

# *Morgantown Pedestrian Safety Plan*

## *A Study of Municipal Pedestrian Needs, Standards, and Strategies With Policy and Project Recommendations*

Prepared for Morgantown City Council and City Manager  
By the Pedestrian Safety Board  
With the Municipal Traffic Commission

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## ***Getting Acquainted with the Pedestrian Safety Plan***

The Pedestrian Safety Plan is a comprehensive, detailed document which has involved much work by the Pedestrian Safety Board and input by neighborhood people in Morgantown. It was first “finished” in December, 2008, but nearly each month, changes have been made to make the document more complete.

The Plan is designed to be an ongoing system for pedestrian infrastructure improvement and increased neighborhood safety. The Plan is designed to accommodate changes and future project additions recommended by neighborhoods/other civic groups and processed according to evaluative criteria.

After a detailed Table of Contents and an important list of Appendices, there is a two-page Executive Summary of the Plan in Section 1. (See following pages.)

This is followed by information on the development of the Plan, information on sidewalk and crosswalk standards, and then in Section 5 information on how Morgantown sidewalks and greenways have been classified.

The goal of this Plan is not to try to pave every sidewalk in the City. The goal is, first of all, to designate, establish and upgrade a “connecting network” of sidewalks and greenways to enable people to walk to destinations throughout the city. (See attached Connective Sidewalk map.)

Secondly, the goal of the Plan is to enable citizens in neighborhoods who do not live on one of those “connecting network sidewalks” to have a means for having the sidewalk on their block paved. Such sidewalks are called “Neighborhood Access Sidewalks”.

And thirdly, the goal of this plan is to create a responsible financial system which will support the on-going costs of maintaining sidewalks and greenways as well as two other investments which will make the city safer for pedestrians: traffic calming and walkway lighting.

In order to build the connecting network (see Connecting Network map, Figure 5 in Section 5), the Plan identifies approximately 150 projects by neighborhood that are evaluated and scored according to nine (9) criteria (see Section 6). The rating creates priorities: 1) within each neighborhood (“Hood”) and within the city as a whole (“City”). These ratings, and project maps for each neighborhood, are also found in Section 6.

A one-page projected cost estimate for the walkway and traffic calming projects is found in Appendix I. The financial plan for meeting the costs (annual front foot fees for private property) is described in detail in Section 10.

Section 7 of the Plan includes plans for the “6 Es” including evaluation of progress. Recommendations are also made for the improvement of school access safety (Section 8), ADA accessibility (Section 9), and sidewalk maintenance (Section 11).

Thank you for your important interest in learning more about the Plan. Like good schools and parks, good walkways and safe neighborhoods are important keys to attracting and retaining economic investment, professional and skilled employees, and jobs in general. We need to work together as citizens to enable Morgantown to become a safer, healthier and a stronger community in which to live both now and in the future.

- Morgantown Pedestrian Safety Board

**PLEASE NOTE: A copy of the full plan is available on the City Web site.**

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## Section 1: Plan Overview and Executive Summary

This Plan contains recommended actions to improve pedestrian safety in the City of Morgantown (“the City”). These actions have been generated, prioritized, and organized for incremental implementation by the Morgantown Pedestrian Safety Board (“the Board”), whose mission, guidelines, and membership are detailed in Appendices A, B, and C, respectively. Some recommendations involve public education, media promotion, marking and signage modifications and additions which can be addressed by the Traffic Commission, City Public Works Department or the West Virginia Division of Highways (WVDOH). Others involve financial planning, collaboration, and consultant engineering services based on change in public policy.

The purposes addressed by the Board are as follows:

- To improve pedestrian safety throughout the City, including (but not limited to) sidewalk, crosswalk, lighting, and traffic calming infrastructure improvements
- To decrease roadway congestion and correspondingly improve transportation diversity to include increases among pedestrians, bicycles, and mass transportation.
- To enhance quality of life in City neighborhoods by making them more pedestrian friendly.
- To improve pedestrian access to public places for city residents and visitors.
- To improve public health and well-being by encouraging walking.
- To establish dialogue with neighborhood associations for the purpose of identifying viable connective pedestrian routes.
- To create a framework for public policy decision-making with regard to pedestrian issues.
- To identify and promote priorities for engineering, enforcement and education programs related to pedestrian safety.
- To promote economic benefit by making the City more pedestrian friendly, accessible and attractive.
- To decrease air and noise pollution in the City through the development of safe, convenient and attractive walkways throughout the City.

*The Board’s recommendations, discussed in detail throughout this report, are as follows:*

1) Adopt Sidewalk and Crosswalk Standards City-wide - Consistent standards for sidewalk and crosswalk widths need to be adopted, all gaps in existing sidewalks should be completed, older sidewalks should be repaired or replaced, all sidewalks should meet Americans with Disabilities Act (ADA) standards, and all sidewalks should be adequately lit for pedestrians to feel safe at all times of day.

2) Designate Connective Network Sidewalks and Other Pedestrian Infrastructure - The establishment of complete and maintained connective sidewalk routes throughout the City can significantly improve the walkability of Morgantown and create access to key destinations for diverse populations throughout the City.

3) Improve Intersection Safety – This plan identifies intersections that accident information and local residents identify as hazardous. Some can be improved by action of the City government and others will need effective advocacy on the part of the City Administration with the WVDOH.

4) Expand Use of Trails – The existing riverfront and Decker’s Creek trail system should be expanded to serve additional connective uses and residential areas. Additional trails, or greenways, would provide important improvements in North-South travel and inter-campus travel within the City and reduce reliance on carbon fuel modes of transportation.

5) Improve Lighting and Security for Streets and Trails – As pedestrian travel increases for commuting and for overall year-around activity, it is important that dark areas on trails be well-lit – especially until 10 p.m. – and that security patrol support and safety phone installation be considered to address unsafe conditions and to promote alternative transportation. It is also important that lighting for streets and sidewalks throughout the City be updated and improved to pedestrian-scale lighting with high efficiency bulbs with sensitivity to the night sky.

6) Support and Implement Safer City Initiatives - The Board recommends that the context for plan implementation include:

- Engineering
- Education
- Enforcement
- Environment
- Evaluation
- Equality

7) Make ADA Pedestrian Accessibility a High Priority – The Board recommends that the Traffic Commission sponsor a City-wide ADA compliance audit to identify and prioritize problem sites which are out of compliance.

8) Establish a Financial Foundation for On-going Sidewalk Improvement, Replacement and Maintenance – On October 21, 2005, the City Manager provided four options for supporting sidewalk policies and programs. The Board recommends that an on-going annual Walkway, Walkway Lighting, and Traffic Calming Fee be established based on per linear foot of road frontage on all property within City limits. The Board also recommends that fee receipts be placed each year in a dedicated fund specified for exclusive support creating a network system of connected sidewalks through pedestrian infrastructure projects (construction and maintenance) and traffic calming projects identified by the Traffic Commission and its sub-committees.

9) Establish, Implement and Enforce a Sidewalk Maintenance Policy – Present City sidewalk codes are unenforced and need to be revisited. Public maintenance of sidewalks – including litter and snow removal - on connector streets needs to be adopted by the City. Many blocks of sidewalks need to be repaired and/or replaced.

Each of the above recommendations is defined and applied more fully to specific situations in the body of this document. This plan is a collaborative effort with neighborhood associations and the input of many interested individuals. The Board is indebted to numerous resources for supporting its 100% volunteer effort and to the City of Hyattsville, MD, for the organizational format of this document.

## Section 2: Enabling Walkability

### *Benefits of a Walkable Community*

Enhancing pedestrian infrastructure and increasing the walkability of a community generates multiple significant benefits.

1) Economic Benefits - The Local Government Commission Center for Livable Communities has identified several clear economic connections with walkable environments.

*Walkability increases property values.* People are willing to pay a premium to live where it is walkable. This includes not just the presence of sidewalks but also reductions in traffic speeds, noise and vehicle generated air pollution. Studies cited by the Local Government Commission and the Center for Livable Communities indicate the reduction in traffic speeds alone can increase the value of property by 15-20%.

*Walkability is good for retail sales.* Studies on congestion in booming business centers are demonstrating that too much traffic congestion can also gridlock economic development. Experience in downtown renewal suggests there are correlations between pedestrian improvements and new business development, drops in vacancy rate, and increases in commercial tax revenues. The compatibility of the contemporary knowledge driven and service oriented economy with a walkable mix of downtown amenities is well established nationwide because networking thrives on accessibility, interactivity and synergistic creativity. Walkability itself creates access, opportunities for interaction, and physical and mental regeneration and integration. Dan Burden in his publication *Street Design Guidelines for Healthy Neighborhoods* points out that walkable streets are successful streets which enable people to visit retail stores and service centers with security, convenience, efficiency, association comfort and welcome.

*Walkability is a tourist magnet.* When communities are developed and redeveloped as compact, pedestrian friendly centers, the attractiveness and appeal created are inviting to visitors. Instead of demonstrating preference for shopping and visiting eating establishments in auto-malls, visitors vote with their feet by visiting walkable locations which are interactive and express local color and character.

2) Accessibility Benefits – A walkable community creates choices which people can use to assist them to travel efficiently to destinations such as home, workplaces, school/university, shopping and recreation areas and transit stops. With a walkable environment, people can more readily choose a walking option to reach destinations that are only short distances away. Walking creates more direct access and reduced time and resources utilized in parking, driving and maintaining a vehicle; it can also help to maintain and improve one's fitness. If even a modest percentage of residents substitute walking on some occasions, this will reduce motorized vehicle congestion and contribute to overall traffic mobility while helping to reduce idling and pollution in the City's air.

3) Sense of Community – When people walk, the resulting interactions with and among other persons and with the natural environment can help enhance one's sense of community. Safe, connective walking areas also put children and adults in closer touch with where they live and allow them to use streets and public areas for socialization and recreation as well as access to destinations.

4) Safety Benefits – Walkable school environments contribute to student safety. Development of city-wide connective and comprehensive pedestrian facilities as well as increasing education and enforcement activities can help reduce injuries and fatalities.

5) Quality of Life Benefits – When persons are able to have choices in modes of travel and can choose walking and biking over other modes, there is a perceived improvement in quality of life. Throughout the nation, departments of transportation report that residents place a high value on the availability of sidewalks and walking paths. For many people today it does not even occur to them that there are choices. This needs to change.

6) Health and Fitness Benefits – There is a large body of documented evidence that walking provides health benefits through maintenance of fitness and prevention or reduction of overweight/obesity and other diseases which result from auto-centered sedentary lifestyles.

7) Environmental Benefits – Continued increases in the City's walking population in place of motorized travel will contribute to the reduction in air pollution levels. Present levels create assaults on immune systems, especially in youth and older adults and foster breathing illnesses and disorders in persons of all ages. In addition, when auto emissions are mixed with emissions from buildings and power plants such conditions can create toxic air conditions which are damaging to all forms of life.

8) Disaster Preparedness Benefits – Mass evacuations on-foot can become the only available means for persons responding quickly to natural disasters, explosions or other emergency events. Pedestrian facilities may become the most suitable means for localized mass evacuations especially when vehicle travel may be dysfunctional or restricted. Having a pedestrian infrastructure in place which has been planned for expediting pedestrian movement when a mass evacuation might be needed can provide the most reliable and sustainable mode of transportation in coping with major incidents.

