



Pedestrian Advisory Committee  
Transportation Safety Commission  
Town of Vienna, Virginia

November 2017

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## Executive Summary

The Town of Vienna strives to be a safe, healthy, and attractive community providing a variety of opportunities to our citizens, businesses, and visitors. The vision, goals, and actions of the Town's Pedestrian Master Plan offer guidance to Town staff and residents as they work to build a pedestrian network that creates an inviting place to live, visit, work, conduct business, and engage in recreational and community activities.

The Town has significant assets including a vibrant commercial district, historic areas, recreation centers, numerous parks and trails, and schools. The Town enjoys a significant sidewalk network but many gaps remain. There are opportunities to expand the Town's sidewalk infrastructure and improve its pedestrian network, which includes addressing needs for crosswalks and amenities like rest areas, water fountains, and landscaping.

The Pedestrian Master Plan is a vision document that provides recommendations for Town officials to consider as it enhances its pedestrian network. It does not supersede federal, state and local laws, Town code, or decisions made by Town Council. The Plan's vision and goals are strategic in nature and are not intended to encompass every scenario. For example, there may be streets that do not warrant sidewalks on both sides. Town officials will continue to abide by existing requirements and will use their discretion when determining improvements for pedestrian safety and access.

The Pedestrian Master Plan was developed by the Town's Pedestrian Advisory Committee (PAC) in coordination with the Transportation Safety Commission (TSC) and Town Council. Development of this plan involved a number of information-gathering and outreach activities. The PAC gathered statistics and other data from Town staff and previous Town pedestrian plans, studies, maps, and police reports. Several relevant resources related to pedestrian safety on the Town's website were also considered.

The PAC reviewed plans developed by other communities including Alexandria, Arlington, Charlottesville, Culpeper, and Falls Church. The PAC also received input from Town departments including Parks and Recreation, Public Works, Public Information, Police Department, Planning and Zoning, and the Town Attorney's Office. The PAC sought feedback from relevant Boards and Commissions including the Planning Commission, Community Enhancement Commission, and Town/Business Liaison Committee. Community organization input was obtained by Safe Routes to School representatives (i.e., elementary school PTAs), neighborhood associations, and the Vienna Business Association. Town resident feedback was considered during various public PAC meetings and a TSC public hearing.

The Pedestrian Master Plan focuses on five goals to help the Town achieve its vision for an integrated network of pedestrian routes. Recommended actions in the Plan support the following goals:

1. Provide high-quality, safe, and convenient pedestrian access and facilities.
2. Complete walkway network with sidewalks on both sides of all streets in Vienna.

3. Create opportunities for and increased use of walking, bicycling, and public transit as an alternative to vehicle trips.
4. Promote benefits of walkable neighborhoods and a vibrant pedestrian-driven local economy.
5. Work toward Walk Friendly community designation.

The Plan details 13 action recommendations in three categories: (1) Facilities; (2) Governing and Operations; and (3) Education, Enforcement, and Encouragement. The complete list of actions is shown below:

1. Prioritize sidewalk projects so that available funds are paired with projects that provide the most benefit to the community.
2. Determine usefulness of certain types of data collection to improve pedestrian facilities.
3. Evaluate the need for new or improved roadway crossings.
4. Support, maintain, and enhance development of Geographic Information System (GIS) mapping to provide information on pedestrian connections throughout Town and surrounding areas.
5. Evaluate adequacy of the Town's pedestrian amenities for safety and convenience, and develop a plan to address needs.
6. Study feasibility of different types of trail and sidewalk materials.
7. Ensure that new developments (both commercial and residential) are safe for walking and that non-motorized transportation and recreation facilities identified in this plan are constructed as part of development projects.
8. Establish an institutional framework to ensure consistent and high quality design standards and implementation of improved pedestrian facilities.
9. Develop a maintenance and management program that ensures that facilities are maintained in good repair, both through routine seasonal maintenance and spot repairs.
10. Work with the county to improve pedestrian connections.
11. Pursue additional grant sources and capital funding as necessary to supplement pedestrian facilities.
12. Develop materials and conduct educational programs and events that encourage safe walking and bicycling for fun, health, fitness, and transportation.
13. Improve enforcement of laws concerning the safe interaction of pedestrians, bicyclists, and motorists in shared environments.

Appendix A discusses elements of a sidewalk rating system that Public Works will maintain to help guide the Town in prioritizing and allocating resources for sidewalk development. The rating system is designed with flexibility to incorporate input from Town citizens and professional judgment of staff.

Appendix B includes a discussion of crosswalk markings to help guide the Town and citizens with crosswalk requests.

Appendix C includes various options for reaching out and working with the community to promote and enhance pedestrian mobility within the Town of Vienna.

It is recommended that the Town incorporate the Pedestrian Master Plan into the next Comprehensive Plan update.

## Section 1: Vision and Goals

The Town of Vienna strives to be a vibrant community providing a variety of opportunities to citizens, businesses, and visitors. Walking is a basic form of transportation that is integral to the safety, health, and livability of our community. It is important to provide a comprehensive, connected, and accessible network of sidewalks, paths, trails, and crosswalks. When safe facilities are not available, people may drive for very short trips, walk on roads, or cross streets at unsafe points.

Vienna desires to preserve its small-town character, improve the quality of life for its citizens, benefit local businesses, and enhance the enjoyment of visitors. Vienna seeks to provide an inviting environment for pedestrians, cyclists, public transportation users, and automobile drivers. The best way to do this is for the Town to consider demographic and housing trends, as well as evolving pedestrian needs, for residents of all ages.

