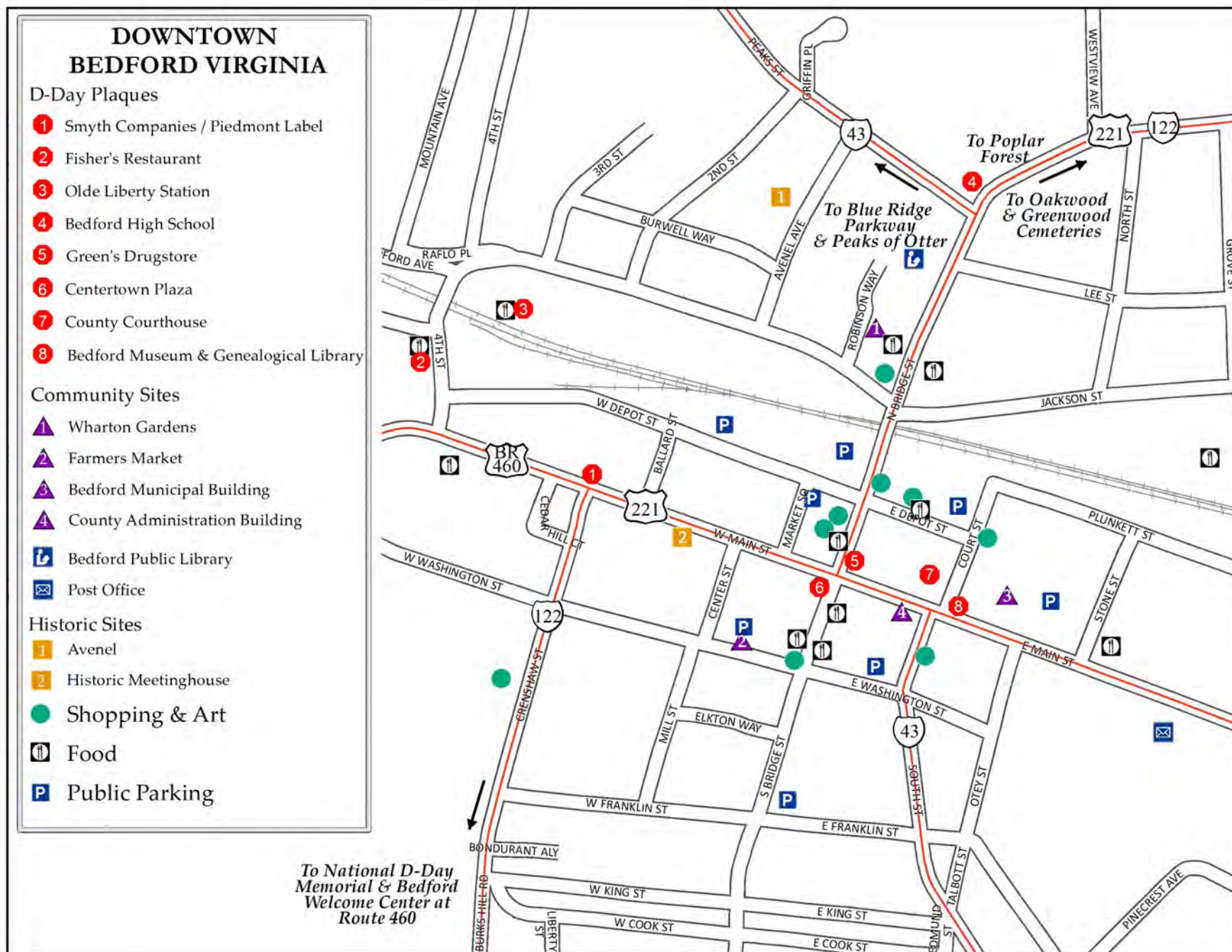
Appendix XI: Established Walking Routes



DRAWN BY CITY ENGINEERING DEPARTMENT 7/2013 (TMB)

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Appendix XII: Bedford Boys Homefront Tour



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Appendix XIII: Bibliography

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Bedford City Small Urban Area Transportation Plan 2035, Region 2000 Local Government Council, 2011

Centertown Bedford Master Plan, Land & Community Associates, 1985

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Gateway, Streetscape & Façade Improvements (City of Bedford), Frazier Associates, 2005

Independence Boulevard (Route 122) Corridor Study, Mattern & Craig, 2006

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Region 2000 Bike Plan, Region 2000 Local Government Council, 2010

Region 2000 Greenways, Blueways, and Trail Plan, Region 2000 Local Government Council, 2012

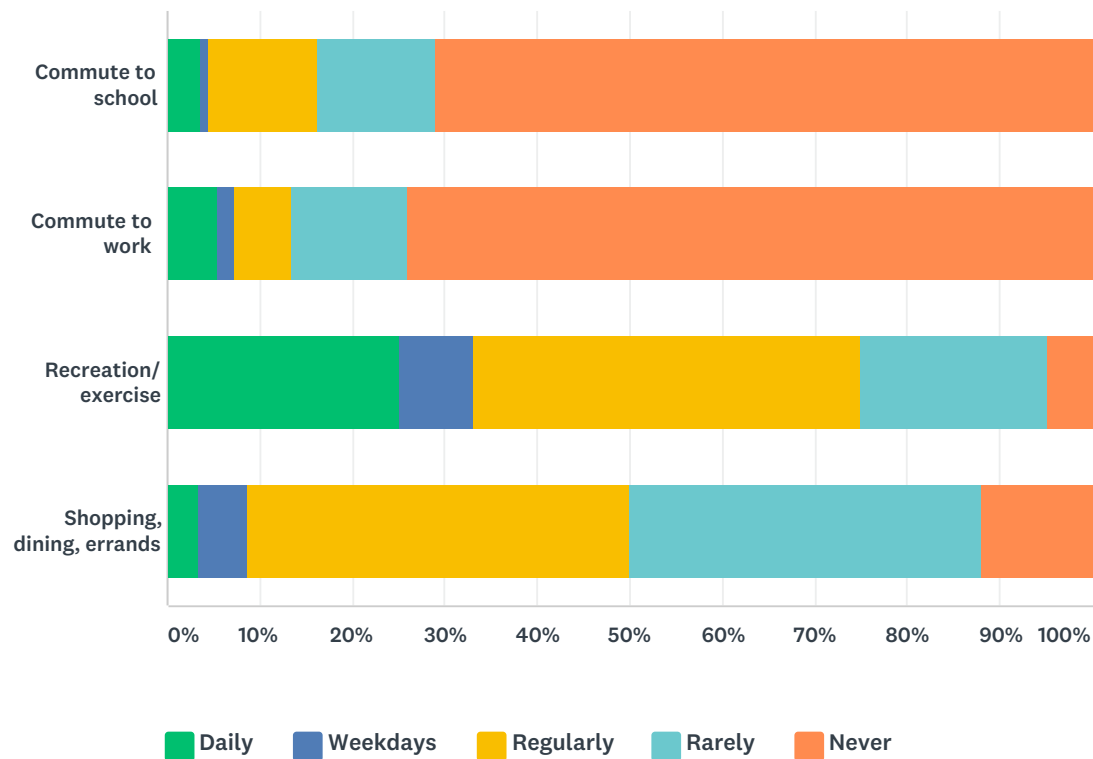
School to School Plan, Hill Studio, 2018

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Appendix XIV: Fall 2018 Community Survey

Q1 How often do you walk in the Town of Bedford and for what purpose?