### ***Priorities in a Walkable Community***

A pedestrian-friendly environment is desirable throughout the City. But it is especially important in residential areas, around commercial centers and near community facilities such as schools, libraries, parks, event centers, and public service centers such as the court house, the municipal centers and public agencies. Each of these destinations needs to be accessible by commonly used routes which are pedestrian-transit-bicycle friendly – not simply in terms of the appeal of the destination but in terms of attractiveness in the routes which are utilized to access them. These routes need to be well connected from multiple directions and perceived as safe. To address variations in weather and topography, and the need for longer distance access by pedestrians, it is important that connector pedestrian routes also be interfaced with transit support.

In order to make a community more pedestrian friendly, or walkable, there are several recognized priorities for generating a safe, attractive, multi-modal environment. Several recommendations from the Federal Highways Administration are listed as follows.

## Street Design

*Focus on...*

- Slowing vehicle speeds.
- Reducing crossing distances for pedestrians.
- Improving visibility for pedestrians and motorists (day and night).
- Increasing the level of caution taken by pedestrians and motorists.
- Providing pedestrian friendly facilities (sidewalks, crossing islands, etc.) where the potential crash reductions are the greatest.
- Recognizing that some effective pedestrian safety measures may increase motor vehicle travel time and have a slight negative impact on motor vehicle LOS (Level of Service).
- Placing a high priority on pedestrian safety and convenience, thus factoring in the need of pedestrians as well as the needs for motorized transportation, in terms of street design.

## Pedestrian Route Connectivity

*Increasing pedestrian route connectivity creates a safer, more pedestrian friendly street system by...*

- Reducing walking distances.
- Offering more choices along quiet local streets.
- Reducing the need for wide, difficult to cross streets and intersections by providing alternate traffic routes.
- Adding sidewalks, paths, stairs/ramps, gates, etc. to link dead-end streets and cul de sacs to other parts of the street or route network.
- Maintaining pedestrian connections (e.g., provide a path in the right-of-way or sidewalk easement) when a street is being severed/discontinued.
- Increasing the number of access points to and from neighborhoods and other destinations, so that all trips are not funneled through one or two large intersections or access points. (More neighborhood travel options means less motor vehicle traffic on any given street.)

## Site Design Improvements

- Both large and small-scale developments should be located close to the street (with parking provided in the back) to balance pedestrian needs with auto access. Such standards greatly contribute to the safety, comfort, and aesthetics of the walking experience.

## Land Use Improvements

- Encourage mixed-use development (such as allowing small-scale retail in neighborhoods or placing schools in the center of neighborhoods) to help create destinations within walking distances of where people live and work.
- Design new neighborhoods with many destinations accessible to residents on foot.

## Access Management Improvements

*Access management can work in favor of pedestrians within the context of other planning including:*

- Encouraging clustered development and mixed land uses.
- Sidewalks or walkways are desirable on urban roadways and efforts should be made to establish priorities for adding needed sidewalks.
- Pedestrian signals and marked crosswalks are desirable at all traffic signals, particularly at wide streets.

- Transit stops should be located where pedestrians can safely cross the street.
- Improving street and neighborhood connectivity.
- Constructing medians to control turning movements.
- Converting auto-oriented strip development into accessible land use patterns more suitable for pedestrians.

### *Existing Conditions*

In the year 2000 the West Virginia Department of Highways assessed the mode of travel for persons going to work (and classes) and reported that Morgantown has the highest percentage of persons walking of any city in the state. The state average percentage of persons walking to work was 2.5%, compared to 16.8% in Morgantown.

This high percentage of walkers who commute is joined by other walkers who walk for exercise. In April 2008, Prevention Magazine listed Morgantown as one of the best walking cities in the United States in terms of having the greatest percentage of its population who walk for exercise.

Both statistical recognitions are evidence that people in Morgantown want to walk. The development of the rail-trail system has been a boon to pedestrians in the community. However, other existing conditions in pedestrian infrastructure put pedestrians at risk for injury and discourage many others from ever joining the ranks of pedestrian commuters, recreational walkers and persons willing to walk to schools, public services, and events. Examples of poor pedestrian infrastructure include:

- non-connecting sidewalks,
- narrow sidewalks adjacent to high speed traffic,
- need for sidewalk replacement and repair,
- lack of sidewalks on pedestrian corridors,
- lack of crosswalks, and
- inadequate provisions for pedestrian safety.

*Street Design* - In December 2007 and March 2008 the Morgantown City Council and the Greater Morgantown MPO Policy Board adopted a “Complete the Streets” policy (see Appendix D) which supports the indispensability of “Complete Street” design to address the needs of the total population – including transit riders, bicyclists, pedestrians, *and* vehicle operators. This action is an important step for the future. At present, however, most street designs in the residential and commercial areas of Morgantown developed between 1940 and 1990.

Street design influenced by the Second World War and post war development attitudes lacked pedestrian facilities, had lanes which were difficult to cross, encouraged higher vehicle speeds, and often included complex intersections that created long delays and provided little protection for pedestrians.

High speed one-way traffic conversions were created to move growing volumes of traffic in central city areas after tram and trolley services were discontinued and before construction of interstates and by-passes were established. The speed of traffic in both residential and commercial areas poses increasing safety concerns for pedestrian uses of streets. It also diminishes quality of life, independence, and sense of community, especially for children and older adults.

Lower design speed areas, such as South Park, were achieved early in the 20<sup>th</sup> Century by incorporating such features as:

- narrow street widths
- on-street parking
- tight turning radii
- buffered sidewalks with street trees
- short block lengths
- short building setbacks
- street lights

Pedestrians living in areas such as South Park, Greenmont, Chancery Hill and sections of Woodburn, Wiles Hill, First Ward and Evansdale are able to walk and cross streets more safely because of the original street design involved.

Connectivity - With the exception of areas within older residential sections of the City, many areas do not connect well for pedestrians with other areas nor with many public services or event centers. For example, citizens living near Dorsey Avenue do not have continuous sidewalk access to and from several schools nor to the downtown. Willowdale Road recently received a new sidewalk but connecting sections are still missing between it and adjacent neighborhoods.

The three year Greater Morgantown MPO Regional Transportation planning process identified city-oriented pedestrian priorities in its Non-Motorized System Improvement Priorities. These priorities for pedestrian infrastructure improvement are presented in Appendix E of this Plan and were also identified once again in the preparation process for this Plan. An example of such repeated need is the lack of sidewalks along Van Voorhis Road which creates a pedestrian disconnection for university students living in housing in the vicinity of the road as well as persons living on South View, West View, and other adjacent residential developments. Serious pedestrian accidents have occurred on Van Voorhis primarily because the road is a narrow two-lane road with high speed traffic and without shoulders or sidewalks.

There are other forms of pedestrian disconnection within established neighborhoods in the City. For example, the Creative Arts Center and the Coliseum are inaccessible by sidewalk from many areas of Suncrest as is the Suncrest Middle School, which might otherwise be walkable for many of its students. Also sidewalks are not included along Route 7 in Sabraton. This disconnection has a negative impact on pedestrian travel to commercial areas, churches, and other centers in the Sabraton area, and to transit bus service.

The recent placement of sidewalks on Collins Ferry Road has completed a sidewalk connection along the road which now serves as a safer corridor for children walking to and from school buses as well as persons in the area desiring to walk to work on Collins Ferry Road or to accessible locations on University Ave. The new sidewalk on Falling Run Road will improve the lack of sufficient pedestrian connection between the Highland Park and Van Gilder areas with the central campus and the downtown area.

Lack of connectivity limits the ability to walk safely along connector streets in particular. It also increases exposure time to vehicles on roads and discourages walking as a means of traveling to specific destinations. Unfortunately, there remain multiple disconnections in sidewalks throughout Morgantown. Most are caused by the failure to build pedestrian infrastructure as the

City has grown within its boundaries. Other gaps have evolved from a lack of maintenance and timely repair.

*Site Design* – Many developments in Morgantown do not provide clear and convenient access for pedestrians. Pedestrians often have to dodge motor vehicles in gaining access to malls, stores, health centers and other destinations where there have not been clear standards or plans for pedestrian movement to and from the building. For example, the intersection of Chestnut Ridge and Van Voorhis is very hazardous to pedestrians. When pedestrians walk in front of parking lots and driveways in order to continue on a route, pedestrians often have to dodge motorists unshielded by adequate width in the sidewalk, a presence of street furniture, trees or landscaping and have to deal with potential conflicts between themselves and motorists. Many driveways along a street without proper pedestrian protective design can be a challenging walking environment, especially for persons with disabilities.

One recent exception to this type of difficulty is represented in the construction of the facility housing Medical Express on South University Ave. In this development plan the parking areas are landscaped and located at a distance from the sidewalk area along South University Ave. Other examples are in the construction of two large multi-family complexes in Sunnyside where the sidewalks have been separated from the parking and living areas by landscaping, trees or low retaining walls.

*Land Use* – With the post World War II ascendance of the automobile as the dominant consideration in community planning, land use and zoning practices became oriented toward single usage and segregation of land into uses such as commercial areas and employment areas, schools, and residential areas. Commercial development became concentrated in strip malls and in other structures with large parking areas located along connector and arterial roadways. These busy roads are difficult for pedestrians to cross and to safely navigate in general. Intersections are especially difficult for pedestrians to cross due to the size and large numbers of turning vehicles.

Morgantown has been organized in a similar way and has become even more segregated in single use patterns with the demise of the small neighborhood grocery stores and other neighborhood small commercial establishments. The lack of availability of safe crosswalks on nearly every arterial road in Morgantown has become a major problem for local residents as well as University visitors to the City.

To counter-balance this trend and to create an environment in which there can be more mixed-use zoning and less dependency on automobiles for each commercial and social transaction, the City of Morgantown has made changes in its zoning code as permitted by revisions in the State planning legislation in 2004. Other plans to progress toward reducing longer travel distances are: promoting higher mixed use residential density in the Sunnyside and riverfront areas; supporting neighborhood transit services; increasing the number of parks in neighborhoods; and the establishing pedestrian infrastructure planning through the work of the MPO and the forming of a Municipal Pedestrian Safety Board. Additional information on these latter two steps is presented in the background section which follows.

## Section 3: Plan Development

### *Background*

The development of a pedestrian safety plan for the City of Morgantown was initiated in January of 2005 when the need for such a plan was discussed by the Morgantown City Council. The discussions continued intermittently throughout the next several months. In October the City Manager developed a memo (10/21/05; Appendix F) identifying four different ways in which comprehensive changes in sidewalk funding might be addressed and urged City Council to decide upon a funding plan before investing in the preparation of a formal sidewalk plan.

The Greater Morgantown Metropolitan Planning Organization concurrently was initiating the development of its Regional Transportation Plan. The planning process was completed in May of 2007 with the publishing of a document which included priorities for non-motorized system improvements in addition to recommendations for roadway network improvements. The 41 non-motorized priority projects recommended in the Plan (pages 112-115) included 25 priorities which related to pedestrian-oriented projects within or immediately adjacent to the City (see <http://www.planttogether.org/>).

The new projects listed are numbered on the Multi-modal Transportation Improvement Map - Figure 25 - as numbers 1, 5, 8, 9, 10, 11, 16, 20, 21, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38. Item # 42 cites the need to “renew and improve street lighting throughout the city” and # 32 identifies the need to “upgrade and replace dangerous sidewalks” and install “sidewalks where there are gaps in the sidewalk network”.

During the fall of 2006 the Morgantown Traffic Commission, with the concurrence of the Morgantown City Council, began taking steps toward the establishment of a Pedestrian Safety Board. Residents making petitions to the Traffic Commission and Traffic Commission members were increasingly mentioning pedestrian safety concerns pertaining to crosswalks and sidewalks in traffic related issues.