The goals outlined in the Pedestrian Master Plan are designed to help achieve the Town's vision for an integrated network of pedestrian routes. The Town of Vienna will achieve its pedestrian vision by focusing on five goals. Subsequent recommendations and actions will support these goals.

1. Provide high-quality, safe, and convenient pedestrian access and facilities.
2. Complete walkway network with sidewalks on both sides of all streets in Vienna.
3. Create opportunities for and increased use of walking, bicycling, and public transit as an alternative to vehicle trips.
4. Promote benefits of walkable neighborhoods and a vibrant pedestrian-driven local economy.
5. Work toward Walk Friendly community designation.

It is recommended that the Town incorporate the Pedestrian Master Plan into the next Comprehensive Plan update.

## Section 2: Background and Existing Conditions

The Pedestrian Master Plan is a coordinated and strategic effort to provide a safe, continuous pedestrian network throughout the Town. Fortunately, the Town has significant existing assets. They include a commercial district, an historic downtown area, recreation centers, and numerous parks and trails, which accommodate a growing population that is enthusiastic about outdoor activities. The Town also has a number of ongoing and planned sidewalk, crosswalk, and road construction projects that will improve conditions for pedestrians and bicyclists. This plan identifies additional projects and opportunities to further enhance pedestrian safety and connectivity.

### 2-A Sidewalks and Other Pedestrian Facilities

As stated in the Comprehensive Plan, the Town should continue policies that advance the construction of facilities, such as sidewalks, to help fill in gaps in the pedestrian network. Vienna

has approximately 81 miles of walkways, excluding trails, such as the Washington and Old Dominion Railroad Regional Trail (W&OD). It is crucial for the Town to establish and maintain safe and accessible facilities to promote increased pedestrian activities.

### **Commercial**

The core of the Vienna community and its designated downtown commercial area is a linear east-west bisector, situated along Route 123 (Maple Avenue) and Church Street. A developing network of sidewalks serves the Central Business District with connections to nearby neighborhoods.

The Maple Avenue (MAC) Commercial Zone is a primarily vehicular-orientated route. In 2014, an overlay-zoning district, MAC, was established to encourage compact, pedestrian-oriented, mixed-use redevelopment to reinforce Maple Avenue's role as the Town's main street. Development along the corridor will promote Vienna's small-town character and maintain the character of residential neighborhoods abutting the corridor. In 2002, a Maple Avenue Enhancement introduced brick sidewalks and lighting to improve the pedestrian experience.

Church Street (one block parallel to Maple Avenue) forms the core historic district with a museum, shops and restaurants that are key destinations for pedestrians and bicyclists. In 1999, a Church Street Vision was established to create a more pedestrian orientated destination. To date, several developments have been built, improving the pedestrian experience along the street. It is also home to many events throughout the year.

In addition, there is Cedar Park Shopping Center, on Cedar Lane at the southern boundary, with surrounding housing and schools that generates substantial foot traffic.

Connecting the commercial areas in Town is bus service provided by the Washington Metropolitan Area Transit Authority (WMATA) and Fairfax Connector, with links to the Metrorail system and surrounding developments of Fairfax, Merrifield, Reston and Tysons. Metrorail Orange and Silver Lines lie conveniently within one mile of the southwestern and northern, respectively, Town boundaries.

### **Residential**

Town roads vary in size and traffic volume. Sidewalks already exist in several neighborhoods; however, sidewalks and pedestrian improvements, such as curb and gutters, are lacking in many others. Regardless of conditions, motor vehicle volumes and speeds are severely affected by cut-through traffic between major and minor arterial roads. Efforts of the Town have been to provide consistent connectivity within and throughout existing sidewalk networks.

#### **2-B Demand for Walking**

There are many key destinations for pedestrians (including runners) and bicyclists within the Town including recreation facilities and schools.

**Community Destinations**

Two miles of the 45 mile Washington and Old Dominion Railroad Regional Trail (known as the W&OD Trail, an historic rail-to-trail between Arlington and Loudon counties) run through the Town of Vienna. It is owned and maintained by NOVA Parks, serving as the north-south connection into the Town central business district, but is also increasingly a commuter route, with connections to Washington DC. Friends of the W&OD Trail is one of many partners that works with the Town to create and maintain a healthy, safe environment for walkers and bikers.

The Freeman House Store and Museum, owned by the Town of Vienna and jointly operated with Historic Vienna, Inc., forms the cultural center of the Town and is the focus of many Town events.

The Vienna Community Center, at the intersection of the W&OD trail and Park and Cherry Streets SE, is owned and operated by the Town of Vienna. It was renovated in 2017 and is a public facility that contains a gym, auditorium, and multipurpose rooms. Several athletic fields and community service institutions near the center result in increased pedestrian and bicycle activity throughout the year.

Patrick Henry Library at the intersection of Center Street South and Maple Avenue East is owned and operated by Fairfax County.

Vienna Town Green on Maple Avenue and Mill Street has local events throughout the year, including a summer concert series.