Answered: 129 Skipped: 5

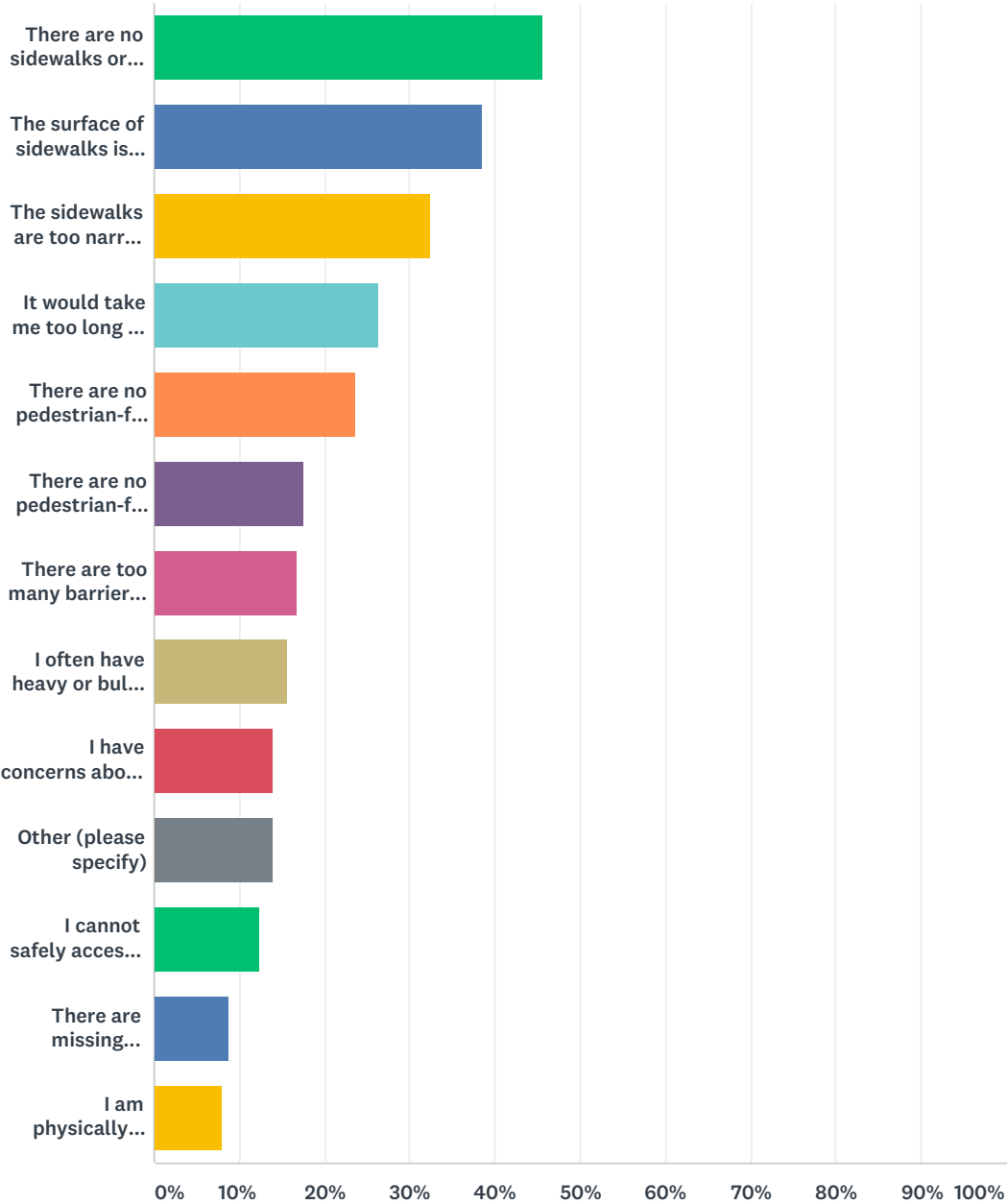


	DAILY	WEEKDAYS	REGULARLY	RARELY	NEVER	TOTAL
Commute to school	3.60% 4	0.90% 1	11.71% 13	12.61% 14	71.17% 79	111
Commute to work	5.36% 6	1.79% 2	6.25% 7	12.50% 14	74.11% 83	112
Recreation/ exercise	25.20% 32	7.87% 10	41.73% 53	20.47% 26	4.72% 6	127
Shopping, dining, errands	3.45% 4	5.17% 6	41.38% 48	37.93% 44	12.07% 14	116

Q2 Have any of the following circumstances prevented you from walking or limited the amount that you walk in the Town of Bedford?

Answered: 114 Skipped: 20

Bicycle & Pedestrian Survey



ANSWER CHOICES

RESPONSES

Bicycle & Pedestrian Survey

There are no sidewalks or missing sections of sidewalk where I travel	45.61%	52
The surface of sidewalks is not even	38.60%	44
The sidewalks are too narrow or have obstacles in the way	32.46%	37
It would take me too long to walk to the places I need to go	26.32%	30
There are no pedestrian-friendly roads or trails near my home	23.68%	27
There are no pedestrian-friendly roads or trails near my work/school	17.54%	20
There are too many barriers to walking (highways, big roads, busy intersections, etc.)	16.67%	19
I often have heavy or bulky items to carry	15.79%	18
I have concerns about crime or personal safety	14.04%	16
Other (please specify)	14.04%	16
I cannot safely access trails from where I live/work	12.28%	14
There are missing sidewalk ramps	8.77%	10
I am physically limited from walking	7.89%	9
Total Respondents: 114		

#	OTHER (PLEASE SPECIFY)	DATE
1	I feel inadequate to be of much service. The more trails the better.	11/6/2018 12:42 PM
2	Several sidewalk sections on Ashland Ave are broken. Trip hazards.	11/6/2018 12:35 PM
3	None of these apply	10/31/2018 6:13 AM
4	I walk regardless.	10/30/2018 9:31 PM
5	Parking is a problem	10/29/2018 5:26 AM
6	Bedford drivers show very little regard for pedestrians. Pedestrian/ vehicle laws are not enforced. I have very nearly been struck while crossing in marked crosswalks.	10/28/2018 9:37 PM
7	Although the speed limit is 25mph on South St, cars fly-- 35mph or more	10/22/2018 7:37 AM
8	Bushes and trees onto or over top of sidewalks. Grass growing onto and grass clippings being left on roads and sidewalks. Dirt and gravel piling up after some rain storms. Look at the underpass after a hard rain and it never gets cleaned up	10/17/2018 2:47 PM
9	Also a busy intersection I would have to cross. I only live a mile from work, and sadly don't feel safe enough to walk/run/bike.	10/17/2018 10:26 AM
10	There is NO need. Other more important things need to be done in Bedford. Focus on bringing businesses in for more Job's for Town and County residents.....	10/4/2018 8:49 AM

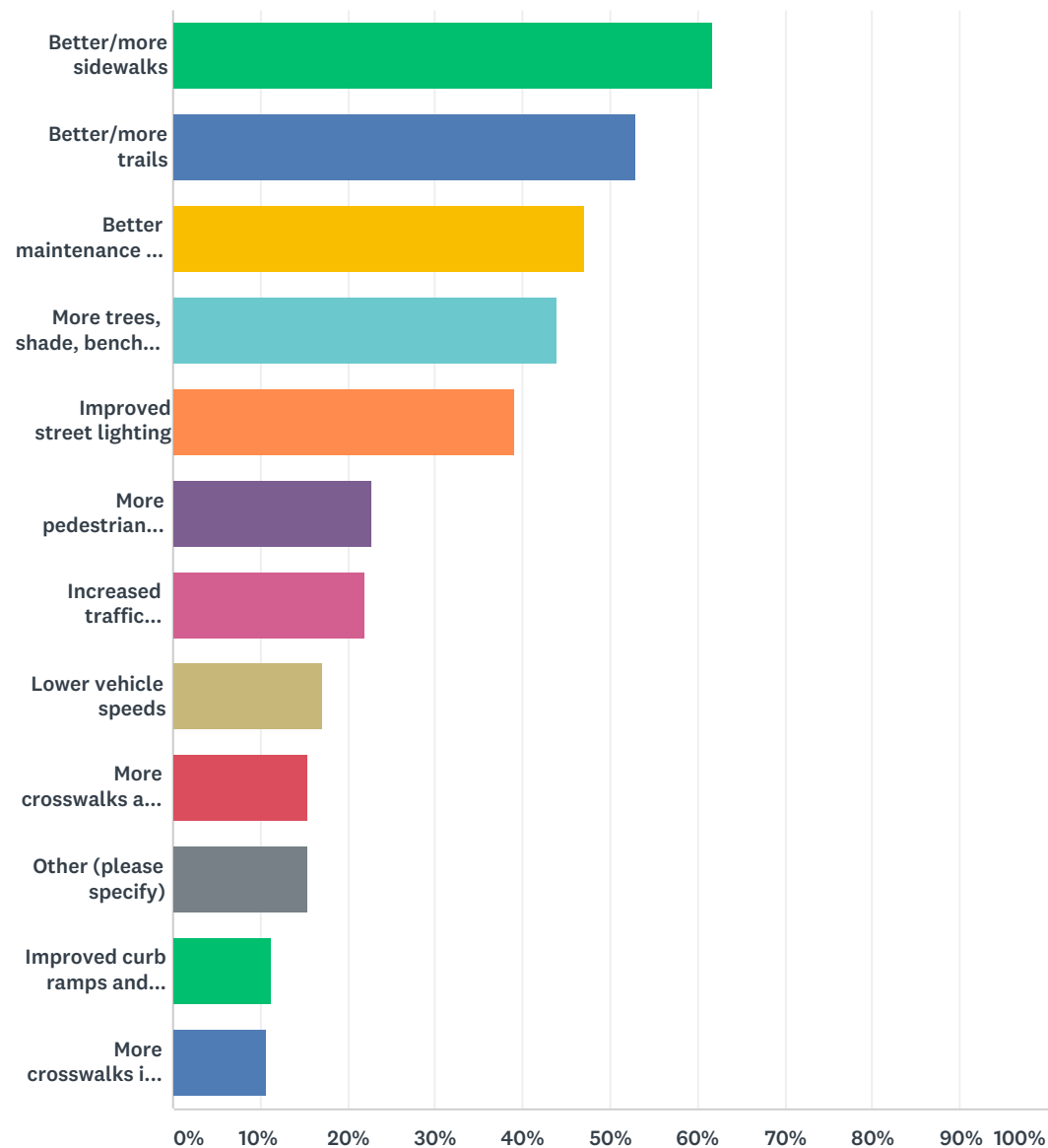
Bicycle & Pedestrian Survey

11	I have a stroller to push	10/3/2018 11:33 AM
12	lack of places to walk - the loop gets a little boring	10/3/2018 11:30 AM
13	A bike or walk path is needed especially for bikes pulling a child's trailer and for young kids to safely ride on.	10/2/2018 5:11 PM
14	Vehicles driving too fast down residential streets making it difficult to cross or unsafe to cross or walk where there are no sidewalks, especially during early morning hours 5:30 - 7:30 AM and evening hours 5:00 - 7:00 PM. Also in some areas cars are parked on the sidewalks forcing you to go out into the street to get around them.	10/2/2018 7:23 AM
15	Shrubs impede some walkways	9/27/2018 2:10 PM
16	Possible lack of public bathroom facilities.	9/27/2018 10:08 AM