In addition, newspaper editorials were focusing more frequently on pedestrian related concerns. WVU students were conducting surveys related to lack of sidewalks and crosswalks. City Council members were continuing to reflect public concern about the insufficient progress being made in addressing pedestrian needs though limited sidewalk projects supported by annual city budgets.

The need for a better pedestrian environment includes a strong public interest in the curtailment of vehicular speeding in city residential areas. Clearly the community is calling for a more comprehensive response to a growing public desire for a more walkable, livable community.

The mission of the Traffic Commission (Appendix A; adopted December 2003) is to enable City Council decision-making to address citizen mobility needs in a resourceful and collaborative manner which improves access and quality of life in the City.

This means...

- Safe mobility for all persons
- Improve traffic flow and reduce congestion

- Multi-modal access for all persons to public services, employment, education, recreation, neighborhoods, and all residential areas and businesses
- Economic and social development opportunities within the community
- Quality of life by protecting and enhancing neighborhoods, reducing lost time and money due to congestion, increasing opportunities for protecting green space, and incorporating use of best practices in addressing transportation concerns
- Health of citizenry by supporting persons well-being, improving air quality, reducing stress, and improving pedestrian, cycling, and other transportation opportunities
- Education of the public on matters relating to transportation and traffic management and service regulation.

In keeping with its own mission, the Traffic Commission established the Pedestrian Safety Board in 2007 for the following purposes:

1. Review and support the implementation of Article 913 on Sidewalks and any other provisions in the Morgantown Municipal Code pertaining to pedestrian travel, safety, and accessibility;
2. Work to improve the safe walkability of Morgantown so as to reduce traffic demands, afford better air quality, increase public access, reduce pedestrian accidents, and improve public health;
3. Promote and lead the development of a Pedestrian Safety Action Plan in accordance with the standards established by the Federal Highways Administration and the West Virginia Department of Transportation;
4. Make recommendations for expanding and improving pedestrian infrastructure, signage, safety, capacity, facilities, and streetscapes for pedestrians on streets, trails, or other land use design which facilitates pedestrian movement;
5. Advocate for the provision of pedestrian travel opportunities to and from locations such as residential, employment, commercial, education, recreational areas, and transit routes and centers;
6. Encourage practice, enjoyment, and awareness of the benefits of walking and the development of a walkable community.

To achieve these purposes, the Board was asked to do the following:

1. Advise and consult with the Traffic Commission, the City Manager, and the City Engineer on any matter pertaining to pedestrian accessibility and safety;
2. Study the transportation problems and needs of the City and make specific recommendations to the Traffic Commission and the City Manager and to the City Council and Greater Morgantown Metropolitan Planning Organization as authorized;
3. Review City plans and policies which contain matters relating to roadways, transit, and non-motorized transportation;
4. Create a City pedestrian safety plan to set forth strategies, recommendations, and time frames for the creation and maintenance of pedestrian access to strategic services throughout the City;
5. Facilitate the planning and implementation of public education on walking and walking opportunities throughout the City;
6. Promote and coordinate participation in all public planning in order to assure representation of public interests pertaining to pedestrian needs;
7. Work with the Traffic Commission and other City Departments as needed to fulfill the purpose of the Pedestrian Safety Board.

The first organizational meeting of the Pedestrian Safety Board was conducted in October, 2007. This pedestrian safety plan is their volunteer effort to carry out the request to “create a City pedestrian safety plan” to improve “pedestrian access to strategic services throughout the City”.

In the following month, November 2007, the Morgantown City Council adopted the Complete Streets principle as a municipal policy for future installation or widening of city streets. This policy is based the principle that streets need to have capacities to include transit, bicycle and pedestrian infrastructures so that they will serve the needs of the total population – as many as 1/3 of which, according to the Complete Streets Coalition, likely do not drive motorized vehicles and thereby need streets which are safe, comfortable, convenient for travel via foot, bicycle, and transit for persons of all ages and abilities. This policy was also adopted by the Greater Morgantown MPO Policy Board in January 2008.

In its preparations to develop a pedestrian safety plan for the City, the Pedestrian Safety Board reviewed the Federal Highway Administration publication, “How to Develop a Pedestrian Safety Action Plan.” It also conducted on-line searches on various municipal pedestrian plans prepared throughout the country. In addition, it surveyed literature and materials prepared by the Local Government Commission and the Center for Livable Communities. These materials helped guide the work of various committee members, interns and other resource persons – while the Board remained in communication and collaboration with the Traffic Commission, the MPO, and city neighborhood associations. This plan is being completed during the fall of 2008.

## Section 4: Recommended Sidewalk and Crosswalk Standards

### *Sidewalks*

Because the City of Morgantown is an older river city with growing traffic problems and a limited number of streets in its street grids, there has been a tendency in public decision-making to reduce attention previously given to sidewalk installation. In the late 19<sup>th</sup> Century and early 20<sup>th</sup> Century development of the older sections of the City, such as, South Park, Greenmont, Wiles Hill, Woodburn and Sunnyside, sidewalks (and street car transit) were considered to be essential elements in local transportation. Since 1940, however, sidewalks constructed have tended to be narrower than both older sidewalks and modern standards. They have less buffer space between the street traffic lanes and the pedestrian walking areas, and they are less pervasive in their construction. In addition, older sidewalks have often failed to be maintained by property owners. Furthermore, the City has not required property owners to comply with maintenance standards set forth in the City Code. New construction of low density residential buildings has often involved the successful petitioning for waivers of City Code requirements to include sidewalks as part of project plans.

It is important, however, that in working toward a more walkable and livable city, changes in policies and practices need to be revisited and earlier sidewalk construction priorities and standards be revived. It is also vital that the City work to have each of its sidewalks meet basic ADA standards where physically practical so that city pedestrians of all ages and abilities are able to move throughout the City.

The ADA requires that sidewalks be constructed so that they are a minimum of 3 feet in width. A 5 foot standard is recommended by both the Federal Highways Administration and the Institute of Transportation Engineers persons. This width allows two persons to pass comfortably or to walk side-by-side. This standard is recommended by the Board where practical in the City of Morgantown. Further, it is recommended that 5-foot or wider sidewalks be installed near schools, at transit stops, and in any downtown or commercial area where there is likely to be a high concentration of people.

The USDOT, the Highway Safety Research Center and the Pedestrian and Bicycle Information Center recommend that sidewalks be continuous along both sides of the street and fully accessible to all pedestrians. USDOT guidelines also divide a sidewalk into four zones as shown in Figure 1:

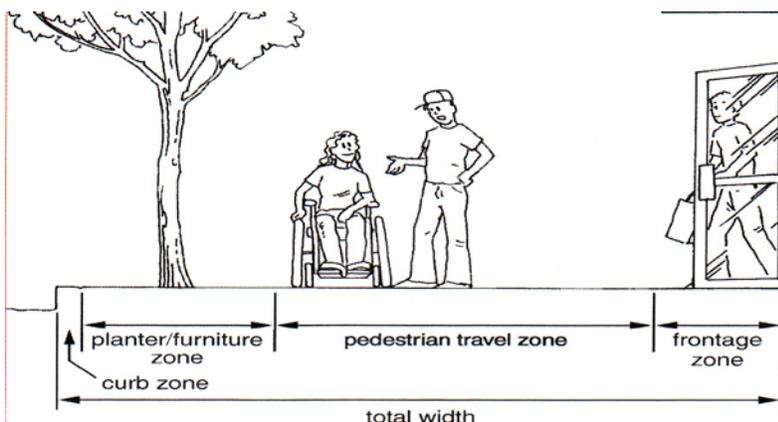


Figure 1: ADA accessible crosswalk

A curb zone is described as the first 6 inches of a sidewalk corridor which is located adjacent to the roadway. It provides important function by channeling storm water away from a sidewalk. It also discourages vehicles from entering a sidewalk area and is an essential component of a sidewalk. Multiple macadam pavings without proper removal of older material diminish the effectiveness of sidewalk curbs.

A planter/furniture/signage zone which serves as a buffer zone of 4 to 6 feet is recommended to separate the pedestrian area of the sidewalk from the traffic lanes. In areas similar to High Street, street furniture (such as benches, bicycle racks, transit shelters, waste receptacles, callbox telephones, fountains, clocks, street light and sign poles) and planting areas serve as effective applications in buffer areas. Parked cars and bicycle areas on streets can also augment on-sidewalk buffer zones.

Street trees, as utilized in locations such as South Park and High Street, are of major value in planter zones. Not only do they increase the sense of safety for pedestrians, they also provide shade for pedestrians, the pavement, and the adjacent buildings; help to reduce pollution and storm water run-off; reduce costs in pavement replacement; cool sidewalk areas and adjacent buildings; create an aesthetic environment; create a sense of place; and increase the public and private value of the location. It is important that sidewalks be built *around* mature trees whenever possible. The importance of street trees to pedestrian thoroughfares is discussed further in Section 7.

Pedestrian travel zones are zones which are free of all obstacles and protruding objects. On local or collector streets the minimum must be 3 feet. However, it is recommended by the Board that a minimum of 4 feet be used along these streets, and a minimum of 6 feet on major streets. The majority of current City projects meet the 4 foot recommendation. Pedestrian travel zones are preferred.

The building frontage zone is an area between the pedestrian travel zone and a building wall. Pedestrians do not feel comfortable walking directly adjacent to a building or a fence taller than 4 feet. Pedestrians are reported to prefer to keep at least 2 feet of “shy” distance away from a building wall.

As a practical matter, the City of Morgantown cannot expect to meet the 5 foot minimum sidewalk width recommended by the Pedestrian Safety Board on all sidewalks nor the USDOT standards for buffers. Many of the older neighborhoods in the City have 4 foot sidewalks which meet the needs of those areas. The width of the sidewalk on a neighborhood street which does not serve as a connector to a major thoroughfare is not a significant concern. Where traffic is heavy and/or moving at high speed, however, exceeding minimum width and buffer zones becomes a matter of critical importance in addressing the safe walkability of the City. A 5-foot sidewalk allows two persons to walk comfortably or to walk side-by side if there is a buffer between the sidewalk and the street. According to the U.S. Department of Transportation standards on accessible sidewalks, sidewalks in downtown commercial areas should be a minimum of 11 feet, which provides a 4 foot planting/furniture/signage zone as a safety buffer from vehicular traffic, a 5 foot pedestrian travel zone, and a 2 foot frontage zone.

In many Morgantown locations, right-of-way constraints, retaining walls, and property lot sizes create serious problems for developing sidewalks according to standards. In order to create a

safe, handicapped-friendly, walkable city, however, the City must take steps to increase sidewalk width whenever possible.

### ***Accessible Cross Slope and Curb Ramps***

A 1:50 or 2% cross slope of a sidewalk assures that the sidewalk allows for accessible travel by physically challenged populations. In addition a 2% slope enables the surface of the sidewalk to drain surface water toward the street and to reduce the presence of standing water that can be susceptible to freezing in colder months.

Curb ramps provide means for transition between elevated sidewalks and crosswalk areas. Mandated by the 1973 Rehabilitation Act and the 1990 Americans with Disabilities Act, curb ramps must be installed at all intersections and mid-block locations where pedestrian crossings exist or where sidewalks terminate. If a curb ramp is located where pedestrians must walk across the ramp, it shall have flared sides; the maximum slope of the flare shall be 1:10. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12.

According to the USDOT Pedestrian and Bicycle Information Center a separate curb ramp for each crosswalk at an intersection should be provided where feasible. Single ramps at a corner for both crosswalks can be problematic – especially for visually impaired persons.

Detectable warning areas on curb ramps as specified by ADA guidelines enable visually impaired persons' to identify the transition between a sidewalk and a street. The ADA currently requires the use of truncated domes on access ramps.