**Parks and Recreation Facilities in and near Vienna**

- Branch Road Tot Lot
- Freedom Hill Park
- Glyndon Park
- Meadow Lane Park
- Northside Park
- Salsbury Spring Park
- Sarah Walker Mercer Park
- Peterson Lane Park
- Vienna Dog Park/Moorefield Park
- Vienna Town Green
- W&OD Railroad Regional Trail and Centennial Park
- Waters and Caffi Fields
- Wildwood Park and Trail
- Nottoway Park
- Stream Valley Park

The Town of Vienna has several annual Town events that promote pedestrian traffic and restrict motor and bicycle traffic for a few hours during (and some before/after) the event.

- Major Annual Events in Vienna**
- Walk on the Hill/ Green Expo (Windover Heights)
  - Viva! Vienna! (Church Street and Centennial Park)
  - 4th of July
  - James Madison H. S. Homecoming Parade
  - Oktoberfest (Church Street)
  - Halloween Parade (Maple Avenue, Berry Street to Center Street)
  - Chillin on Church
  - Church Street Holiday Stroll

**Schools**

Public and private schools in and near Vienna attract young families to Town. These families choose to walk their children to school (including preschool), whenever possible. In addition, each public school has a representative who works with the Town on the Safe Routes to School (SRTS) national partnership initiative. Safe Routes to School aims to encourage school children to walk and bike to school as a way to promote healthy living, as well as decrease traffic and pollution<sup>1</sup>. Safe Routes to School programs in Vienna have been very successful in using education and incentives that emphasize how much fun it can be to encourage kids to walk and bike.

- Public and Private Schools in and Near Vienna**
- |                      |                            |
|----------------------|----------------------------|
| • Cedar Lane School  | • Madison HS               |
| • Cunningham Park ES | • Our Lady of Good Council |
| • Green Hedges       | • Thoreau MS               |
| • Flint Hill ES      | • Vienna ES                |
| • Louise Archer ES   | • Westbriar ES             |
| • Marshall Road ES   | • Wolf Trap ES             |

<sup>1</sup> See <http://www.saferoutesinfo.org/>

Parent volunteers work with local officials and police to reinforce safety measures and secure funding for educational materials and sidewalk development.

## 2-C Challenges

The Town of Vienna faces significant challenges as it seeks to become a more pedestrian- and bicycle-friendly community. The volume of automobile traffic on many Town roads can make it difficult for pedestrians and bicyclists to travel safely. While Vienna has made great progress over the years, the Town lacks sufficient pedestrian facilities in many areas. This can lead people to drive even for short trips.

Walking can provide a great transportation option for local residents and visitors. It provides exercise and is a clean, healthy, inexpensive way to get around. Vienna enjoys an extensive sidewalk network in the central business district and many neighborhoods. However, significant gaps in the network exist. Some sidewalks are narrow and have obstructions such as stairs, street signs, telephone poles, and fire hydrants. Some walkways are little more than narrow asphalt paths and some are brick (cobblestone effect) and are uneven. These obstacles make many of the existing sidewalks inaccessible to families with strollers, wheelchair users, and others with disabilities.

Substantial new home construction in the Town is likely to generate more users of existing and future pedestrian and bicycle facilities. It also provides opportunities to build out the sidewalk network, as homebuilders are required to provide a dedication and/or extend sidewalk in front of new homes.<sup>2</sup>

As the Central Business District is developed with potentially higher densities, there may be more people walking who will increasingly be in conflict with vehicular traffic. All of these trends lead to less driving, increased walking, and more sidewalk use. Ongoing and planned sidewalk, crosswalk, and road construction projects will improve conditions for pedestrians and bicyclists.

While new home construction provides opportunities to enhance the sidewalk network, enabling and encouraging more walking will require substantial action by the Town of Vienna, including:

- 🚶 Financial resources to support upgrades and construction of new street designs, sidewalks, crossings, and other facilities to build a full and complete pedestrian network.
- 🚶 Public transparency of the petition, review, and construction process.
- 🚶 A robust assessment process for pedestrian infrastructure that highlights street and sidewalk qualities and reviews crosswalks for relevance, upkeep, and adherence to the Americans with Disabilities Act (ADA) requirements.

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<sup>2</sup> See Town Code 17-67.1 (dedication) and Town Code 17-67.2 (extending sidewalk).

## Section 3: Recommendations and Actions

The Town seeks to ensure that pedestrians are able to safely access Vienna's public spaces, parks, schools, community facilities, businesses, and transit stops. The actions outlined in this section are aimed at creating an interconnected pedestrian network of sidewalks and safe crossings so that walking is a convenient and comfortable transportation option in the Town of Vienna. Pedestrian facilities shall meet all federal (including Americans with Disabilities Act), state, and local regulations and specifications.

While specific actions are spelled out in this section, the following broad principles should guide future pedestrian planning:

- 🚶 New road construction and improvement projects (widening, rebuilding, etc.) should enhance the pedestrian network.
- 🚶 Intersection improvements should specifically address the needs of pedestrians. For example, crosswalks should be provided on all legs of intersections, and design elements, such as curb extensions and median refuge islands, should be provided when possible. Signals should be designed to fully meet the needs of pedestrians and bicyclists, per federal and state guidance.
- 🚶 New development should contribute to the Town's pedestrian network; site plans should address connectivity within the site and with adjacent properties and destinations.<sup>3</sup> Developments should be considered as an opportunity to provide important functional connections.
- 🚶 Town parks should have pedestrian access and should be connected to create a "network" system.
- 🚶 Pedestrian facilities should be provided on all arterial roadways as they serve as critical connections in the transportation network.
- 🚶 New residential development should provide pedestrian connections to retail centers, schools, transit stops, and parks.
- 🚶 Existing residential areas should be evaluated for safe and reliable pedestrian access. A formal process for citizen input should be established and considered when reviewing needed improvements to existing infrastructure.
- 🚶 The Town should look for opportunities to facilitate pedestrian connections to other neighboring centers like Tysons, Mosaic District/Merrifield, and public transportation.
- 🚶 The Town should take into account how new or upgraded pedestrian facilities provide for wellness activities such as recreational walking, running, and bicycling.
- 🚶 The goal for sidewalks should be a minimum of 5 feet wide but wider in main commercial / retail areas (up to 8-10 feet in width) to allow for adequate pedestrian traffic flow. Multi-use trails (VDOT uses the terminology "Shared Use Path") should be a minimum of 8 feet and desirably 10 feet wide.

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<sup>3</sup> Per Town Code: new subdivisions require curb, gutter, and sidewalk; Single Family tear-downs and rebuilds require the property owner to dedicate right of way for sidewalk if insufficient right of way exists, building sidewalk if existing sidewalk exists on either side of the lot.

Key action recommendations are categorized by the following types and described below:

1. Facilities Recommendations
2. Governing and Operations Recommendations
3. Education, Enforcement, and Encouragement Recommendations

## **FACILITIES RECOMMENDATIONS**

Pedestrian facilities include walkways, sidewalks, shared-use trails, pathways, overpasses, and underpasses. They include marked crosswalks, curb ramps, and lighting to improve access and safety. They can also include amenities such as water fountains, restrooms, and trashcans.

**ACTION 1: Prioritize sidewalk projects so that available funds are paired with projects that provide the most benefit to the community.**

The goal is to provide safe and accessible sidewalks on both sides of every street in Town. In order to provide benefits to as many citizens as possible in the shortest time frame, the Town should emphasize projects that address safety concerns; serve high demand areas such as sidewalks near schools, parks, transit stops, and commercial centers; or that strengthen the system by creating a contiguous network.

The recommended method of sidewalk prioritization is a weighted rating system maintained by the Department of Public Works that allows for discretion-based flexibility to incorporate the professional judgment of staff. The sidewalk rating system is based on safety, sidewalk classification, feasibility, suitability analysis (i.e., proximity to Town infrastructure and commerce), road category, vehicle volumes, proximity to metro stations, and proximity to transit stops. Funding is also an important factor.

See Appendix A for detailed information about the sidewalk rating system.

**ACTION 2: Determine usefulness of certain types of data collection to improve pedestrian facilities.**

The Town should evaluate what types of data collection would be useful to analyze Town walking patterns and improve pedestrian facilities.

Types of data collection could include:

- 🚶 Ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips
- 🚶 Tools to evaluate major pedestrian areas in order to identify problem areas and solutions
- 🚶 Walkability checklists
- 🚶 Pedestrian Intersection Safety Index
- 🚶 Pedestrian Level of Service
- 🚶 Pedestrian Road Safety Audit Guidelines and Prompt Lists

- 🚶 Smart Growth Scorecards
- 🚶 Web-based apps for resident feedback
- 🚶 Pre/post evaluations of road projects and traffic calming related to pedestrian crashes, volumes, and motor vehicle speeds
- 🚶 Safe Routes to School (SRTS) parent surveys

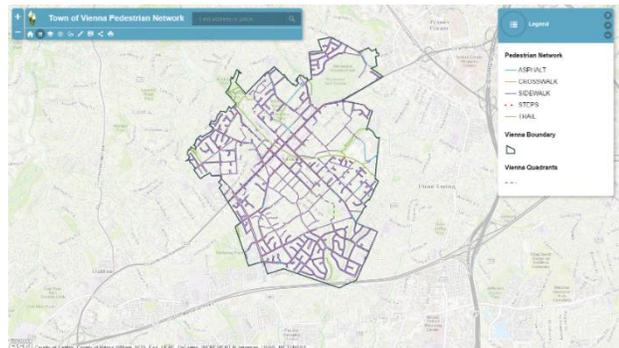
**ACTION 3: Evaluate the need for new or improved roadway crossings.**

In accordance with the Virginia Supplement to the Manual on Uniform Transportation Control Devices (MUTCD), crosswalks are marked to identify, for both pedestrians and drivers, the preferred pedestrian crossing place. Crosswalks should generally be marked along the shortest safe walking route across the street and may be adjusted to improve safety or to enable accessibility.

Generally, crosswalks are marked according to traffic and pedestrian volumes, along school routes, near parks and community facilities, and at signalized intersections. Additionally, Vienna's 2015 Comprehensive Plan recommends a uniform policy based on regional and national best practices.

Citizens should report inadequate existing crosswalk markings to the Department of Public Works. Crossing signal timing issues should also be reported to the Department of Public Works.

Additional information on types of crosswalks can be found in Appendix B.



**ACTION 4: Support, maintain, and enhance development of Geographic Information System (GIS) mapping to provide information on pedestrian connections throughout Town and surrounding areas.**

GIS maps, as shown in the image, provide a host of utilities for pedestrian needs. The mapping system provides an interactive tool that residents and visitors can navigate and explore. These maps can demonstrate how a specific sidewalk improvement can enhance connectivity of the Town's pedestrian network. The database also may include a view to show how the Town's pedestrian network can connect to county trails and outside destinations, such as Tysons and the Mosaic District. Information contained in these maps can be used to identify pedestrian network needs, prioritize projects, and measure progress in meeting this plan's goals. Information contained in the GIS mapping system can also be used for static maps and brochures recommended in Action 12.