Q3 What types of improvements would encourage you to walk more?

Answered: 123 Skipped: 11

Bicycle & Pedestrian Survey



ANSWER CHOICES	RESPONSES	
Better/more sidewalks	61.79%	76
Better/more trails	52.85%	65

Bicycle & Pedestrian Survey

Better maintenance of existing sidewalks and paths	47.15%	58
More trees, shade, benches, or other amenities along my route	43.90%	54
Improved street lighting	39.02%	48
More pedestrian crossing signals at intersections	22.76%	28
Increased traffic enforcement for safer driving and biking around pedestrians	21.95%	27
Lower vehicle speeds	17.07%	21
More crosswalks at intersections	15.45%	19
Other (please specify)	15.45%	19
Improved curb ramps and accessibility for people with disabilities	11.38%	14
More crosswalks in the middle of the block (not at an intersection)	10.57%	13
Total Respondents: 123		

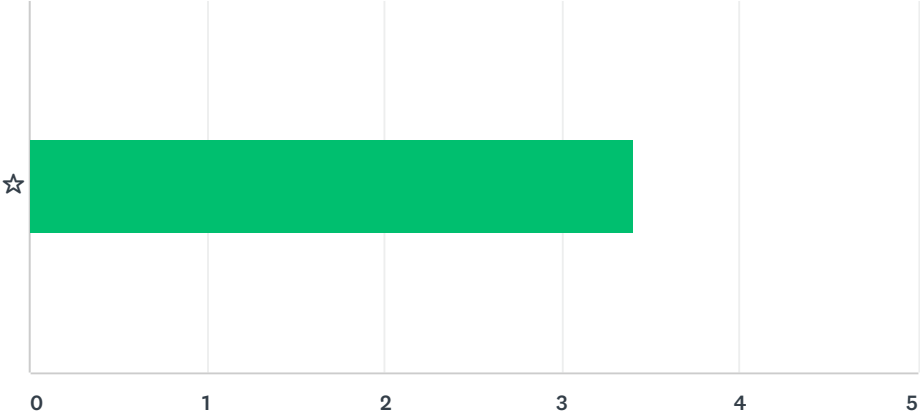
#	OTHER (PLEASE SPECIFY)	DATE
1	Educate the public about pedestrian crosswalks. Enforce the laws regarding these areas. I agree with the attached proposals: Renovation/beautification of town pond located on Lake Drive. Suggest partial clearing of shrubbery on right of pond. Amenities suggested include azaleas to be added on right and left sides of pond; also add park benches for enjoyment and install a fountain to enhance water quality of pond. The current walking route on College Street, Ashland Avenue, Lake Drive, and Peaks Street offer frequently utilized residential streets with existing sidewalks. The above improvements are an easy addition to further encourage residents to walk more.	11/6/2018 12:46 PM
2	Put a blinking yellow light at Peaks St and College Street. My husband was in the crosswalk and a police cruiser went straight through the crosswalk.	11/6/2018 12:42 PM
3	Speed bumps would help in the Primary School area. [Attached text] Renovation/beautification of town pond located on Lake Drive. Suggest partial clearing of shrubbery on right of pond. Amenities suggested include azaleas to be added on right and left sides of pond; also add park benches for enjoyment and install a fountain to enhance water quality of pond. The current walking route on College Street, Ashland Avenue, Lake Drive, and Peaks Street offer frequently utilized residential streets with existing sidewalks. The above improvements are an easy addition to further encourage residents to walk more. We are happy to help maintain the town pond area. We are happy to contribute towards a purchase of a fountain for the pond. This will help oxygenate the pond.	11/6/2018 12:32 PM
4	Along Ashland Avenue, some homeowners have allowed shrubs and vegetation to partially block sidewalks. Some pile debris on the sidewalk. Renovation/beautification of town pond located on Lake Drive. Suggest partial clearing of shrubbery on right of pond. Amenities suggested include azaleas to be added on right and left sides of pond; also add park benches for enjoyment and install a fountain to enhance water quality of pond. The current walking route on College Street, Ashland Avenue, Lake Drive, and Peaks Street offer frequently utilized residential streets with existing sidewalks. The above improvements are an easy addition to further encourage residents to walk more.	11/6/2018 12:27 PM

Bicycle & Pedestrian Survey

5	Skip everything else and just get us a bus system already.	10/30/2018 5:13 PM
6	B.U.S we need at least a town bus!	10/30/2018 10:39 AM
7	More trash cans and doggie poop stations would be nice.	10/29/2018 8:14 AM
8	More trash cans and doggie poop bag stations would be nice.	10/29/2018 7:57 AM
9	Parking available in different places.	10/29/2018 5:26 AM
10	Where to walk to if there's nothing to do or buy after I get there!!	10/19/2018 5:01 PM
11	Also some water fountains for people and for dogs. If you want to do a road trip go up to D.C. and check out the Mount Vernon Trail. Wonderful bike and pedestrian trail. Plenty of water fountains and bathrooms.	10/19/2018 2:54 PM
12	Holding citizens accountable for keeping bushes/trees maintained so they don't grow over the sidewalk, as well as keeping grass trimmings off of road/sidewalk. Installation of a water fountain that can also fill up water bottles. Installation of permanent restroom facilities.	10/17/2018 6:31 PM
13	Maybe a bathroom around the loop somewhere since the stores don't want people using theirs.	10/17/2018 2:47 PM
14	The round, raised, BRWA meters are a trip hazard. Town sidewalks are covered with these.	10/4/2018 8:21 PM
15	None.....see above answer.	10/4/2018 8:49 AM
16	somewhere to go when I get there?	10/4/2018 8:30 AM
17	Add pet cleanup stations along favorite walking routes. Add a bike lane where feasible, for instance, Peaks Street, Oakwood Street and Longwood Avenue.	10/2/2018 7:29 PM
18	None	9/30/2018 6:57 PM
19	Water fountains would also be great. High ones for people and low ones for dogs.	9/28/2018 8:05 AM

Q4 In your opinion, how walkable is the Town of Bedford?

Answered: 129 Skipped: 5



	VERY POOR	POOR	FAIR	GOOD	EXCELLENT	TOTAL	WEIGHTED AVERAGE
☆	2.33% 3	7.75% 10	42.64% 55	42.64% 55	4.65% 6	129	3.40

Q5 What are the most problematic locations for walking in the Town of Bedford? Please be as specific as possible.