### ***Crosswalks***

According to an early 1990's study on Pedestrian Crash Types published by the Federal Highways Administration, pedestrians have the highest risk in the traveling public because they are the least protected. Nationally, pedestrians were identified as representing 14% of all traffic fatalities even though walking accounts for only 3% of the total travel trips. The study's analysis states that pedestrian accidents occur most often when a pedestrian is attempting to cross a street either at an intersection or a mid-block location.

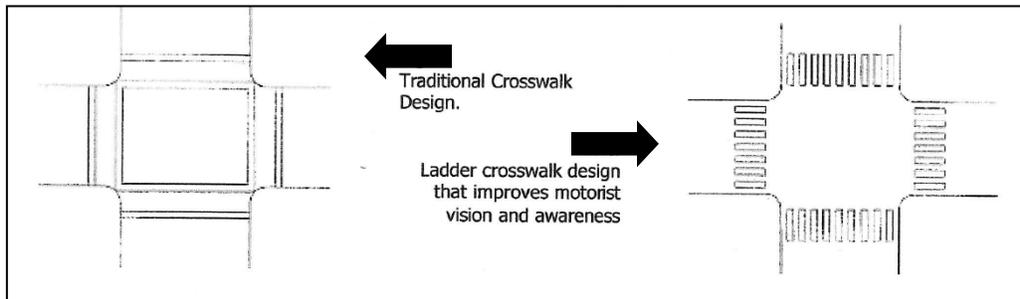
Intersections also can be one of the primary barriers for persons of different ages and impairments to achieve accessibility and mobility. Every accommodation needs to be made to make street crossings manageable for all people.

Again, according to the Pedestrian and Bicycle Information Center, "at both signalized and unsignalized intersections, there is an implied (legal) crosswalk for pedestrians at each leg, whether or not the crosswalk is marked. The only time this is not true is when there is a sign clearly prohibiting pedestrians from crossing one or more legs. Midblock crossings that are marked may have other physical features and signs."

The primary function of marked crosswalks is "to highlight the right-of-way where motorists can expect pedestrians to cross and to designate a stopping or yielding location." The function of crosswalks is also to inform pedestrians on optimal or preferred locations to cross. Even though various marking are provided in the MUTCD, "the 'international' (also known as 'ladder' or

‘zebra’) markings are strongly preferred, particularly at uncontrolled locations, because they are far more visible, which is particularly important at night or in low light conditions (e.g. rain).”

The Board recommends the use of the ladder design, as is the City’s current policy, rather than the traditional design endorsed by the WVDOH. The following illustration is a comparison of crosswalk designs.



**Figure 2: Crosswalk design examples**

The MUTCD requires a minimum crosswalk width of 6 feet. The Florida Department of Transportation recommends a 10-foot wide ladder crosswalk design at locations serving large numbers of persons on high use thoroughfares.

The Board recommends the use of inlay tape and thermoplastic materials (as is current City Policy) which are more cost-effective in the long run even though they are more expensive on first application. “Both inlay tape and thermoplastic are more visible and less slippery than paint when wet.” (walkinginfo.org)

Where crossing times are measured at signalized intersection, the general standard rate for pedestrian travel in a crosswalk is to be calculated to be 4 feet per second. This figure may be adjusted to accommodate the needs of special populations such as persons with disabilities, elderly persons or young school children.

### ***Installation of Crosswalks at Signalized and Unsignalized Intersections***

*“Many pedestrians consider marked crosswalks a tool that enhances their safety and mobility. They view the markings as proof that they have a right to share the roadway, and in their opinion the more the better. Many pedestrians do not understand the legal definition of crosswalk and think no crosswalk exists unless it is marked. They may also think that drivers will be able to see the crosswalk markings as well as they do, and they assume that it is safer to cross where drivers can see white crosswalk lines.” – Zegeer, C.V., Stewart, R.J., Huang, H.H., and Lagerwey, P.A. Safety Affects of Marked Vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines. FHWA-RD-01-075. Federal Highways Administration, Washington, D.C., 2002.*

Both marked and unmarked crosswalks can exist at intersection. In Virginia, any intersection where the speed does not exceed 35 miles per hour constitutes a place where a driver must yield right of way to any pedestrian crossing the highway. This standard is based on the MUTCD and is believed to be fully applicable in West Virginia as well.

According to Chapter 17, Article 10, of the West Virginia Code, where Pedestrian Rights and Duties are delineated, such pedestrian privileges are inferred in Article 10-2 and Article 10-3 to be in both marked and unmarked crosswalks at an intersection.

The Federal Highway Administration (FHWA) authorized a study on crosswalks by Zegeer et al in 2005\*\* which is considered to be the current authoritative guidance on marking crosswalks. The study identifies the following conditions to be used for marking crosswalks:

1. At locations with STOP signs or traffic signals.
2. At non-signalized street locations where engineering judgment dictates that the number of motor vehicle lanes, pedestrian exposure, average daily traffic (ADT), posted speed limit, and geometry of the location would make the use of a specially designated crosswalk desirable for traffic/pedestrian safety and mobility.

A summary of the Zegeer et al FHWA marked crosswalk study as summarized by Lance Dougald in his Report on Development or Guidelines for the Installation of Marked Crosswalks (Charlottesville, 2004) is provided below.

On pages 5 and 6 of his publication Dougald points out that the key element in the Zegeer report and others is “engineering judgment.” He notes that whenever the term is applied, the judgment needs to be documented.

“Engineering judgment” includes the following considerations:

1. The effectiveness of a marked crosswalk. Crosswalk markings should not be used at all intersections. If used extensively, many marked crosswalks would be underused and motorists would tend to be desensitized to their presence. This could lead to problems at heavily utilized crosswalks and detract from the potential safety value at these locations. Crosswalks should be utilized in general only at locations where pedestrian activity is significant. This will insure that motorists come to associate crosswalks and pedestrian activity. (Katz, Okitsu & Associates, 2004)
2. Alternate treatments to be used with crosswalk markings. It is important to note that although crosswalks are an important element in intersection design, a crosswalk does not ensure the safety of a pedestrian. Too often, crosswalks are the sole provision for pedestrians at intersections when other safety measures are needed. These safety measures include warning signage, bulb outs or curb extensions, median and slip lane refuge islands, pedestrian signal enhancements, and enhanced signal phasing to incorporate pedestrian activity. (Toole and Zimmey, May 2004)
3. Adequate sight distance of pedestrians, relative to vehicular speed. If it is not feasible to provide advance warning to motorists, crosswalks should not be provided. (City of Stockton (CA) Public Works Department, 2003).
4. Parking prohibitions near a crosswalk. Vehicle parked too close to an intersection block a driver’s view of pedestrians. (Florida Department of Transportation, Florida Pedestrian Planning and Design Handbook, 2004)

5. Alternate crossing locations. In some instances, complex signal phasing, dual vehicle turning movements, and width of roadway pose potential hazards to pedestrians at intersections. In these cases, safer crossing locations should be explored (K, Fricke, unpublished data).

Recommendations for installing marked crosswalks at uncontrolled locations are summarized in Figure 3, below.

Roadway Type (# of Travel Lanes and Median Type)	ADT ≤ 9,000			ADT 9,000 - 12,000			ADT 12,000 - 15,000			ADT > 15,000		
	Speed Limit**											
	≤30 mph	35 mph	40 mph	≤30 mph	35 mph	40 mph	≤30 mph	35 mph	40 mph	≤30 mph	35 mph	40 mph
2 Lanes	C	C	P	C	C	P	C	C	N	C	P	N
3 Lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multi-Lane (4 or More Lanes) With Raised Median +	C	C	P	C	P	N	P	P	N	N	N	N
Multi-Lane (4 or More Lanes) Without Raised Median	C	P	N	P	P	N	N	N	N	N	N	N

\*These guidelines include intersection and mid-block locations with no traffic signals or stop sign on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor site distance, complex or confusing designs, substantial volumes of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make a crossing safer, or necessarily result in more vehicles stopping for pedestrians. Whenever marked crosswalks are installed, it is important to consider other pedestrian facility enhancements, as needed, to improve the safety of the crossing (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic calming measures, curb extensions). **These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.**

\*\*Where speed limit exceeds 40 mph, marked crosswalks alone should not be used at unsignalized locations.

**C = Candidate sites for marked crosswalks.** Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to show whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volumes, vehicle speeds, sight distance, vehicle mix, etc., may be needed at other sites. It is recommended that a minimum of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) exist at a location before placing high priority on the installation of a marked crosswalk alone.

**P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements.** These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

**N = Marked crosswalks alone are not recommended, since pedestrian crash risk may be increased with marked crosswalks. Consider using other treatments, such as traffic signals with pedestrian signals, to improve crossing safety for pedestrians.**

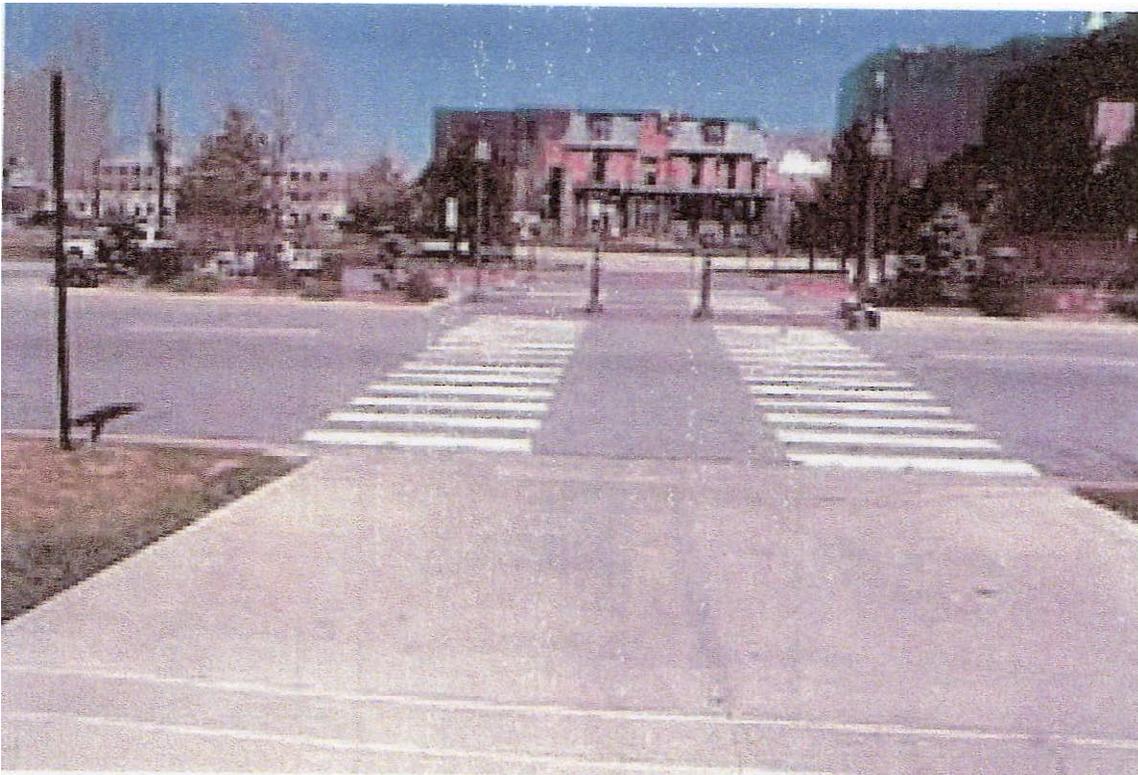
+The raised median or crossing island must be at least 4 feet wide and 6 feet long to adequately serve as a refuge for pedestrians in accordance with MUTCD and AASHTO guidelines.