**ACTION 5: Evaluate adequacy of the Town’s pedestrian amenities for safety and convenience, and develop a plan to address needs.**

The Town should adopt and implement a lighting standard for pedestrian facilities (based on national standards, such as the Illuminating Engineering Society of North America Standard Practice for Roadway Lighting) in locations of significant night-time activity, such as the Central Business District and Community Center, and along primary pedestrian corridors leading to the Central Business District.

Other amenities to evaluate for needs include rest areas (e.g. benches), water fountains, solar powered trash cans, dog waste bag dispensers, and landscaping to create clear pathways.

As part of this process, the Town may evaluate the need for additional pedestrian facilities, such as the feasibility of adding off-road pedestrian trails in the Town or upgrading existing trails to current standards.

**ACTION 6: Study feasibility of different types of trail and sidewalk materials.**

The Town should evaluate which options are most cost-effective while considering which materials are more environmentally friendly and longer lasting. This should include examining the efficacy of pervious pavement and other materials, including asphalt, on certain paths.

## **GOVERNING AND OPERATIONS RECOMMENDATIONS**

The most efficient way to improve conditions for walking in the Town of Vienna is to incorporate pedestrian facilities into community design from the outset. It is much more expensive to retrofit pedestrian facilities in communities that were originally designed only for automobile access. The concept of “complete streets” has gained tremendous support in recent years through federal, state, and local policies. Complete streets are those that are designed for all users – people who drive automobiles, people who use public transportation, people who bicycle, people with disabilities, and people who travel on foot.

A critical step in providing convenient and safe options for pedestrian transportation and recreation in the Town of Vienna lies in having a strategic plan that is supported by design guidelines, ordinances, and other regulations necessary to steer community design and roadway construction. The actions recommended in this plan will help integrate accommodations for pedestrian transportation and recreation into the everyday activities of the Town of Vienna.

**ACTION 7: Ensure that new developments (both commercial and residential) are safe for walking and that non-motorized transportation and recreation facilities identified in this plan are constructed as part of development projects.**

New development often creates opportunities for providing non-motorized transportation and recreation facilities. The Town should explore with developers the feasibility of constructing pedestrian facilities that are identified in this plan as a part of their development projects. Developers should consider establishing connector trails in order to provide access from their

developments to Town pedestrian pathways. Over time, this will help to expand the pedestrian network outlined in this plan.

**ACTION 8: Establish an institutional framework to ensure consistent and high- quality design standards and implementation of improved pedestrian facilities.**

Town staff should develop an institutional framework for improving pedestrian facilities by incorporating pedestrian priorities into design principles, development projects, and staff training/education. The Town should encourage staff to work toward the goals and actions in this Plan as part of any program or development project where pedestrian facility improvements may be needed. Town staff should review its approach for implementing this Plan on an annual basis to determine whether recommendations are actively being sought and to evaluate whether additional measures are needed to address expanding the Town’s pedestrian network.

**ACTION 9: Develop a maintenance and management program that ensures that facilities are kept in good repair, both through routine seasonal maintenance and spot repairs.**

**Maintenance Schedule**

A first step in developing a maintenance program is to identify what tasks need to be undertaken and who is responsible for these tasks. Responsibility is largely determined by facility ownership. Tasks are generally divided between on-street maintenance tasks, “off-street” sidewalk tasks, and multi-use trail maintenance tasks. Recommended maintenance practices include:

- 🚶 Repairing trail and roadway surfaces and sidewalks to ensure a continuous facility and smooth surface that is free of cracks, potholes, bumps, and other physical problems.
- 🚶 Careful repair of utility cuts to prevent sidewalk interruptions for pedestrians and surfaces for cyclists.
- 🚶 Maintaining drainage facilities, including catch basins and drainage grates.

**Maintenance Website, Mobile App and Hotline**

Evaluate the possibility of establishing a website, mobile app, and phone hotline to allow residents to report maintenance problems and request spot repairs. The Town website should include a “Pedestrian and Bicycle Facility Maintenance Action Request Form,” and the Town should establish a Pedestrian and Bicycle Maintenance Hotline to give citizens an easy means of reporting maintenance concerns on local trails and bikeways. Concerns may include:

- 🚶 Snow removal from Town commercial property.
- 🚶 Signal maintenance.
- 🚶 Cutting back vegetation such as shrubbery, tree limbs, and intrusive tree roots to prevent encroachment.
- 🚶 Maintaining pedestrian and bicycle signs, striping, and markings, especially replacement of signs that are damaged by vehicle crashes and other incidents.

**ACTION 10: Work with the county to improve pedestrian connections.**

The Town should collaborate with Fairfax County and NOVA Parks to ensure an integrated and connected network of pedestrian facilities between the Town, county, and W&OD Trail. Sidewalks in Town should connect with regional routes and pathways. In addition, pedestrian improvements should be pursued in the following areas as they have the potential to impact residents of the Town of Vienna:

- 🚶 Improve pedestrian mobility and safety at James Madison High School and Thoreau Middle School.
- 🚶 Develop better connections to and from Tysons and Mosaic District.
- 🚶 Work with the state on ensuring pedestrian and bicycle connections and facilities around I-66 development.
- 🚶 Every park should have a connecting trail. Connecting all trails and parks makes the Town safer and more accessible.