Answered: 89 Skipped: 45

#	RESPONSES	DATE
1	Peaks Street- narrow sidewalks in 600 block	11/8/2018 8:39 AM
2	Areas with broken or cracked side walks can be found in most neighborhoods.	11/6/2018 12:46 PM
3	Ashland Ave from College Street to Bedford Ave-- no sidewalk Bedford Ave from Ashland Ave to 4th Street (along the tracks). No sidewalk	11/6/2018 12:44 PM
4	Bedford Ave to 4th Street along the tracks. Also Ashland Ave in front of the Elks Home	11/6/2018 12:42 PM
5	My lot backs up to the town lake. I would certainly be happy if the lake could be made cleaner with walking trails around it and trees & shrubs planted.	11/6/2018 12:38 PM
6	No cross overs at intersections.	11/6/2018 12:35 PM
7	Speed bumps would help in Primary School area.	11/6/2018 12:32 PM
8	Corner of peaks and bridge streets. Heavy traffic and lots of turning vehicles. May be time for a traffic light. Also, more crosswalks on streets crossing/intersecting bridge street.	11/2/2018 5:36 AM
9	There is nothing downtown to walk to.... its a ghost town....	10/31/2018 6:44 AM
10	Ashland Ave sidewalks, Lake drive lake is unkempt and unsightly, sidewalk on bedford ave beside railroad tracks?	10/31/2018 6:13 AM
11	Broken sidewalk on Ashland Ave.. Lake drive could use improvement around the Lake area. It's unkept and unsightly. It would be nice to have a sidewalk on Bedford Ave across from the ball fields.	10/31/2018 6:13 AM
12	handicap accessible ramps at curbs.	10/31/2018 4:50 AM
13	Ramps at intersections	10/31/2018 3:59 AM
14	Neighborhoods	10/30/2018 9:30 PM
15	Wal-Mart and that area.	10/30/2018 5:13 PM
16	I live on one side of town...Walmart...jobs are on the other. I have no way to make a living or feed my family by walking everywhere let alone the time to.	10/30/2018 10:39 AM
17	Halfway down Jackson St one of the sidewalks end. The areas near the center of town are much better than those away from town or not in the "nicer" areas. For example the sidewalks are bad near Otey St. However they're great down most of Main. To lift a town you need to focus on the not-as-pretty areas. It could help increase foot traffic to local businesses. Especially downtown. Considering it's much too far to walk to the Walmart center from across town. And people who have no cars, have no option of public transportation.	10/30/2018 9:47 AM

Bicycle & Pedestrian Survey

18	A "No Thru Traffic" sign placed at the intersection of Route 43 and Lake Drive is so needed as people are following their GPS and trying to take a short cut from Route 43 to Route 460 that takes them through a neighborhood instead of through town. I walk this street everyday and at times it is like a freeway and these individuals are no where near the speed limit.	10/29/2018 8:14 AM
19	Lake Drive and Ashland Ave are often used as a short cut from route 43 route 460. (People following GPS is the main culprit.) It would be nice if a "No Thru Traffic" sign or like kind where put up at the intersection of Route 43 and Lake Drive.	10/29/2018 7:57 AM
20	The hill on Whitfield.	10/29/2018 5:26 AM
21	Any crosswalks. Drivers fail to yield to pedestrians legally crossing the streets.	10/28/2018 9:37 PM
22	Near D Day memorial	10/28/2018 5:24 AM
23	Only one side of the street has a sidewalk on some parts of Longwood and other streets; some sidewalks are narrow and have the street on one side, and overgrown bushes on the other (Peaks st); due to trees and/or poor lighting, I will not walk the loop after dark.	10/27/2018 10:22 AM
24	Streets off of the main thoroughfares are often not walker friendly.	10/26/2018 12:48 PM
25	Intersection of Main and Bridge Streets	10/25/2018 11:51 PM
26	No sidewalks on Link Road	10/23/2018 9:00 AM
27	Peaks St from Boone to Nichols no sidewalk have to walk on shoulder	10/22/2018 9:18 PM
28	Need better access on both sides of the RR tracks in the area of Liberty Landscape.	10/22/2018 4:05 PM
29	Side streets, alleyways, and suburbs	10/22/2018 7:37 AM
30	Finding good parking to get out and walk. Numerous parking spots along the sidewalks have signs or trashcans posted where you are not able to open passenger doors of the vehicle. These need to be posted at the "white parking lines" and not in between them. Also , lack of handicap parking in town.	10/20/2018 1:01 PM
31	On the loop there are a lot of repairs that need to be made.	10/19/2018 7:33 PM
32	East Main St	10/19/2018 5:01 PM
33	Independence Avenue. There is plenty of room to add a bike trail/pedestrian trail.	10/19/2018 2:54 PM
34	Drivers don't observe crosswalks.	10/18/2018 4:51 PM
35	From dogwood lane to maymont- no sidewalk and traffic is dangerous	10/18/2018 12:21 PM
36	Breaking up exercise due to intersections. Lots of traffic.	10/18/2018 7:32 AM
37	maybe 122 from the shell station out to liberty lake park	10/18/2018 7:10 AM
38	Crossing the street at the banks at suntrust and union bank.	10/17/2018 8:31 PM
39	Safety	10/17/2018 6:42 PM
40	Under the train trestle near Liberty Station is always littered with large rocks/debris. No sidewalks on Independence to link two sides of town together. Trees are overgrown on College Street near the Elks home. Rough sidewalk coming up Lake Drive.	10/17/2018 6:31 PM

Bicycle & Pedestrian Survey

41	Longwood at apartments bushes grow out and rain and mud stay on sidewalk. Across street houses leave grass covering and grass growing over sidewalk. House past Oakwood street let's trees take over sidewalk same as second street with bushes taking over road off of avenal. Oak and Baltimore sidewalk covered with bushes. Really ride any street and you will see where sidewalks are covered	10/17/2018 2:47 PM
42	Connection of Jackson > Grove > Orange > Main Street and intersection at CVS on Main Street	10/17/2018 10:26 AM
43	Independence Ave.	10/17/2018 10:23 AM
44	Anywhere other than the Loop	10/17/2018 10:21 AM
45	Main Street- narrow walkways, uneven sidewalks, needs crosswalks	10/17/2018 10:16 AM
46	Independence Blvd	10/17/2018 10:08 AM
47	Anywhere around the old Middle School and on main and anywhere near Walmart	10/16/2018 9:11 PM
48	Depot Street is not a safe walking street	10/16/2018 2:39 PM
49	In front of Health Dept and Old Rec Dept has no sidewalk. No sidewalk going from Old Rec Dept to Primary School.	10/4/2018 8:21 PM
50	none	10/4/2018 8:49 AM
51	no where to go when you get there....I can't understand the sidewalk issue, when we have so many other needy things that could be addressed such as new businesses, places to work, maybe a theater or bowling alley etc etc etc...If you want any gauge as to if there is a walking issue, check out the LOOP any given night??? It doesn't seem to hinder those folks, daytime or night....as for uptown, etc etc etc, I really think you are putting the wagon before the horse with sidewalks...where are all these people going to walk to??? The antique stores???? Because that's all we have to offer...	10/4/2018 8:30 AM
52	A lack of running trails is problematic.	10/3/2018 4:17 PM
53	Uneven sidewalks	10/3/2018 3:20 PM
54	MOST STREETS	10/3/2018 2:59 PM
55	The Loop Liberty Lake Park neighborhoods	10/3/2018 2:52 PM
56	Neighborhoods	10/3/2018 11:40 AM
57	Uneven sidewalks for kids in strollers, wagons,etc	10/3/2018 11:33 AM
58	lack of locations	10/3/2018 11:30 AM
59	Centertown, hidden areas at bottom of hills	10/3/2018 11:02 AM
60	Limited access to see oncoming traffic- (Whitfield drive)	10/3/2018 10:55 AM
61	Around Beale's - crossing the street to get to the main parking area.	10/3/2018 10:35 AM
62	No bike trails	10/3/2018 9:20 AM
63	Independence Ave. People use this route, but it is. It walking/biking friendly or safe. When it rains, pedestrians walk in the street. It can be dangerous. Town to LMS/LHS. Town to BSTC, town to Bedford visitors center/liberty lake	10/3/2018 6:25 AM
64	Narrow sidewalks on Peaks Street that need repair.	10/2/2018 7:29 PM