Source: Zegeer, C.V., Stewart, R.J., Huang, H.H., and Lagerwey, P.A. *Safety Effects of Marked Vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines.* FHWA-RD-01-075. Federal Highway Administration, Washington, D.C., 2002.

**Figure 3: Recommendations for Installing Marked Crosswalks at Uncontrolled Locations**

### ***Mid-block Crossing Design and Location***

The location of mid-block crossings is a problem of concern in Morgantown due to the design of multiple lane thoroughfares in which no pedestrian refuge medians or islands are provided. Dan Burden has developed a "Triple-Four" crosswalk design ([www.pedbikeimages.org](http://www.pedbikeimages.org)) which utilizes a double ladder concept with a center pedestrian zone.



**Figure 4: "Triple-Four" crosswalk design**

This design provides an opportunity to improve visibility of the crossing area for drivers as well as the aesthetics of a crossing area. If installed with high visibility thermoplastics, and accompanied by a pedestrian actuated mid-block signal, pedestrian safety can be supported at high-activity crossing areas such as at a multi-modal transportation center, university class locations, fast food restaurants, office supply stores, shopping centers, and park and recreation areas.

General criteria for determining whether to install a mid-block crossing have been discussed in the previous justification section. Additional mid-block crossing decision-making are summarized from the MUTCD by the Sacramento Department of Public Works:

- *A pedestrian generator is less than 300 feet away at a location mid-way between a signal- or stop-controlled intersection, or there are pedestrian trip generators on both sides of the street.*

*Or*

- *40 pedestrians cross during a one-hour period or 25 cross per hour for four consecutive hours or include a high proportionate number of children and/ or older adults which are disproportionately represented in collision and fatality statistics*

- *Fewer than five gaps in traffic during the peak five minute period.*
- *The mid-block location is 300 feet or more from another crossing location on an arterial street; 300 feet or more from another crossing on a collector street; 100 feet or more from a location on a local street.*
- *The mid-block location has sufficient sight distance.*
- *Special treatments are considered; safety assessments warrant the crosswalk.*

### ***Traffic Calming***

Traffic calming is a method of designing roadways to require traffic to proceed at slower speeds, thus protecting pedestrians and motorists. It is in effect at all times and reduces the need for on-site enforcement personnel at multiple locations simultaneously throughout the City. The science and practice of traffic calming has been successfully used by the Morgantown Traffic Commission's Traffic Calming Committee to address the dangers of excessive vehicular speed throughout the City. A city-wide Traffic Calming Plan (see Appendix M) has been approved by the Traffic Commission as a means to protect pedestrians and residents in all neighborhoods of the City.

The Pedestrian Safety Board fully endorses the Traffic Calming Plan and recommends that the improvements recommended be implemented in conjunction with pedestrian safety improvements (e.g., crosswalks, walk signals, signage) to maximize effectiveness in keeping the City's residents safe.

### ***Trails and Other Greenways***

Trails are non-motorized connectors which can be developed in various types of settings including stream banks and utility corridors. Trail construction has become a significant means for moving Morgantown forward in improving its walkability and the overall quality of life within the City. Most persons when they think of trails within Morgantown think of the Mon River/Decker's Creek rail-trail network. But trail development in the City has been much more pervasive and needs to become even more so in the future. Well utilized trails now link Richwood Ave and Whitmore Park with the Decker's Creek Trail. An elaborate network of park trails has already been established at White Park. More recently trails have been developed at Dorsey's Knob Park as well as in other short, non-street locations throughout the City.

Trails are an important means for improving access between neighborhoods and for connecting walkable shopping, school or park destinations through greenway areas. Morgantown is a city which can benefit greatly from additional trail construction because of the hilly topography, narrow streets, and numerous dispersed neighborhood areas. One unutilized means for trail development is the use of utility rights-of-way in high density neighborhoods such as Sunnyside or Greenmont.

A problem that has emerged in the City is maintaining the safety and usefulness of trails when daylight is not available. With the changes taking place in the economy and in the multi-dimensional use of the trails, they can no longer be considered as exclusively a park or recreation

resource. Morgantown's trails are becoming more important to persons walking to work, services and academic classes.

This evolution is consistent with both the MPO planning and the national trends in which more and more person are pursuing alternate transportation as means for access to essential destinations. To support rather than discourage such evolution, it is important that morning and evening trail lighting be provided year-round in addition to locating call boxes in the most traveled sections of the trail. Such changes will support the goals of this Plan and help reduce traffic congestion.

Optimum trail widths are 8-14 feet with a 3-6 foot clear zone beside the trail. Shade trees are important contributors to the successful development of multi-purpose trails. (Burden, D. Street Design for Healthy Neighborhoods. 2002)

There are still other important ways by which people make green connections within the City. These are stairs, trails and paths which are means by which people can travel from one street to another without following established streets, lanes or alleys. In Wiles Hill and Woodburn there are stairways which link parallel or adjacent streets in such a way that people can travel more directly and efficiently between residential locations and downtown destinations. These stairways are located on public rights-of-way and were established before 1940. Some maintenance has been performed, but more is needed. Increased lighting would also improve year-round safety.

Surfaced trails which are not of rail-trail width and unsurfaced paths are greenways which have importance in neighborhoods as connections between homes, parks, schools and shopping areas. These less developed greenways provide a means of "getting around" in neighborhoods. Because of their directness, they can become incentives for travelers to walk to a destination rather than to use motorized transportation.

## Section 5: Pedestrian Infrastructure Plan

### *Strategic Infrastructure Elements*

There are many steps which have been identified which need to be taken to make a more walkable city possible. In order to establish a strategic connecting network which will allow pedestrian travel from point-to-point and area-to area throughout the City, the focus must be both on specific destinations as well as safe, comprehensive, and connective access.

The destinations in a comprehensive city-wide pedestrian infrastructure system must include commercial districts, schools, parks, post offices, service centers, other major employment sites, and neighborhoods.

In assessing priority safety needs the Pedestrian Safety Board has studied the *DOH Pedestrian Accident Data: 1998-2008* to determine where most of the reported accidents have taken place in Morgantown during the past 10 years. A list of all accidents is presented in Appendix G.

In projecting a comprehensive pedestrian access system, several levels of infrastructure must be considered. Most, but not all, pedestrian access relates to current public thoroughfares which are designated as city streets. In order for streets to serve the multiple transportation, commercial, and social needs of the population, it is essential that streets also provide various functions for the walking public. Accordingly, some streets serve as *arterial connectors* which enable serving numerous commercial, residential and neighborhood interests. Others streets are *area collector streets* which often link multiple residential streets to major and minor arterial connectors throughout the City. In order to fulfill these various networking functions, the streets must be “Complete Streets” and have safe and sufficient sidewalk and crosswalk capacities.

There is a network of arterial and collector streets in Morgantown which the Pedestrian Safety Board believes is essential to present and future safe, connective pedestrian travel. It is essential that sidewalks and crosswalks on these network streets be installed, completed and maintained according to standards. This plan designates the sidewalks on these core network streets as *connecting network sidewalks* (CNS).

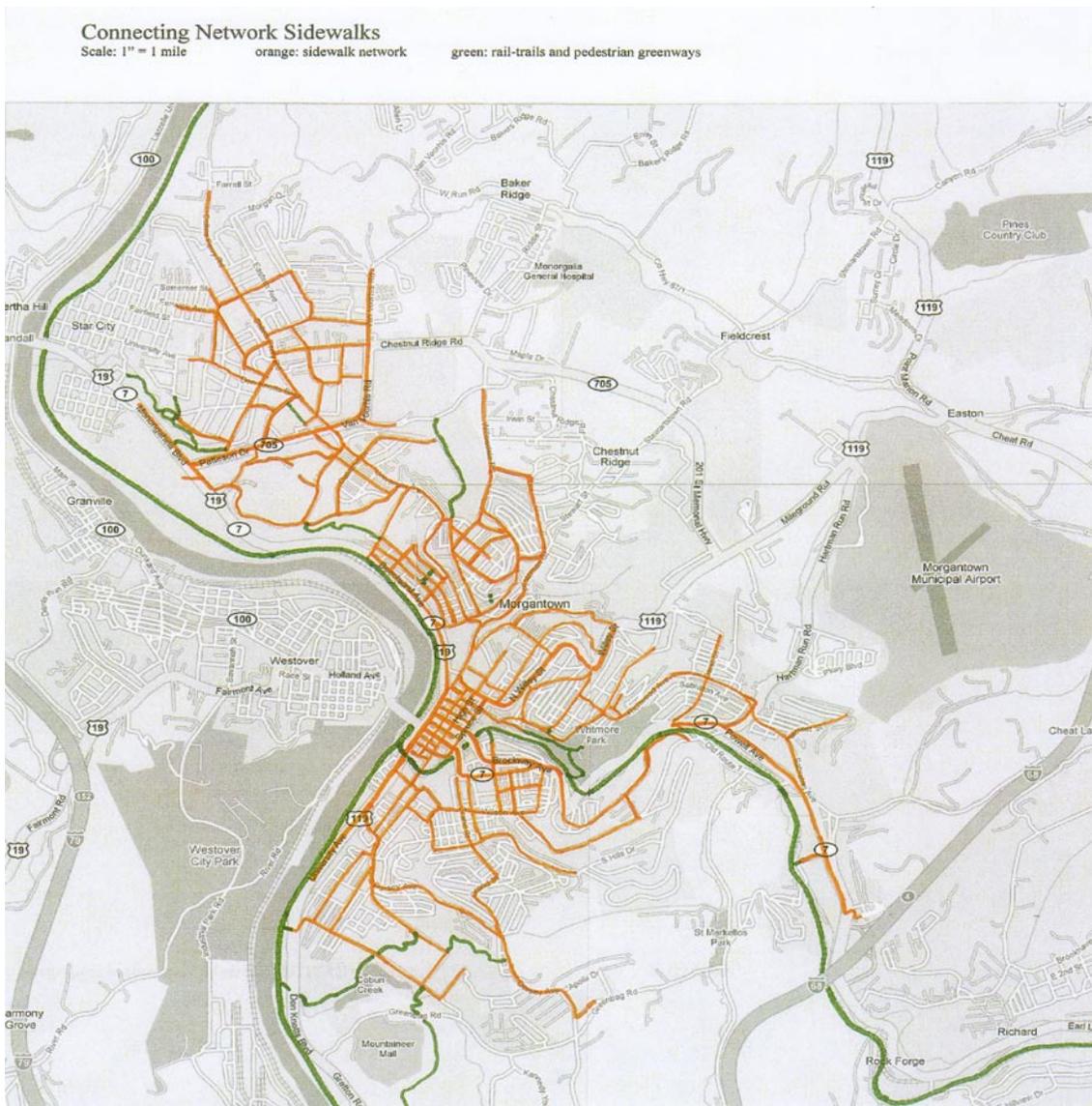
Ideally every street within the community would have sidewalk and “Complete Street” characteristics. Because this goal is not deemed to be achievable at this time, this Plan places priority on addressing the need for upgrading CNS capacity and on building other types of connective pedestrian infrastructure.

Some streets serve as “gateway” entrances to a city. Nearly all of Morgantown’s principle gateway streets are included in the CNS network (e.g., Route 7 in Sabraton). Gateway streets are those which welcome people to the city and are vital to establishing important impressions of the community. Gateway streets need to be “complete streets” to establish an inclusive, aesthetic welcome while providing multi-modal transportation on primary urban corridors.