**ACTION 11: Pursue additional grant sources and capital funding as necessary to supplement pedestrian facilities.**

Although some of the proposed network will be built through new development or the redevelopment process, there will be gaps in the network in both the short- and long-term that will require special funding in order to complete. It will be important to establish a mechanism for building these connections. The Town should ensure that it is up to date on all relevant grant sources such as Safe Routes to School grants, and funding mechanisms available for pedestrian facility improvements.

The Town should establish a yearly budget line item for new pedestrian pathways, in order to provide matching funds for future successful grants, and to complete special projects that are not grant-funded. It should continue use find innovate ways to fund sidewalk projects.

## **EDUCATION, ENFORCEMENT, AND ENCOURAGEMENT RECOMMENDATIONS**

Physical improvements to pedestrian and bicycle facilities in the Town of Vienna should be complemented by education, enforcement, and encouragement programs. When new sidewalks, shoulders, and pathways are constructed, pedestrians should be educated on how to use these facilities safely. In addition, drivers should be expected to treat pedestrians as legitimate users of the road and operate safely around these non-motorized facility users. Unsafe behavior by pedestrians, bicyclists, or drivers should be targeted through enhanced law enforcement.

At the same time, promotional efforts, such as International Walk to School Day on the first Wednesday in October and developing a public walking map, can help advertise walking and promote fun and healthy forms of recreation and transportation in the Town. This section sets forward a number of recommendations that will help the Town promote walking as a transportation alternative and increase pedestrian safety.

**ACTION 12: Develop materials and conduct educational programs and events that encourage safe walking and bicycling for fun, health, fitness, and transportation.**

Most people are aware of the environmental benefits of walking and bicycling instead of driving an automobile, but do not fully realize the health benefits that walking and bicycling provide. This plan encourages development of walkways and trails to promote physical activity and wellness programs for people of all ages in the Town of Vienna. The Town's education initiative should emphasize links between walking and bicycling and weight loss, disease prevention, lower health care costs, and longer lives for all members of the community. Targeted audiences for this outreach effort should include:

- 🚶 Community-based health improvement partnerships
- 🚶 Elder care facilities
- 🚶 Schools
- 🚶 Bicycle promoting organizations such as Fairfax Alliance for Better Bicycling (FABB) and Washington Area Bicyclist Association (WABA)

Specific projects can be targeted based on local needs and ideas, however, a key component of each project should be community outreach and promotion efforts that highlight the health benefits of walking and bicycling and offer practical advice about where to walk or bicycle in the community.

An important key to developing successful education and encouragement programs is having a coordinated approach, a consistent message, and focused activities. These campaigns can be promoted through use of Town newsletter articles, banners, and promotion at high-profile Town events (Viva! Vienna!, Taste of Vienna, etc.).

Recommended encouragement activities are listed in Appendix C.

**ACTION 13: Improve enforcement of laws concerning the safe interaction of pedestrians, bicyclists, and motorists in shared environments.**

The Town of Vienna Police Department should offer educational training to officers about pedestrian and bicyclist rights and responsibilities. This includes aggressive behavior by drivers, bicyclists, and pedestrians. For example, the Maryland Office of Highway Safety organizes safety training events for officers to raise awareness of rights, rules, and appropriate responses to incidents involving conflicts between motor vehicles, bicycles and pedestrians. Educating law enforcement officers can lead to decreased incidents of the following behaviors:

- 🚶 Motorists and bicyclists not yielding to pedestrians in crosswalks
- 🚶 Motorists and bicyclists speeding
- 🚶 Motorists and bicyclists running red lights and stop signs
- 🚶 Unsafe pedestrian and bicycle behaviors

The Police Department should enforce existing laws related to unsafe driving and bicycling behaviors so that the Town creates a culture of safe driving, riding, and pedestrian activity.

The Police Department should establish a standard protocol for bicycle dismounting during town events, such as Viva! Vienna!, to maintain pedestrian safety.

The Police Department should maintain motorist, bicyclist, and pedestrian-related accident statistics and consider publishing this information on the Town's web site. This information can be used to evaluate trends and understand the impact of the plan's implementation of pedestrian, bicycle, and motor safety education.

The Police Department established the Eye-to-Eye campaign to address unsafe behaviors. The campaign should be widely promoted and include measures to address unsafe motorist, bicycle, and pedestrian behaviors. As technology advances, the Police Department should adapt and develop new safety awareness programs.

## Appendix A: Sidewalk Rating System

The recommended method of sidewalk prioritization is a weighted rating system that allows for discretion-based flexibility to incorporate the professional judgment of staff. The sidewalk rating system is maintained by the Department of Public Works and based on the following eight elements:

- Safety
- Sidewalk classification
- Feasibility
- Suitability analysis (i.e., proximity to Town infrastructure and commerce)
- Road category
- Vehicle volume
- Proximity to metro stations
- Proximity to transit stops

Funding is also considered when determining how to prioritize sidewalk development. In order to complete the pedestrian network in the shortest possible time, it is critical to focus sidewalk construction where grants and other funding sources can be maximized. In the long term, more sidewalks will be constructed sooner and at a lower cost if sidewalks are constructed where grant money is available. It is recommended that grants be actively sought for the highest priority sidewalks. Most grants require some form of matching from the Town. This approach may mean that a sidewalk project that rates lower using the sidewalk rating system could be built sooner due to existing grant opportunities.