Bicycle & Pedestrian Survey

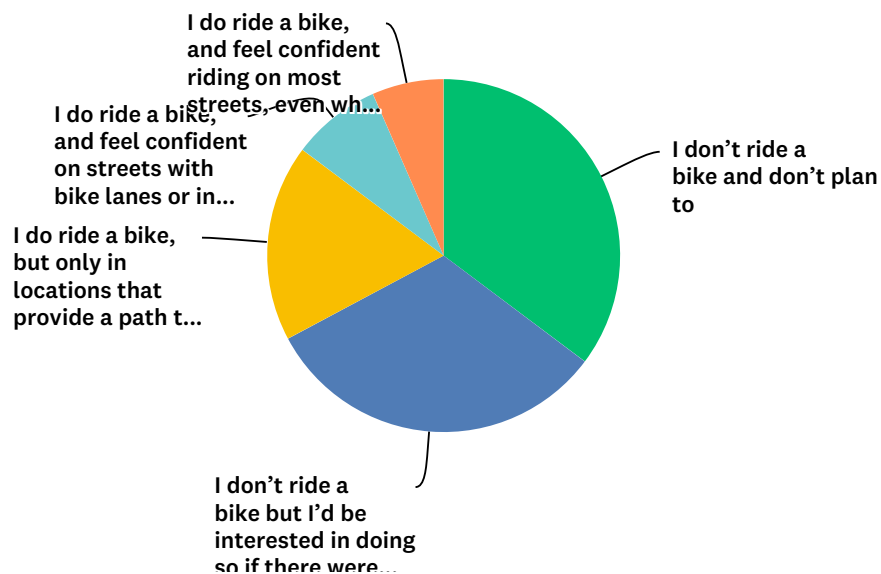
65	Depot street needs a sidewalk for those shops.	10/2/2018 5:11 PM
66	Distances between places to shop and eat, limited recreational biking or walking trails	10/2/2018 4:40 PM
67	Second Street, Bedford Ave.to Ash Ave in front of the recreation fields and around past the English Meadows campus. Also Peaks Street where sidewalks are very narrow and it is difficult to cross. Downtown only the main streets are pedestrian friendly. Depot street is hard to traverse.	10/2/2018 7:23 AM
68	Intersection near food lion, independence blvd	9/30/2018 6:57 PM
69	Independence through to the commercial center at WalMart, anything past Independence as E Main turns under 460 and into Falling Creek Road.	9/28/2018 3:01 PM
70	Sidewalks not well maintained. No bike trails - i.e. along Independence. There is plenty of room to make it more conducive to pedestrians.	9/28/2018 8:05 AM
71	Crossing the street near Wells Fargo.... traffic is always going and people don't know how to yield to pedestrians	9/27/2018 8:24 PM
72	Independence Blvd.	9/27/2018 6:56 PM
73	In general I don't like that sidewalks are non existant here. I would walk more and let my kids ride their bikes more.	9/27/2018 6:05 PM
74	I can't think of any areas that are difficult to walk.	9/27/2018 2:03 PM
75	Jackson Street towards Beales. Need a sidewalk on the loft side. Also, need to trim bushes back.	9/27/2018 1:31 PM
76	The corner of North Bridge St and Depot St is very narrow and uneven. Can cause someone to trip out lose their balance.	9/27/2018 1:02 PM
77	The loop	9/27/2018 12:23 PM
78	Areas near the Welcome center, and areas that will soon be within town limits, like North Hills drive and Vista Circle	9/27/2018 12:11 PM
79	Not enough shade for area around the post office. I regularly visit to PO but am less inclined to walk there in the summer. Where would i walk to on sundays after church? Not much open except a few places.	9/27/2018 11:41 AM
80	I dont know how this would be fixed but when some people see me walking across the road, they speed up so that I'm forced to run across the road with my stroller. Some places that I need to go to a different sidewalk have no pedestrian walk so I walk across the road and people get irritated because they want to maintain speed on the roads with no pedestrian cross.	9/27/2018 11:36 AM
81	Centertown. Heavy traffic.	9/27/2018 11:33 AM
82	Independence Blvd/Longwood Ave. It would be nice to have a sidewalk from Longwood Ave connect to a sidewalk on Independence.. and then the sidewalk on Independence connect with one on Main St.	9/27/2018 11:01 AM
83	Link Road from US 460 to Smith Street	9/27/2018 10:58 AM
84	Walking down peaks st the sidewalks are horrible	9/27/2018 10:58 AM
85	Other than the loop there's not many places with sidewalks or the sidewalks end	9/27/2018 10:50 AM
86	Longwood Ave	9/27/2018 10:50 AM
87	Burks Hill Road to BES and LLP. To Walmart via Independence.	9/27/2018 10:49 AM

Bicycle & Pedestrian Survey

88	Independence Blvd. has no access along its length. Moving from East Main to reach Taco Bell, Walmart, etc. is difficult and risky. Sidewalks on Longwood approaching Food Lion are way too narrow for safely passing another person or carrying groceries. Crossing from Food Lion to DQ etc. can be risky. Baltimore runs out of sidewalks and is risky walk. Sidewalks on North Bridge St. at Peaks are not continuous on side East bound side of Bridge to Longwood forcing crossover. Sidewalks on East Main are not continuous on both sides forcing crossover in middle of East Main near Boone Tractor creating unsafe crossover. Sidewalks on Crenshaw/Burke's Hill are way too narrow and often overgrown for safe passage and need protective railings in some locations. No sidewalks by Health Dept and Rec fields making walking risky and no connection to sidewalks near Elks Home. Crossing at RR bridge on 4th St is very dangerous due to fast cars, poor sight lines and Yield sign that is mostly ignored.	9/27/2018 10:08 AM
89	Uneven sidewalks Narrow spacing of sidewalks to allow for 2 way walking traffic	9/27/2018 10:02 AM

Q6 What statement best describes you?

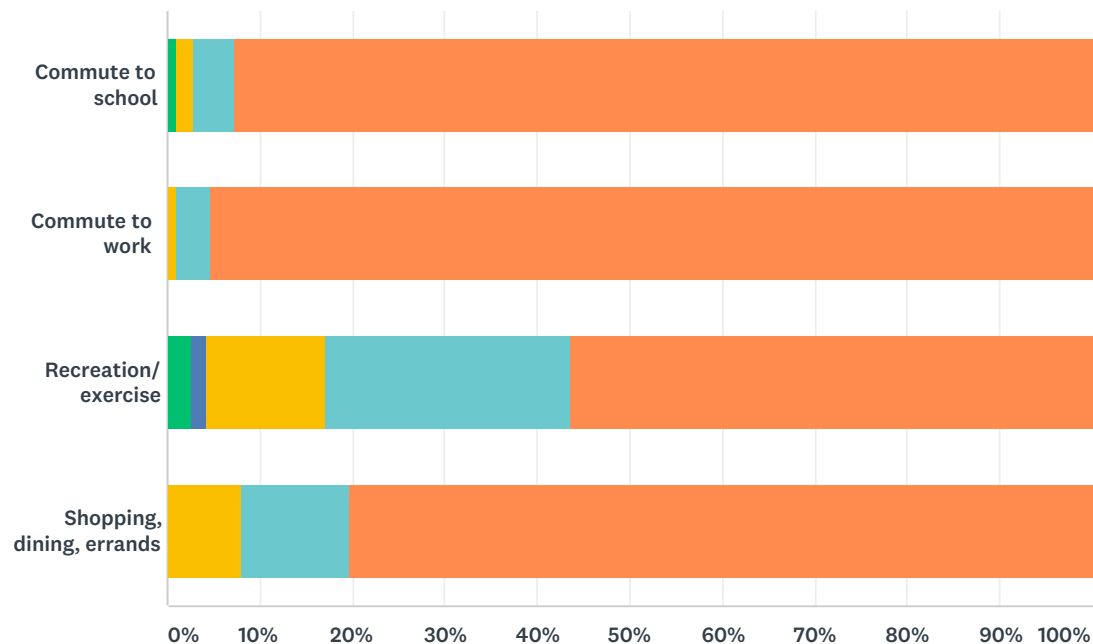
Answered: 122 Skipped: 12



ANSWER CHOICES	RESPONSES	
I don't ride a bike and don't plan to	35.25%	43
I don't ride a bike but I'd be interested in doing so if there were safe places to ride	31.97%	39
I do ride a bike, but only in locations that provide a path that is separated from traffic	18.03%	22
I do ride a bike, and feel confident on streets with bike lanes or in some cases mixing with traffic on slower-speed streets	8.20%	10
I do ride a bike, and feel confident riding on most streets, even when traffic is moving fast	6.56%	8
TOTAL		122

Q7 How often do you bicycle in the Town of Bedford and for what purpose?