The construction, replacement, and/or maintenance of *neighborhood access sidewalks* (NAS) which are not part of the designated core connective network is still very important to the walkability and quality of life in the City. The NAS are vital feeders to the CNS and also have a quality of life support function for a specific part of a neighborhood. Presented in Section 10 of this Plan is a proposal for addressing the expense of a core pedestrian infrastructure within the

City. The Pedestrian Safety Board believes that priority attention and resources must be given to a core network to help the City move forward in improving safe walkability, reducing traffic congestion, supporting use of alternative transportation, providing greater equity in infrastructure to all of its citizens and visitors, improving air quality, and addressing exercise related physical problems.

These are the broad goals which this Plan addresses. The day-to-day goals for the citizens are to achieve a quality of life which will improve life for all: the small item shopper, the university student and school youth pedestrian, the dog exerciser, the recreational walker, the transit rider who walks to and from a bus stop, the job commuter walker, the neighborhood visitor, the letter mailer, and the park user.



**Figure 5: Morgantown Connecting Network Sidewalks (CNS)**

The list of strategic connecting routes has been organized primarily according to residential locations within the City. Some of these routes have sidewalks or other infrastructure which are relatively new and in good condition. Others have sidewalks which were installed many years

ago and are in disrepair. Still others have not been installed according to accepted standards and need to be altered or augmented. The list which follows is a comprehensive list of core connecting components for a City-wide pedestrian infrastructure system regardless of the current status. Streets listed in this section of the document may be City-, University-, or State-owned. As such, strategic partnerships with city, university, and state agencies must be fostered to promote the objectives of this Plan.

### ***Rail-Trails***

A critical improvement in the walkability of Morgantown has been generated through the work of the Mon Rivers Trails Conservancy with the support of the Hazel Ruby McQuain Foundation, the Greater Morgantown Chamber of Commerce, the State of West Virginia, the City of Morgantown, the Monongalia County Commission and much volunteer effort. The rail trails along the Monongahela River and Decker's Creek have enabled people to at first to enjoy new recreational mobility within the community; now they are also interested in using the trails as a means for travel to employment, services, errands, and events.

Such transitions offer a means for reducing motorized vehicular car travel and congestion, making contributions to improving air quality, and supporting expansion of transit service use in inclement weather. The limitations in trail use year-round for transportation, however, relate to the trails not being illuminated between the hours of 6:30 to 7:30 a.m. to allow travel to work and morning classes and between the hours of 5 p.m. and 10 p.m. – especially when daylight savings time is not in effect.

### ***Central City***

Sidewalks are needed on both sides of all streets and crosswalks at all intersections where 20 or more pedestrians cross during peak hours. Thermoplastic crosswalk markings are important for routes where heavy trucks and traffic are located. The highest priorities for pedestrian infrastructure improvements are crosswalks along the South University/ University/Beechurst corridor between Decker's Creek and Eighth Street. Access to the new post office location on South High St. needs to be improved.

### ***Evansdale***

University Ave - a major connective corridor between campuses, commercial areas and neighborhoods.

Oakland Street/Country Club Drive - a connective link for all streets in the north Evansdale area, the hospital/Ronald McDonald House/stadium, and University Ave

Oakland St – pedestrian connection for WVU students

Rawley Ave – pedestrian connection for WVU students

Riverview Drive – a connection for pedestrians using Rawley Ave.

Rawley Lane – A connection adjoining WVU property between Evansdale Drive and the commercial district on Patteson Dr. utilized primarily by WVU students but also by some Evansdale residents as well.

Evansdale Drive – The city street portion of this link connects Rawley Ave., Rawley Lane and University Ave.

## ***First Ward***

Dorsey Ave – a critical pedestrian link for several neighborhoods with the central city, mid-point shopping area, and Mountainview Elementary School. Safe access to South University Ave. and the rail trail is needed.

West Virginia Ave. – the central north-south pedestrian corridor in First Ward which provides linkage to First Ward Park as well as Hite St/Dorsey Ave connectors at one end and Mississippi St connector on the other end

Madigan Ave. – A parallel north-south pedestrian corridor to West Virginia Ave. which provides linkage to the west side of First Ward Park, the cemetery, and bus routes and sidewalk connections on Dorsey Ave. via Barrickman St.

Barrickman St. – a two block connector which links Madigan Ave. and Dorsey Ave.

Hite Street – a principle link to the downtown for several neighborhood streets and to South Middle School, Vocational Technical Institute, the Municipal Ice Rink and White Park

Mississippi Street – a link with the two schools, White Park, the Municipal Ice Rink, several neighborhood streets and South University Ave and the rail-trail

East Parkway – provides connective link between Hite Street and Mississippi Street as well as access to White Park, South Middle School, the Vocational Technical Institute and the Municipal Ice Rink

Trail Connectors – Trail connectors within and adjacent to White Park provide park connection for neighborhoods (Dobbs St.) along Dorsey Ave. They also provide commercial area connection for schools and park facility users in White Park area. There are plans for a greenway connection between White Park and the river rail-trail. An additional trail connections has been called for between White Park and Dorsey’s Knob and the businesses in the vicinity of the I-68 intersection on 119 S.

## ***Greenmont***

Brockway Ave - the principle multi-modal traffic corridor in neighborhood

Cobun Ave. – a principle pedestrian connector with the Pleasant St Bridge, Morgantown High School and multiple neighborhood streets

Wilson Ave – a neighborhood access route which serves Morgantown High School, several streets and a neighborhood commercial area. It is also a connective link for the area with the South High Street

Kingwood Street – a neighborhood thoroughfare which links Decker’s Creek area of the neighborhood, Wilson Ave with Brockway Ave. and Cobun Ave.

Arch Street – A park type street connecting Kingwood and Overdale Streets

Green Street – An open style street with wide planting areas and custom street lights

White Ave. - Provides inter-area connection for pedestrians traveling between South Park/Greenmont and Marilla Park

Hirschman St. - Serves as a two block connector between White Ave. and East Brockway

East Brockway – Serves as a connector between neighborhoods located along East Brockway between the Hogback and Marilla Park.

Trail Connectors - Connectors between Greenmont and the downtown are currently dependent on upper level bridges at Walnut and Pleasant Streets. The Walnut Street Bridge has a sidewalk on only one side of the roadway. Additional access to the Decker’s Creek Trail and dog park area is a priority for the Greenmont neighbors.

### ***Jerome Park-Sabraton***

Richwood Ave/ Sabraton Ave – Principal multi-modal corridor in neighborhoods

Darst St./Mineral St. – A minor arterial route which links pedestrians on such streets as Carlisle Ave., Richwood Ave., and Montrose Ave. with Earl Core Road, the Decker’s Creek Trail and Marilla Park.

Hillcrest Street – Neighborhood connector with Sabraton Ave at Norwood neighborhood

Earl Core Road between Darst St and Listravia Ave. – Multi-modal access route through central commercial area also linking neighborhoods and parks

Hartman Run Road between Richwood Ave and Earl Core Road – Neighborhood link to Earl Core Road, commercial area, and alternate transit routes

### ***Seneca-Sunnyside***

Beechurst Ave – A vital pedestrian arterial for neighborhoods to downtown campus, downtown commercial area and commercial areas along Beechurst corridor

University Ave. between Fayette St. and Riverview Drive –Central pedestrian arterial for neighborhoods in inter-campus and inter-commercial area travel

Grant Ave and Greenway Extension – A multi-modal linkage for inter-campus pedestrian travel

McLane Ave – A connective pedestrian corridor between Eighth St and Third St.

Beverly Ave – A pedestrian connector with sidewalks on both sides of the street which links former Westchester Hall and Beverly Ave residents with University Ave. at Third St. intersection

Third Street – A connector street linking University Ave, Beverly Ave., Grant Ave., McLane Ave., Beechurst Ave., and the rail trail

Sixth Street – A connector street linking University Ave, Beverly Ave., Grant Ave., McLane Ave., Beechurst Ave., and the rail trail.

Eighth Street – A connector St. linking University Ave , McLane Ave., Grant Ave., and University Ave.

Campus Drive – A connector street linking Beechurst Ave., McLane Ave., Grant Ave., and University Ave.

Fourth Street Greenway – The undeveloped Fourth Street right-of-way between University Ave. and McLane Ave. offers an opportunity to develop a greenway which will enhance the neighborhood and area pedestrian travel.

### ***South Park-South Hills***

Pleasant Street Bridge, Walnut Street Bridge – Two of four bridges which serve as direct arterial connections with the downtown central city

Brockway Ave. – A minor east-west arterial connector from the Walnut St. Bridge to Pennsylvania Ave

East Brockway – A minor east-west arterial connector from Pennsylvania Ave to Hogback

Wilson Ave. – A significant neighborhood collector which links multiple local residential streets in Greenmont and in South Park and provides pedestrian access to Morgantown High School.

Kingwood St. – Provides a neighborhood boundary between South Park and Greenmont and links Pennsylvania, Brockway, Cobun and Wilson Avenues

Jefferson Street – A connector which links Jackson Ave, Wilson Ave., and Simpson St.

Prairie Ave. – Provides access linkage from South High St., Wagner Rd., Wilson Ave. and Morgantown High School

South High Street – Provides an arterial link between downtown, South High Street Bridge, Hopecrest, First Ward, and Dorsey Ave.

Wagner Road – Links Dorsey Ave., Caddell St., Simpson St. and Prairie Ave. and is part of an access route for more distant neighborhoods in First Ward to Morgantown High School

Buchannon Ave. –Serves as a connector between Courtney St. and Jackson Ave.

Grand Street – A significant connector between Cobun Ave, and Ross St. intersection

Park St. - A significant connector from Cobun Ave. to Maple Ave.

Jackson Ave. – serves as a neighborhood connector between Jefferson St. and Buchannon Ave. Links several neighborhoods with Grand St. and Park St.

Simpson St. – Links South High Street and adjacent areas with Jefferson St. and Wilson Ave.

### *Suncrest*

Patteson Dr. – A principal 4/5 lane arterial corridor which tends to separate all of Suncrest pedestrians from the other parts of Morgantown

University Ave. – An arterial connect between Patteson Dr and Star City boundary

Collins Ferry Road - An arterial connector linking collector streets such as Burroughs, Killarney, Aspen/Junior and providing access to Suncrest Elementary School, and two large employment sites near its western terminus

Van Voorhis Rd. – A heavily vehicle traveled, two-lane road which could be a traffic reducing pedestrian arterial but is presently very dangerous for pedestrians

Burroughs St. – An important arterial link between the busiest intersection in Morgantown and Collins Ferry Road. Provides pedestrian linkage to WVU campus destinations and to the Suncrest Middle School

Pocahontas Ave. – a heavily traveled one-way link between Collins Ferry Road and University Ave. which also is part of a safe-route-to-school network of streets for Suncrest Middle School

Killarney Dr. – A neighborhood collector which links Van Voorhis Road and Collins Ferry Road

Aspen St. – A heavily used cross arterial in central Suncrest which connects with Junior Ave. to provide linkage between University Ave, Suncrest Elementary School, Collins Ferry Road, Western and Eastern Avenues, Dogwood and Anderson Avenues and connecting streets with VanVoorhis Rd.

Junior Ave. – A heavily traveled vehicle and pedestrian arterial which links Aspen Street and University Ave. and is the specific address for the Suncrest Elementary School

Christy St. – A heavily used connection between Van Voorhis Rd. and Windsor Rd. which will become even more utilized by pedestrians with the opening of the inter-modal transportation center on the WVU side of Van Voorhis Rd. near Christy St.