Sidewalk scoring should not be the only factor involved in selecting which sidewalks to build when funds are available. The Department of Public Works should be granted discretion to articulate reasons why the Town may benefit from building lower-scoring sidewalks before higher-scoring sidewalks. Cost of construction, the nature of grants, or likelihood of imminent or long-term redevelopment that would reduce Town costs might be additional considerations.

### **Safety**

Providing safe pedestrian access carries the most weight. Since Vienna is primarily a residential community, many children walk to and from their bus stops or schools in all areas of the Town. High traffic volumes, narrow road widths, drainage ditches, poor sight lines, and inadequate stopping distances can make walking in the road or on the shoulder dangerous. For example, a wide road with short sight distance would be deemed more unsafe than a less wide road with plenty of sight distance.

Speeding should not be a criterion for prioritization of sidewalks. Excessive speeds should be addressed with traffic calming and enforcement measures.

On low-volume residential streets it is important to provide at least one complete sidewalk to separate pedestrians from vehicular traffic. Providing a second sidewalk on a low-volume street has a lower priority to providing one on a similar street having none.

### **Sidewalk Classification**

Streets with missing sidewalk sections can be classified into three categories:

- Streets where there are no sidewalks on either side.
- Streets that have gaps in the sidewalk; these are short missing segments of sidewalks that are designated as gaps by the Director of Public Works. In general, these sections span 250 linear feet or less.
- Streets that have a sidewalk on one side, but not on the other.

In many cases, closing a gap in the sidewalk system provides an immediate and substantial benefit by connecting two large contiguous networks of sidewalks into a single connected network.

### **Feasibility**

Feasibility can range from potential construction issues, off site impacts, and environmental impacts.

#### **A. Existing Conditions that Affect Sidewalk Rating System**

Trees are a great contributor to the health and welfare of our community. The Town arborist should review all plans for sidewalk development to determine the potential impact on trees. Where it is deemed that a sidewalk will adversely affect a tree, the Town arborist should consider solutions to reduce those impacts.

Wherever possible, the Town should take steps necessary to preserve established trees during sidewalk construction by using alternate sidewalk materials, for example. When saving trees is not possible, the Town should plant appropriate replacement street trees as determined by the Town arborist.

If the Town's arborist makes a determination that an established tree is deserving of preservation and there is no safety concern, sidewalk construction should be delayed so that plans can be updated, unless delay would result in forfeiture of grant funds. Town staff will continue to make determinations about the use of grant funds based on each individual project.

#### **B. Existing Conditions that Do Not Affect Sidewalk Rating System**

The presence of partial sidewalks from infill subdivisions or tear-down construction does not alter the priority of constructing remaining sidewalks. Infill sidewalk sections can function to connect neighbors and serve as school bus stops. Their presence creates a requirement for adjacent redevelopment to extend sidewalks at no cost to the Town. Their presence does not

decrease safety on the street, but rather improves it by providing refuge for pedestrians from oncoming traffic.

Embankments, large desirable trees, or other conditions that increase the cost of constructing sidewalks do not alter the priority of a sidewalk section. However, if safety is not a concern and there are missing sidewalks of similar priority, it is better to construct the lower-cost sidewalks first as they further the goal of increasing connectivity.

### **Suitability Analysis (i.e., proximity to Town infrastructure and commerce)**

Sidewalk suitability is determined by proximity to pedestrian generators (schools, parks, recreation facilities, shopping, etc.). Some locations host events that generate both vehicular and pedestrian traffic at the same time. Examples include schools, sports fields, and the Town Green. For locations that generate event traffic it is important that there be sidewalks on both sides of the street in the area of overflow parking to separate pedestrians seeking to get to and from the event from the vehicles that are arriving at and departing the event.

### **Road Category**

Road category<sup>4</sup> rating is based on whether the considered sidewalk is on a principal arterial road, minor arterial road, or collector road.

### **Vehicle Volume**

The number of vehicles that typically frequent the street are considered based on existing data or engineering estimates.

### **Proximity to Metro Station**

Points are attributed based on proximity to the Vienna and Greensboro Metro Stations.

### **Proximity to Transit Stops**

Points are attributed based on proximity to public transit stops (e.g., Fairfax Connector and Metro bus stops).

## **Appendix B: Crosswalk Markings**

Vienna generally uses three types of reflective crosswalk markings depending on the type of street, and traffic lanes, volume, and speed. As shown in figure 1, the three styles are: (1) a pair of parallel lines, (2) ladder crosswalks, (3) and diagonal crosswalks.

### **Higher-Visibility Crosswalk Markings**

Higher-visibility markings, diagonal and ladder, are most appropriate for use on wider roads, where traffic speeds are high and in locations where pedestrian crossings are less expected and

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<sup>4</sup> See the Town's Comprehensive Plan for more detail about road categories.

drivers need greater warning. Higher-visibility markings are also appropriate in areas of high pedestrian traffic.

**Ladder or Diagonal crosswalks are used at:** Signalized intersections along arterial streets. Depending on traffic speeds and volumes, single parallel lines or diagonal/ladder markings may be used for signalized crossings of secondary streets.

- High-volume, pedestrian crossings of arterial streets without traffic signal.
- Schools and along routes that students regularly use in walking to school.
- Mid-block crossings.