Answered: 118 Skipped: 16



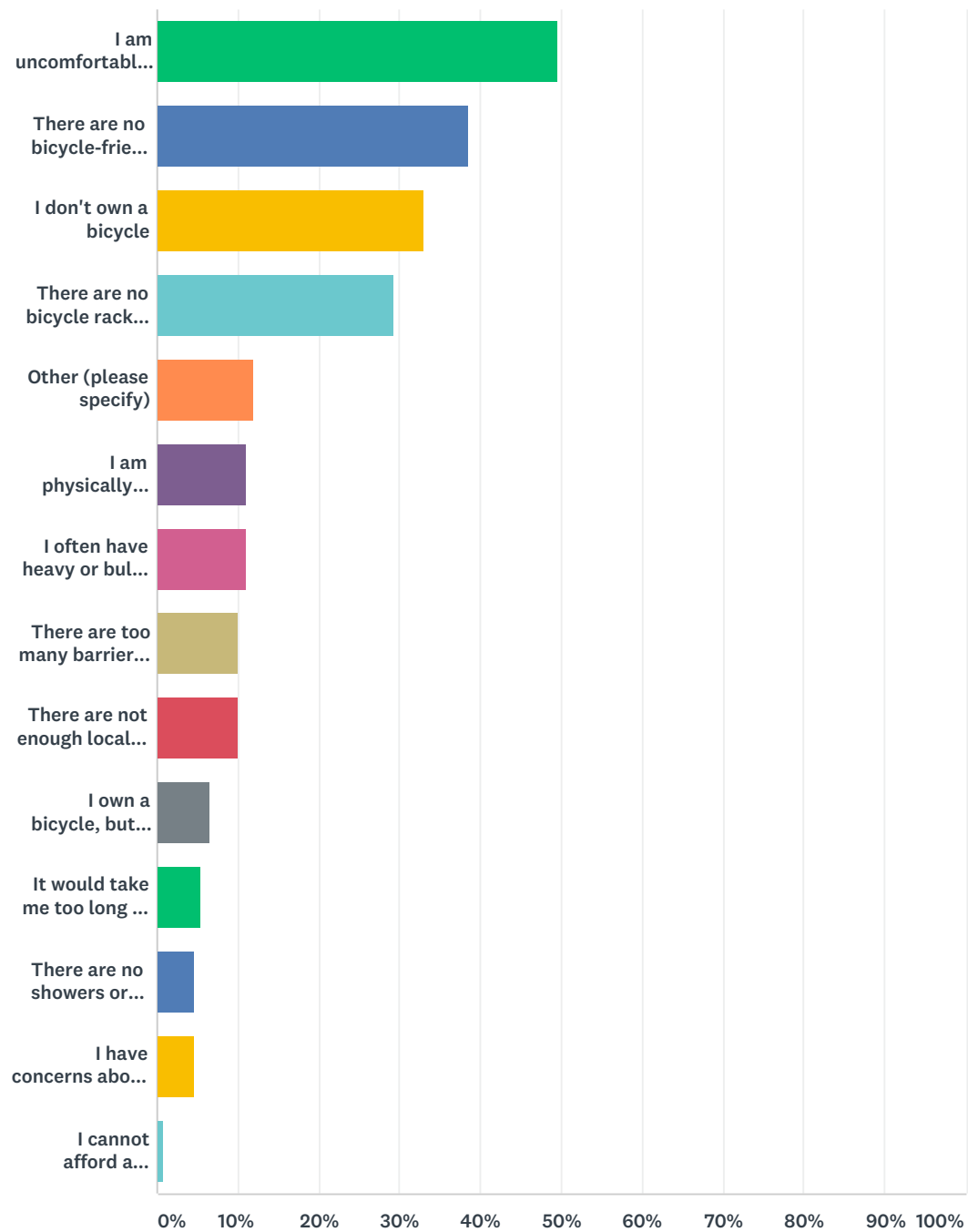
■ Daily
 ■ Weekdays
 ■ Regularly
 ■ Rarely
 ■ Never

	DAILY	WEEKDAYS	REGULARLY	RARELY	NEVER	TOTAL
Commute to school	0.91% 1	0.00% 0	1.82% 2	4.55% 5	92.73% 102	110
Commute to work	0.00% 0	0.00% 0	0.91% 1	3.64% 4	95.45% 105	110
Recreation/ exercise	2.56% 3	1.71% 2	12.82% 15	26.50% 31	56.41% 66	117
Shopping, dining, errands	0.00% 0	0.00% 0	8.04% 9	11.61% 13	80.36% 90	112

Q8 Have any of the following circumstances prevented you from bicycling or limited the amount that you bike in the Town of Bedford?

Answered: 109 Skipped: 25

Bicycle & Pedestrian Survey



Bicycle & Pedestrian Survey

ANSWER CHOICES	RESPONSES	
I am uncomfortable sharing the road with cars and trucks that are driving fast	49.54%	54
There are no bicycle-friendly roads or trails near my home	38.53%	42
I don't own a bicycle	33.03%	36
There are no bicycle racks or other safe places to park my bike	29.36%	32
Other (please specify)	11.93%	13
I am physically limited from riding	11.01%	12
I often have heavy or bulky items to carry	11.01%	12
There are too many barriers to biking (wide intersections, highways, streams, etc.)	10.09%	11
There are not enough local places to purchase bicycle, equipment, or repair services	10.09%	11
I own a bicycle, but it's not in riding condition	6.42%	7
It would take me too long to bike to the places I need to go	5.50%	6
There are no showers or changing rooms at my work/school	4.59%	5
I have concerns about crime or personal safety	4.59%	5
I cannot afford a bicycle	0.92%	1
Total Respondents: 109		

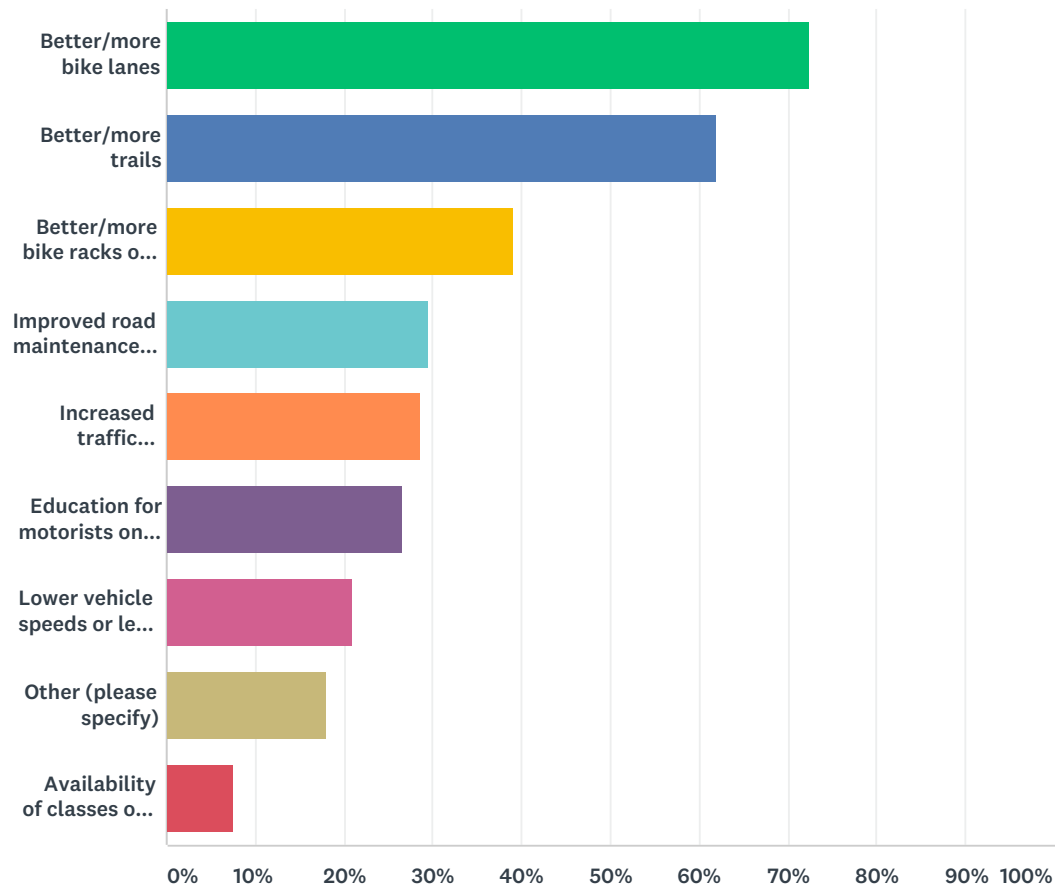
#	OTHER (PLEASE SPECIFY)	DATE
1	Don't bicylce	10/29/2018 5:28 AM
2	Drivers fail to share the road	10/28/2018 9:41 PM
3	Family would ride more if there were more bike paths	10/22/2018 2:33 PM
4	I only bike in Bedford after 530 pm on weekdays due to traffic and no bike lanes. Weekends I don't mind riding thru town at all.	10/17/2018 8:39 PM
5	Need bike lanes	10/16/2018 8:39 PM
6	Love the Bedford area mountain bike trails but sharing the roads/lanes with daily commuters isn't worth the risks especially the main streets. Side walks are not for biking and streets not marked with bike lanes.	10/16/2018 2:51 PM

Bicycle & Pedestrian Survey

7	I hate for everything to sound negative....but honestly, how many folks do you really think ride/will ride to work, play. etc on a bicycle if you make improvements? I am on the town streets daily, I can name the people who ride a bike, and almost all of them ride for recreation purposes? I also disagree with wasting the towns (and taxpayers) money on the Crenshaw St deal....I mean really..do you honestly think people will walk from DDay to town???? In this day and age....It would suit the town better to forget all of this and buy a nice bus!!! Haul them to town, then haul them back....Come to think of it, it probably would be cheaper!	10/4/2018 8:36 AM
8	My son and I enjoy riding together but I don't feel safe with him riding in traffic; so we journey to Lynchburg or Roanoke to ride the greenways or Falling Creek Park.	10/2/2018 3:51 PM
9	Don't bike	9/30/2018 6:58 PM
10	I would love to bike to work but prefer a bike route seperate from traffic. Need a bike lane on Falling Creek Road from town to Falling Creek Park.	9/29/2018 8:37 AM
11	Hub	9/27/2018 1:04 PM
12	Bedford needs designated bike lanes to encourage residents and visitors to bike while also ensuring their safety.	9/27/2018 11:05 AM
13	Ban cell phone use while driving. Never safe to ride a bicycle on any public road or street. Drivers are on cell phones.	9/27/2018 11:03 AM

Q9 What types of improvements would encourage you to ride a bicycle more often?