Laurel St. - One of only two connecting links between University Ave. and Patteson Dr. which provides access to several WVU destinations as well as Krepps Park and Suncrest Middle School.

Krepps St – A connecting link between Laurel and Baldwin Streets which also accommodates regular use by Suncrest Middle School buses, parking, and pedestrians

Baldwin St. – One of two connecting streets between University Ave. and Patteson Dr. on which the Suncrest Middle School is located

Windsor Ave. – The Munsey to Burroughs St section of Windsor is a pedestrian link for persons walking on Munsey St, Christie St and Burroughs St and from other parts of Suncrest

Munsey St. – A connecting street for persons walking to and from Eastern Ave to the hospitals, to the multi-modal transportation center and to WVU stadium events

Koontz Ave. – A connecting street between Sellaro Plaza and University and between University Ave. and Munsey Street which provides access between commercial areas and neighborhoods

Eastern Ave. – Provides a link between Burroughs St. and Killarney Dr which permits a central sidewalk network to link with Munsey Ave and WVU employment, transportation and service centers

Western Ave. - Provides safety for pedestrians walking between Somerset St. and Junior Ave. and safer drop-off and curb parking area for Suncrest Elementary School

Fenwick St. – Provides neighborhood collector linkage from Mansfield Ave to Junior Ave and drop-off and parking safety for Suncrest Elementary School

Kiwanis Ave. – Provides neighborhood connection between Junior Ave. and Rotary St. and access to Suncrest Elementary School as well as routes to Suncrest Middle School and commercial districts along University Ave.

Rotary St. – Provides linkage between Collins Ferry Rd. and Lyons Ave. sidewalk which connects neighborhoods on both sides of Collins Ferry and University Ave. with each other and with Middle School, WVU, and commercial destinations

Lyons St. – A pedestrian link which connects Rotary St. and Pocahontas Dr. to create a safer crossing of University Ave. at Pocahontas rather than at the Rotary/University intersection

Parkview Dr. - A neighborhood collector street along the northern edge of Krepps Park which has foot traffic to park activity as well as parking for park and WVU events

Krepps Park Green Way Trail Connector - A first step in linking park trails with Chipps Hollow Road and subsequently with river rail-trail system

Rawley Lane Greenway - A greenway planned by the Beautification Commission bordering the Suncrest Middle School property which would link Baldwin St. with Patteson Dr. commercial areas.

### ***Wiles Hill-Highland Park***

Stewart St. - An arterial connecting University Ave. and Willowdale Rd. and Highland Park residential areas.

Willowdale Rd. - An arterial linking high density residential area with Stewart St., the stadium, the hospitals, and Chestnut Ridge Rd.

Falling Run Rd. /Protzman St. – A collector linking University Ave. with Van Gilder Ave. and adjacent residential areas.

Hoffman Ave. – A neighborhood collector which links 10 neighborhood streets with Stewart St. and Protzman St.

McCullough Ave. – A heavy populated connecting link between Hoffman Ave. and Willowdale Rd.

Jones Ave. – A collector street which connects much of Wiles Hill with Stewart St., University Ave. and the downtown areas

Jones Ave. Greenway – An extension of Jones Ave. though the Wiles Hill Fire Station property to create a pedestrian-cycling-transit link between the downtown and Ruby Hospital

Virginia Ave. – A neighborhood collector street in Wiles Hill between Jones Ave. and Morgan St.

Center St. – Links Highland Ave., Virginia Ave., Eureka Dr., and the Wiles Hill Community Center

Grove St. – A connector which links Highland and Jones Avenues, Virginia Ave., North St, Afton St. and Willowdale Rd.

Highland Ave. – A neighborhood collector which links Jones Ave. with Stewart St.

Afton St. – A connector St. which links Willowdale Road with Melrose and Grove Streets

Overhill St – A connector between University and Jones Ave.

Overhill Greenway Extension – One block of stairs located in the Overhill St. right-of-way between Jones Ave. and Highland Ave.

First St. Greenway Extension – Two blocks of stairs located between First St and Wellen Ave.

North Street – The one block link between University and Jones Ave provides a connection between the Wiles Hill neighborhood and University Ave.

### ***Woodburn***

Willey St. – A principal arterial linking the downtown and the downtown campus with several Woodburn residential areas. Sidewalk area from High St to Roosevelt St.

Richwood Ave. – An arterial connecting the Woodburn, Jerome Park and Sabraton areas with the downtown

Monongalia Ave. – A neighborhood collector between Richwood Ave. and Willey St.

Snider St. – A collector link between Monongalia Ave. and Willey St. and Richwood Ave.

Gem Street - A steep connective street between Dallas St. and Richwood Ave

Dallas St. – A heavily used pedestrian link between Richwood Ave. and Forest Ave. and the downtown by Woodburn residents

Charles St. – A connecting street which is heavily used by the surrounding neighborhoods and persons cutting through the neighborhood to the downtown

James St. – A recently upgraded pedestrian connector between Monongalia Ave. and Charles St.

Fortney St. – A short connecting street which provides access to the Woodburn Elementary School between Charles and Richwood Avenues.

Parsons St. - The front entrance of Woodburn School is located on the lower end of this street which connects Fortney St and East End Ave.

College Ave. – An arterial connector between the downtown WVU campus and Willey St.

Cornell Ave. – A connecting street between College Ave. and Willey St. which is near the WVU campus and the former University High school property.

Price St. – A connecting street between Cornell Ave. and Willey Street which also serves the Arnold Hall dormitory.

Stanton St. - The access street for the former University High School from Willey St. and Cornell Ave.

Prospect St. – A collecting and connecting link between Willey St., Price St., Spruce St., North High Street, and University Ave.

North High St. – A collector street linking Maiden Lane, Prospect St. and the High Street commercial area

Forest Ave. Greenway Extension – A trail extension of Forest Ave which links the downtown and Valley Crossing and the Decker's Creek Trail

## Section 6: Pedestrian Infrastructure Improvement Project Priorities

### *Identification and Prioritization*

What needs to be done to establish the core pedestrian infrastructure network identified in Section 5? A few of the City CNS on core connective routes are in good condition due to recent construction and replacement. Most core network sidewalks, however, have gaps, need to be completed, or are in disrepair. In order to address these needs the Pedestrian Safety Board has assembled a list of projects based on multiple sources of input which include: the Greater Morgantown Metropolitan Planning Organization (MPO), Morgantown Public Works and Traffic Commission records, recommendations from neighborhood associations and City Council members, and the work of the Pedestrian Safety Board.

Like many other cities, the City of Morgantown has limited resources to address these needs. The list of 147 projects has been evaluated utilizing a rating system (below) based on a system established by the City of Bloomington, Indiana, and modified by Kane County in Illinois.

**Table 1: Pedestrian Project Impact Scoring Rubric**

Prioritization Category	Category Detail	Range	Point Value
<i>Safety Characteristics</i> (12 points max)	Traffic Speed	≥ 45 mph	3
		30-40 mph	2
		≤ 25 mph	1
	Lanes	5	3
		3-4	2
		2	1
	Traffic Volume	≥ 15,000 ADT	3
		9000 >15,000 ADT	2
		≤ 9000 ADT	1
	Street Classification	Primary arterial	3
Secondary arterial		2	
Collector		1	
<i>Pedestrian Usage</i> (12 points max)	Proximity Attractor	< 1/3 mile	3 per attractor
		1/3 to 2/3 mile	2 per attractor
		2/3 to 1 mile	1 per attractor
<i>Project Feasibility</i> (10 points max)	Intuitive point assignment based on field observations of political “doability” and cost		10
<i>Potential Pedestrian Volume</i> (10 points max)	Intuitive point assignment of actual or potential pedestrian volume		10
<i>Additional Factors</i> (9 points max)	Located near or along a bus route		3
	No sidewalk on either side of street or high safety hazard		6

\*adapted from *Kane County (IL) Bicycle and Pedestrian Plan*, p. 66

With this scoring system higher total point values represent a higher priority for pedestrian infrastructure projects.

### ***Rating of Recommended Pedestrian Infrastructure Projects and Priorities***

A list of pedestrian infrastructure projects may be found on following pages in this section. Each project is given a designation of which entity, or combination of entities, is responsible for the road/project in the “R” column, with possibilities of: “C” – City; “S” – State, “U” – West Virginia University.

The total points assigned to each project was used to create a relative ranking to other projects in a specific neighborhood (“Hood”) area. It was also used to rank projects relative to the overall project list (“City”), with the exception of projects on the campus of WVU.. The plotting of each project on a neighborhood map follows the overall project list.

**Table 2: Pedestrian infrastructure project impact scoring and rankings**

#	R	Project	Traffic Speed	# of lanes	Traffic Volume	Street Classification	Proximity Attractor	Feasibility (polit. Doable, cost)	Pedestrian Volume	Transit Route	No sidewalk/high safety hazard	TOTAL	RANKING	
		<i>Example: Most powerful impact project ratings</i>	3	3	3	3	12	10	10	3	6	53		
		<i>Central City</i>												
													HOOD	CITY
1	S	Install four-way thermoplastic crosswalk system Westover Bridge MPO	1	3	3	3	12	7	8	3	6	46	3	5
2	S	Install thermoplastic crosswalks with actuated signals at Walnut/Univ. Av intersection MPO	1	2	3	3	12	7	8	3	6	45	6	9
3	S	Install thermoplastic crosswalks with actuated signals at S. Univ Av/Foundry St intersection MPO	1	3	3	3	12	7	7	3	5	44	9	15
4	S	Install thermoplastic crosswalks with actuated signals, timers at Beechurst/Univ Av/Fayette St intersection MPO	1	2	3	3	12	7	8	2	6	44	9	15
5	S	Install thermoplastic crosswalks on Beechurst at unsignalized Hough St intersection MPO	1	2	3	3	12	9	6	3	6	45	6	9
6	S	Install thermoplastic crosswalks with actuated signals on Beechurst at Campus Drive Intersection MPO	1	2	3	3	12	9	8	3	6	47	1	2
7	S	Install thermoplastic crosswalks with actuated signals on Beechurst at unsignalized Third St intersection MPO	1	2	3	3	12	6	6	2	6	41	15	32