### Uncontrolled Crossings

The level of treatment for uncontrolled crossing can range from an unmarked crosswalk to the installation of a Rectangular Rapid Flashing Beacon (RRFB). The level of treatment should be determined at the discretion of staff through an engineering study.

### Mid-block Crossings

All other alternatives should be exhausted before installing mid-block crossings since they are not expected by typical traffic. An engineering study should be performed prior to the installation of a mid-block crosswalk to determine the level of special treatments to accompany the crosswalk to ensure adequate safety.

Vienna should consider using the pedestrian hybrid beacon, known as HAWK (High-intensity Activated Crosswalk) at midblock pedestrian crossings on multi-lane roads as shown in figure 2. These crossings should also include a highly visible crosswalk design.

## Appendix C: Community Outreach

The following discussion presents opportunities and resources for developing materials to promote and enhance pedestrian mobility within the Town of Vienna.

### Community Events

The Town's parks and recreation department and public information office, local volunteer groups, and other stakeholders should work to sponsor events such as community bike rides for children, family bicycle tours, walk-a-thons, community trail walks, interactive historic walking tours, and guided walking and cycling tours with elected officials.

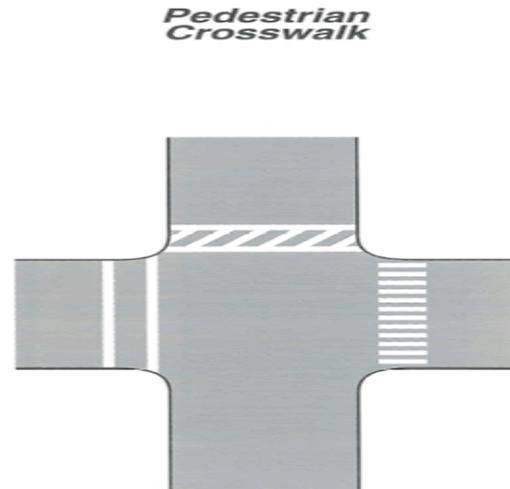


Figure 1: Three styles of crosswalk markings as shown in the Manual on Uniform Traffic Control Devices (MUTCD) [http://mutcd.fhwa.dot.gov/services/publications/fhwaop02090/intmarkings\\_longdesc.htm](http://mutcd.fhwa.dot.gov/services/publications/fhwaop02090/intmarkings_longdesc.htm)

The Town should work with the Police Department's Public Information Officer, schools, and other local organizations to develop activities that encourage walking and educate parents, children, and other pedestrians on safety.

The Town should reach out to local schools' Parent Teacher Associations (PTAs) to encourage increased participation in the annual International Walk to School Day and National Bike to School Day. The Town's PIO should consider promoting the accomplishments of each school located within the Town's boundary regarding this event. Walk-to-school days are implemented at many schools throughout Virginia. They increase awareness of walking and bicycling as fun, healthy transportation choices that can reduce automobile congestion and pollution near schools.

### **Pedestrian Safety Materials**

Using existing federal, state, and county guidelines and materials, the Town should develop, distribute, and post on the Town's website pedestrian (and bicycle) safety brochures and flyers. Potential materials include safety tips on the Town's website, brochures, handouts, and public safety messages. These materials can be provided at local businesses, schools, and public buildings. Information should be targeted to pedestrians (and bicyclists) as well as drivers. Important safety topics that should be discussed include:

- 🚶 Rules of the road
- 🚶 Road crossing safety
- 🚶 Proper location and direction for bicycling on the roadway
- 🚶 Pedestrian and bicyclist visibility to drivers at night
- 🚶 Yielding to pedestrians and bicyclists at road crossings and giving bicyclists enough space when riding on the roadway
- 🚶 The relationship between vehicle speeds and the severity of pedestrian and bicycle injuries

### **Pedestrian and Bicycle Web Page**

The Town should develop a Web page to encourage more pedestrian and bicycle activity. The website should include maps of on-and off-road walking and bicycling facilities (e.g. bicycle parking locations), recommended bicycle routes that provide access to historic and cultural sites and public water access points. Information should also be provided on pedestrian, bicycle, and driver safety tips. It also should include links to resources such as bicycle shops, running shoe stores, bicycle clubs, a calendar with information about events such as organized rides and walking tours, and links to other websites with information about walking, bicycling, and related health issues. This website can serve as the same site recommended in Action 9 that provides residents an opportunity to report maintenance issues and request repairs.

### **Town of Vienna Bicycling/Walking Maps and Brochures**

The Town's public information office or perhaps other Town committees or groups should develop brochures to show residents and visitors preferred routes for bicycling and walking. These materials would provide information about the benefits of non-motorized transportation and physical activity, pedestrian and bicycle safety tips, bicycling rules, bicycle parking, and information about local bicycling and walking organizations.

Brochures about individual bicycle routes, mountain bicycle trails, hiking trails, and walking tours should be developed. These brochures would show the bicycle route, trail, or walking route in significant detail, including written directions (e.g., cue sheet). They would include information about historic sites, restaurants, shops, and other attractions along or close to the route. This type of brochure would be a great resource for residents or visitors looking to do a half-day or full day of walking or bicycling in the Town.



**Outlets for Distribution of  
Maps and Brochures:**

- Visitors centers (e.g., Freeman House)
- Libraries
- Bike shops
- Gyms
- Schools
- Online
- Other organizations, such as bicycle clubs, businesses, and realtors