Answered: 105 Skipped: 29



ANSWER CHOICES	RESPONSES	
Better/more bike lanes	72.38%	76
Better/more trails	61.90%	65
Better/more bike racks or bike parking options	39.05%	41
Improved road maintenance (e.g. filling potholes, street sweeping)	29.52%	31

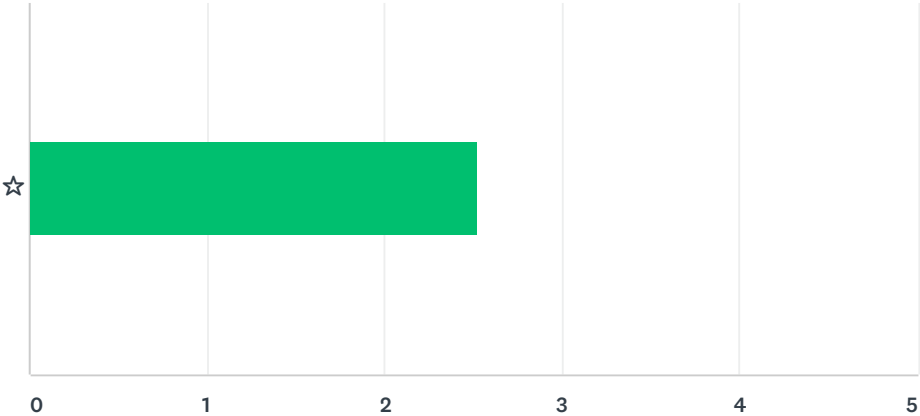
Bicycle & Pedestrian Survey

Increased traffic enforcement for safer driving around bicyclists	28.57%	30
Education for motorists on how to respectfully share the road	26.67%	28
Lower vehicle speeds or less traffic	20.95%	22
Other (please specify)	18.10%	19
Availability of classes on biking skills and how to ride in traffic	7.62%	8
Total Respondents: 105		

#	OTHER (PLEASE SPECIFY)	DATE
1	A bus system.	10/30/2018 5:15 PM
2	Seriously bus..	10/30/2018 10:42 AM
3	Don't bike	10/29/2018 5:28 AM
4	Have physical limitations for cycling	10/25/2018 11:54 PM
5	Bedford is a nice quiet place to ride a bike/walk but its not set up to safely commute on a bike everyday	10/22/2018 7:38 AM
6	I'm not interested.	10/19/2018 7:34 PM
7	none, i dont bike	10/18/2018 7:11 AM
8	Nothing	10/17/2018 2:49 PM
9	Dedicated bike trails would be great. Unfortunately Bedford is located on a hill so many will not bike regardless due to lack of ability. However, when possible, graded trails minimizing areas with steep inclines may encourage more ridership.	10/16/2018 2:51 PM
10	none..... we need businesses and jobs for/with taxpayer's money.	10/4/2018 8:52 AM
11	none	10/4/2018 8:36 AM
12	Bike rentals	10/3/2018 3:21 PM
13	Wider streets	10/3/2018 11:41 AM
14	Places to rent bikes/bike equipment	10/3/2018 11:35 AM
15	"Share the Road" signs. Bike lanes on the major streets (Peaks, Longwood, Oakwood, Whitfield, Lake, College, around rec field).	10/2/2018 7:32 PM
16	Enforce the 3' passing law , catch people texting and driving.	10/2/2018 4:52 PM
17	NA	9/27/2018 1:04 PM
18	If Bedford had actual bike lanes that would be great.	9/27/2018 11:05 AM
19	Ban cell phone use in the town of Bedford.	9/27/2018 11:03 AM

Q10 Please rate the overall "bicycle friendliness" of the Town of Bedford as a place.

Answered: 116 Skipped: 18



	VERY POOR	POOR	FAIR	GOOD	EXCELLENT	TOTAL	WEIGHTED AVERAGE
☆	16.38% 19	27.59% 32	46.55% 54	6.90% 8	2.59% 3	116	2.52

Q11 What are the most problematic locations for biking in the Town of Bedford? Please be as specific as possible.

Answered: 63 Skipped: 71

#	RESPONSES	DATE
1	Peaks Street & Longwood Avenue	11/8/2018 8:39 AM
2	All of the town streets. Drivers don't seem to know how to deal with bikers.	11/6/2018 12:47 PM
3	Longwood Avenue, Peaks Street, Access to YMCA	11/6/2018 12:28 PM
4	Everywhere we go home lanes and sidewalks not sure enough for walkers and bikes.	11/2/2018 5:38 AM
5	streets narrow, drivers don't care to share the road with Bikes.	10/31/2018 6:46 AM
6	well, besides the terrain. . . BIKE LANES would go a long way to getting me to ride again	10/31/2018 4:52 AM
7	Share the streets with vehicles.	10/30/2018 9:32 PM
8	Pretty much everywhere, bus Wal-Mart is suicide for anyone on foot or bike.	10/30/2018 5:15 PM
9	Everything...BUS	10/30/2018 10:42 AM
10	I wouldn't know.	10/30/2018 9:49 AM
11	The entire loop	10/29/2018 5:28 AM
12	Peaks, Bridge,Main Street	10/28/2018 9:41 PM
13	Bridge,Main, Otey,and.Washington	10/28/2018 5:27 AM
14	Don't know	10/25/2018 11:54 PM
15	Roads are not safe and sidewalks not safe for bicycles and pedestrians at the same time.	10/22/2018 2:56 PM
16	No bike lanes, need street improvements, bike signs, bike racks	10/22/2018 7:38 AM
17	Not enough room to share road with traffic. No parking/racks to secure a bicycle.	10/20/2018 1:05 PM
18	No clue.	10/19/2018 7:34 PM
19	Independence Avenue.	10/19/2018 2:55 PM
20	Downtown	10/18/2018 4:53 PM
21	No room for bikes.	10/18/2018 7:36 AM
22	221 and 122	10/18/2018 7:11 AM
23	Downtown there is no bike lanes to speak of.	10/17/2018 8:39 PM

Bicycle & Pedestrian Survey

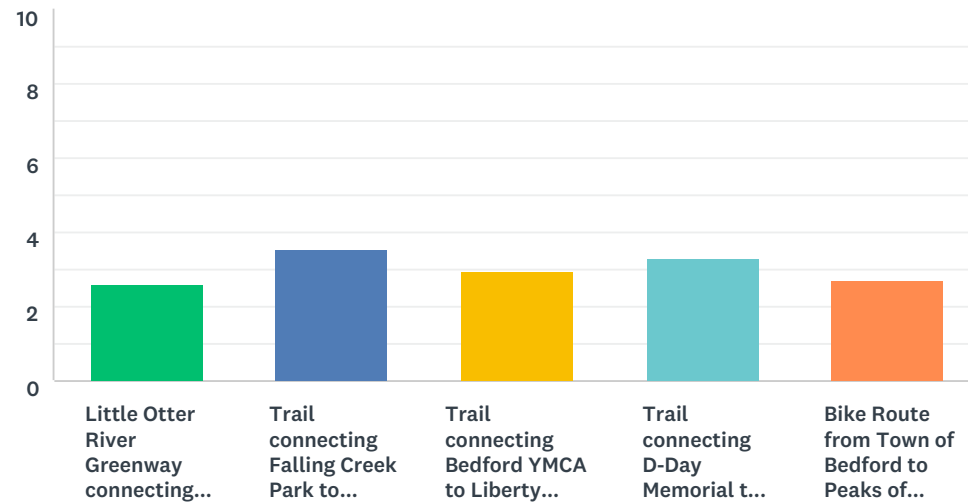
24	Safety	10/17/2018 6:43 PM
25	Don't know	10/17/2018 2:49 PM
26	Intersection at CVS on Main Street. Better connection of Jackson > Grove > Orange > Main	10/17/2018 10:27 AM
27	No trails or bikeways within town limits	10/17/2018 10:17 AM
28	Attitude of pedestrians and auto drivers.	10/17/2018 9:04 AM
29	Independence and main st.	10/16/2018 9:14 PM
30	Longwood Ave people speed in their cars	10/16/2018 8:39 PM
31	Main and Bridge streets are not good options for biking due to hills, parked cars and narrow streets. Biking should be encouraged for alternative side streets	10/16/2018 2:51 PM
32	none	10/4/2018 8:52 AM
33	people are too fat, and we have too many cars	10/4/2018 8:36 AM
34	N/a	10/3/2018 4:18 PM
35	Traffic	10/3/2018 3:21 PM
36	MOST STREETS	10/3/2018 3:02 PM
37	Road sharing	10/3/2018 11:35 AM
38	All around town and beyond	10/3/2018 11:05 AM
39	No availability	10/3/2018 11:02 AM
40	Traffic	10/3/2018 9:23 AM
41	No biking trails!	10/3/2018 7:50 AM
42	I can't think of any bike friendly areas, due to street size and vehicle speeds; other than area parks. Montvale and falling creek are two parks that I frequent that are well maintained.	10/3/2018 6:28 AM
43	Everywhere	10/2/2018 7:32 PM
44	No areas in the town are safe for my young kids and myself to ride. We go to surrounding counties to ride the Blackwater creek trail and the greenway.	10/2/2018 5:14 PM
45	Tough to find safe route south to Dickerson Mill rd, also no decent wide road to falling creek.	10/2/2018 4:52 PM
46	Anywhere in the town	10/2/2018 3:51 PM
47	All. We need bike lanes	9/29/2018 8:37 AM
48	Pretty much anywhere. Drivers often do not pay attention to other motor vehicles let alone bicyclists. I wouldn't dare ride my bike on the road until MUCH was done to shift the care of motor vehicle drivers to be safe and courteous to bicyclists.	9/28/2018 3:05 PM
49	There are no bike lanes. There are only narrow poorly maintained sidewalks.	9/28/2018 8:07 AM

Bicycle & Pedestrian Survey

50	East Main street. I don't think people watch for walkers and bike riders	9/27/2018 6:13 PM
51	No bike lanes and no bike racks	9/27/2018 2:13 PM
52	I do not bike in town	9/27/2018 2:04 PM
53	Bedford Ave, longwood, downtown area	9/27/2018 1:24 PM
54	There are no bike lanes downtown	9/27/2018 1:04 PM
55	No biking lanes	9/27/2018 12:25 PM
56	Downtown	9/27/2018 12:12 PM
57	Cannot get from town to falling creek park safely. Only a few bike racks around town to leave it while i am in a shop or store. Roads too narrow	9/27/2018 11:44 AM
58	Everywhere. Due to traffic.	9/27/2018 11:34 AM
59	To ride a bike in Bedford you have to share the same lane with cars. Bedford needs designated bike lanes encourage more residents and visitors to bike while also making them feel safe.	9/27/2018 11:05 AM
60	ALL	9/27/2018 11:03 AM
61	I think bike lanes would help a lot.	9/27/2018 11:03 AM
62	Basically same as prior indicated for walking.	9/27/2018 10:10 AM
63	No bike lanes in town No bike trails outside of parks & recreation facilities	9/27/2018 10:03 AM

Q12 The following new projects have been recommended in various public documents or forums. To help elected officials set priorities, please rank these projects in order of importance (1 being highest priority and 5 being the lowest).

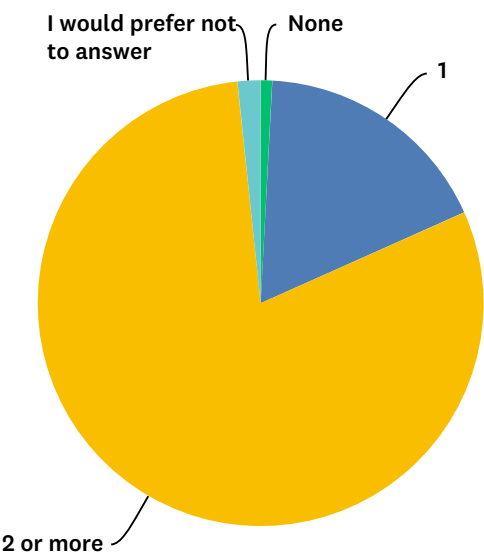
Answered: 119 Skipped: 15



	1	2	3	4	5	TOTAL	SCORE
Little Otter River Greenway connecting Routes 43 and 122	14.55% 16	16.36% 18	13.64% 15	27.27% 30	28.18% 31	110	2.62
Trail connecting Falling Creek Park to Liberty Lake Park	28.95% 33	28.07% 32	18.42% 21	16.67% 19	7.89% 9	114	3.54
Trail connecting Bedford YMCA to Liberty Lake Park	11.82% 13	25.45% 28	28.18% 31	14.55% 16	20.00% 22	110	2.95
Trail connecting D-Day Memorial to Downtown Bedford	30.63% 34	17.12% 19	22.52% 25	11.71% 13	18.02% 20	111	3.31
Bike Route from Town of Bedford to Peaks of Otter along Route 43	18.02% 20	13.51% 15	16.22% 18	26.13% 29	26.13% 29	111	2.71

Q13 How many functional automobiles are in your household?

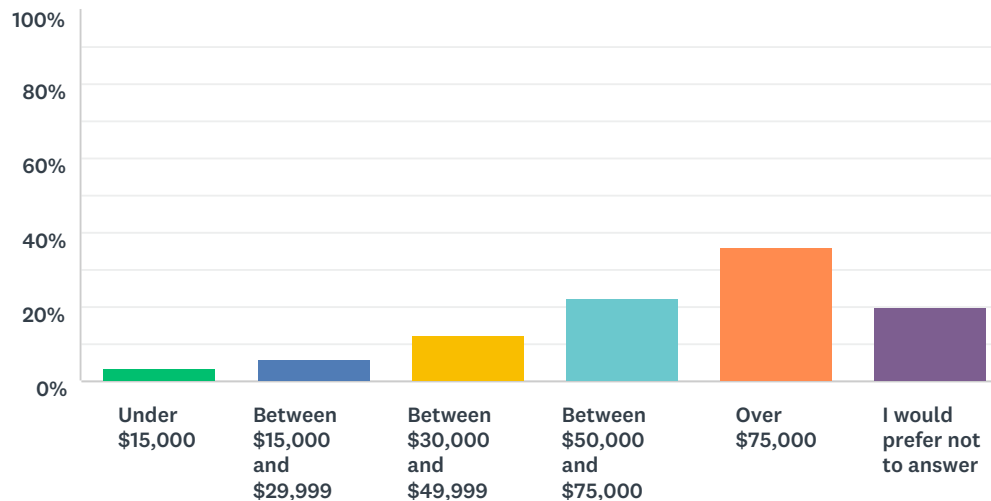
Answered: 120 Skipped: 14



ANSWER CHOICES		RESPONSES	
None		0.83%	1
1		17.50%	21
2 or more		80.00%	96
I would prefer not to answer		1.67%	2
TOTAL			120

Q14 What is your annual household income?

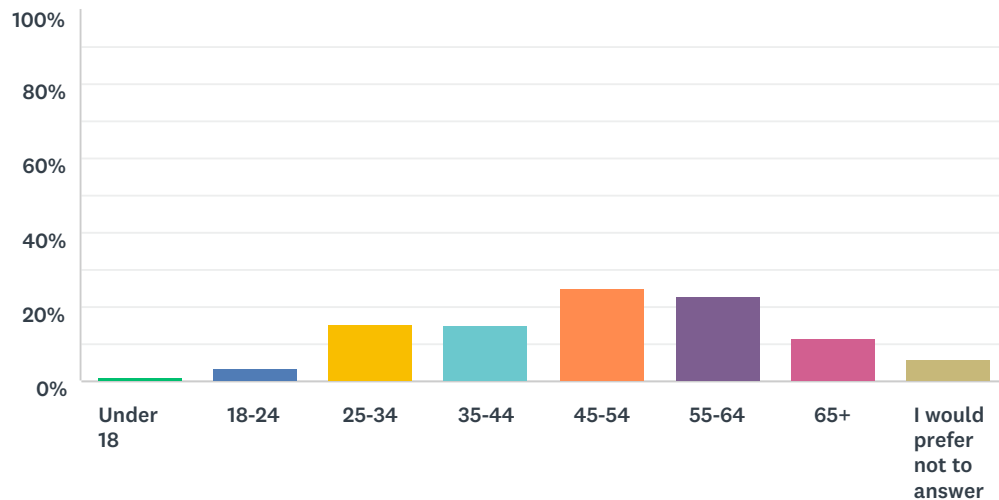
Answered: 120 Skipped: 14



ANSWER CHOICES	RESPONSES	
Under \$15,000	3.33%	4
Between \$15,000 and \$29,999	5.83%	7
Between \$30,000 and \$49,999	12.50%	15
Between \$50,000 and \$75,000	22.50%	27
Over \$75,000	35.83%	43
I would prefer not to answer	20.00%	24
TOTAL		120

Q15 What is your age?

Answered: 121 Skipped: 13



ANSWER CHOICES	RESPONSES	
Under 18	0.83%	1
18-24	3.31%	4
25-34	15.70%	19
35-44	14.88%	18
45-54	24.79%	30
55-64	23.14%	28
65+	11.57%	14
I would prefer not to answer	5.79%	7
TOTAL		121