8	S	Install thermoplastic crosswalks with actuated signals on Beechurst at Sixth St intersection MPO	1	2	3	3	12	9	6	2	6	<b>44</b>	<b>9</b>	<b>15</b>
9	S	Install crosswalks at unsignalized Willey/Chestnut St intersection	1	1	3	2	12	8	10	3	6	<b>46</b>	<b>3</b>	<b>5</b>
10	CS	Install crosswalks on Chestnut St at unsignalized intersections with Fayette St, Walnut St, Pleasant St, Kirk St, and Foundry St	1	1	1	1	12	10	6	3	2	<b>37</b>	<b>22</b>	<b>75</b>
11	S	Install crosswalks at unsignalized High/Kirk St intersection	1	1	2	2	12	7	6	3	4	<b>38</b>	<b>21</b>	<b>66</b>
12	S	Install crosswalk access to New Post Office across S. High St at unsignalized intersection with Foundry St	1	1	2	2	12	9	6	3	4	<b>40</b>	<b>16</b>	<b>43</b>
13	S	Upgrade both sidewalks on Pleasant between Univ Av and Spruce St. Bridge	1	1	3	2	12	6	8	3	4	<b>40</b>	<b>16</b>	<b>43</b>
14	S	Upgrade/complete sidewalk on Don Knotts Blvd between Westover Br and Riverfront Pk/Trail Parking entrance	3	2	3	3	12	6	4	3	6	<b>42</b>	<b>12</b>	<b>22</b>
15	CS	Upgrade sidewalks on Univ Av between Westover Br and Stewart St	1	2	3	3	12	6	9	2	4	<b>42</b>	<b>12</b>	<b>22</b>
16	S	Install pedestrian crossing on Willey St at unsignalized Richwood Av intersection w/ overhead sign and pedestrian actuated flashing beacon	1	1	2	2	12	8	7	3	6	<b>42</b>	<b>12</b>	<b>22</b>
17	C	Install raised intersection and crosswalks at unsignalized N. High St/Prospect intersection	1	1	2	1	12	10	10	3	6	<b>46</b>	<b>3</b>	<b>5</b>
18	S	Install raised intersection and crosswalks at Prospect St/Univ Av unsignalized intersection	1	1	3	1	12	10	10	3	6	<b>47</b>	<b>1</b>	<b>2</b>
19	S	Install raised intersection and crosswalks at College Av/Maiden Ln unsignalized intersection	1	1	1	1	12	10	5	3	6	<b>40</b>	<b>16</b>	<b>43</b>
20	S	Change one-way traffic flow on Spruce St between Willey St and Walnut St to two-lane/two- way traffic lanes with buffer areas along sidewalks for bicycle travel and pedestrian buffer w/ traffic flow	1.5	2	2	2	12	8	8	3	6	<b>44.5</b>	<b>8</b>	<b>14</b>
21	C	Install timed overhead lights on the Caperton Trail between Hazel Ruby McQuain Park and the city line on Deckers Creek and between the Lock and Dam and the Star City line on the river section of the trail	1	1	1	1	12	8	6	3	6	<b>39</b>	<b>19</b>	<b>53</b>
22	C	Install police call boxes every 500 ft on the rail trail between the Morgantown Lock and Dam and the Seneca Center and between Hazel Ruby McQuain Park and Decker Boulevard	1	1	1	1	12	8	6	3	6	<b>39</b>	<b>19</b>	<b>53</b>



		<i>Greenmont</i>											HOOD	CITY	
37	C	Install pedestrian bridge across Decker's Cr and upgrade access trail areas to connect Spruce St, rail trail and Decker Av MPO	1	1	1	1	12	6	6	2	2		<b>32</b>	<b>3</b>	<b>113</b>
38	S	Upgrade sidewalk on Brockway Av between Walnut St bridge and Hogback	1	1	3	3	12	6	6	3	6		<b>41</b>	<b>1</b>	<b>32</b>
39	C	Upgrade/install sidewalk on Kingwood St between Decker Av and Harner St	1	1	1	1	12	6	4	2	4		<b>32</b>	<b>3</b>	<b>113</b>
40	C	Upgrade sidewalk on Wilson between Kingwood St and Overdale St	1	1	1	1	12	7	5	3	4		<b>35</b>	<b>2</b>	<b>91</b>
41	C	Upgrade sidewalk on Overdale St between Wilson Av and Brockway Av	1	1	1	1	9	5	3	2	4		<b>27</b>	<b>10</b>	<b>144</b>
42	C	Upgrade sidewalk on Cobun Av between Kingwood St and Cherry Ln	1	1	1	1	12	5	4	3	3		<b>31</b>	<b>5</b>	<b>122</b>
43	C	Install sidewalk on White Av between Wilson Av and Hirschman St	1	1	1	1	12	5	3	1	4		<b>29</b>	<b>7</b>	<b>134</b>
44	C	Install sidewalk on Hirschman St between White Av and East Brockway Av	1	1	1	1	12	5	2	1	4		<b>28</b>	<b>8</b>	<b>139</b>
45	C	Install sidewalk on East Brockway Av between Hogback and Marilla Park	1	1	1	1	9	4	4	1	6		<b>28</b>	<b>8</b>	<b>139</b>
46	C	Upgrade sidewalks on Green St between Wilson Av and Cobun Av	1	1	1	1	12	5	4	2	4		<b>31</b>	<b>5</b>	<b>122</b>
		<i>Jerome Park-Sabraton</i>											HOOD	CITY	
47	C	Upgrade/complete sidewalk on Sabraton Av between Hartman Run Br and Rt 7/857 intersection	1	1	2	2	12	6	5	3	6		<b>38</b>	<b>5</b>	<b>66</b>
48	C	Install sidewalk on Hillcrest St between Sabraton Av and Ashland Av	1	1	1	1	9	5	2	1	3		<b>24</b>	<b>8</b>	<b>147</b>
49	S	Install sidewalk on Earl Core Road between Darst St and Listravia Av intersection MPO	2	1	3	3	12	5	5	3	6		<b>40</b>	<b>2</b>	<b>43</b>
50	S	Enhance pedestrian crossing utilizing an overhead sign and pedestrian actuated flashing beacon on Earl Core Road at Darst St intersection MPO	2	1	3	3	12	8	2	3	6		<b>40</b>	<b>2</b>	<b>43</b>
51	CS	Install sidewalk to extend cross walk at Mineral Ave/Woodrow St on Route 7 to Decker's Creek Trail MPO	2	1	3	3	12	10	2	3	6		<b>42</b>	<b>1</b>	<b>22</b>

52	S	Enhance pedestrian crossings on Earl Core Road at signalized intersections at Hartman Run Rd, Decker Boulevard, shopping mall, and Eljadid St MPO	2	1	3	3	12	8	2	3	6	40	2	43
53	S	Install neighborhood connector sidewalk on Eljadid St between Earl Core Rd and Decker's Cr rail-trail MPO	2	1	3	3	12	5	2	2	4	34	6	97
54	S	Install neighborhood connector sidewalk on Hartman Run Road between Earl Core Road and Richwood Av MPO	2	1	2	2	9	4	2	3	6	31	7	122
<b>Seneca-Sunnyside</b>														
													HOOD	CITY
55	C	Upgrade/connect sidewalk on Grant Av between Campus Dr and Eighth St	1	1	1	1	12	8	9	3	5	41	3	32
56	C	Install illuminated Grant Av greenway between Eighth St at Grant Av to Evansdale Dr MPO	1	1	1	1	12	7	7	1	6	37	6	75
57	C	Upgrade/complete sidewalk on Sixth St between Grant Av and Beechurst Av	1	1	1	1	12	5	4	3	6	34	8	97
58	S	Install thermoplastic crosswalk system at Beechurst Av/Sixth St intersection	1	2	3	3	12	10	3	2	6	42	2	22
59	C	Install sidewalk on Sixth St between Beverly Av and Grant St	1	1	1	1	12	7	6	3	6	38	5	66
60	C	Upgrade/connect sidewalk on both sides of Beverly Av between Univ. Av and Sixth St.	1	1	1	1	12	7	5	3	4	35	7	91
61	C	Upgrade sidewalk on McLane between Eighth St and Third St	1	1	1	1	12	5	5	2	3	31	10	122
62	C	Install sidewalk on Eighth St between Univ Av and Beechurst Av	1	1	1	1	12	3	3	3	5	30	11	129
63	C	Upgrade the sidewalk on Third St between Univ. Av and Beechurst Av	1	1	1	1	12	4	6	2	4	32	9	113
64	C	Upgrade sidewalks on Univ. Av between Stewart and Riverview MPO	1	1	2	2	12	5	7	3	6	39	4	53
65	S	When Beechurst Av is widened, install center refuge medians/crosswalks and river side sidewalk between Eighth St and Univ. Av	1	2	3	3	12	10	5	3	6	45	1	9
<b>South Park-South Hills</b>														
													HOOD	CITY
66	S	Install crosswalks at S. Walnut/Brockway Av intersection utilizing an overhead signs and pedestrian actuated flashing beacon	1	1	3	3	12	5	7	3	6	41	4	32

67	S	Install crosswalks at Brockway/Kingwood St intersection	1	1	3	3	12	1	6	3	6	36	7	83
68	C	Install crosswalks at Wilson Av/Linden intersection	1	1	1	1	12	10	10	3	6	45	1	9
69	C	Install crosswalks at Wilson/Elm Intersection	1	1	1	1	12	1	10	3	6	36	7	83
70	C	Install crosswalks at Wilson/Cedar Intersection	1	1	1	1	12	10	10	3	6	45	1	9
71	C	Install/complete sidewalk on Prairie Av from Wilson to Wagner Rd	1	1	1	1	12	8	10	3	6	43	3	20
72	C	Extend sidewalk on Ross St from Grand St intersection to Dorsey Av	1	1	1	1	12	4	4	2	4	30	10	129
73	C	Install sidewalk on Buchannon Av between Courtney Av and Jackson Av	1	1	1	1	6	6	3	1	4	24	11	147
74	C	Complete sidewalks on Jackson Ave between South Park and Buchannon Ave	1	1	1	1	6	6	3	1	4	24	11	147
75	C	Complete sidewalk on Park St between Maple St and Jackson Ave	1	1	1	1	6	6	3	1	4	24	11	147
76	C	Upgrade sidewalks on South High Street between the South High St bridge and Dorsey Av	1	1	1	1	12	8	7	3	4	38	5	66
77	C	Upgrade sidewalks on Simpson St between South High St and Jefferson St	1	1	1	1	12	8	7	2	4	37	6	75
78	C	Upgrade sidewalks on Wagner Road between Allison St and Dorsey Av	1	1	1	1	12	7	6	2	4	35	9	91
		<i>Suncrest</i>											HOOD	CITY
79	S	Install enhanced pedestrian crossing at Burroughs/VanVoorhis/Chestnut Intersection MPO	2	3	3	3	12	9	7	3	6	48	1	1
80	S	Install mid-block pedestrian crossing on Chestnut Ridge Rd at Suburban Lanes Plaza utilizing an overhead sign and a pedestrian activated flashing beacon MPO	2	3	3	3	9	7	2	3	6	38	22	66
81	S	Install pedestrian crossing on VanVoorhis Rd at unsignalized intersection at Christy St utilizing an overhead sign and a pedestrian activated flashing beacon	2	3	3	3	12	8	6	3	6	46	3	5
82	S	Install pedestrian crossing on Patteson Dr at Laurel St intersection utilizing an overhead sign and a pedestrian activated flashing beacon MPO	2	3	3	3	12	7	3	3	6	42	5	22
83	S	Install pedestrian crossing on Patteson Dr at Baldwin St intersection utilizing an overhead sign	2	3	3	3	12	6	4	3	6	42	5	22

		and a pedestrian activated flashing beacon												
84	S	Install thermoplastic crosswalk system at the Patteson Dr/ Univ Av intersection	2	3	3	3	12	10	5	3	6	47	2	2
85	C	Install/upgrade sidewalk on Baldwin St between Univ Av and school and school and Patteson Dr	1	1	1	1	12	7	10	3	6	42	5	22
86	C	Install sidewalk on Krepps St between Baldwin St at school and Elmhurst St	1	1	1	1	12	8	8	3	6	41	9	32
87	S	Install crosswalks and pedestrian crossing warning signs at unsignalized Univ/Collins Ferry/Baldwin St intersection	1	2	3	3	12	8	4	3	6	42	5	22
88	C	Install crosswalks and pedestrian crossing warning signs at unsignalized University/Pocahontas/Laurel St intersection	1	1	3	2	12	7	4	3	6	39	16	53
89	S	Install pedestrian crossing with pedestrian crossing warning signs at the unsignalized Pocahontas Av/Collins Ferry intersection	1	1	2	2	12	7	3	3	6	37	25	75
90	C	Install sidewalk on Laurel Street between Univ Av and Krepps Park	1	1	1	1	12	9	4	3	5	37	25	75
91	C	Install sidewalk on Parkview between dog park and Laurel St intersection	1	1	1	1	9	5	4	3	4	29	35	134
92	C	Install sidewalk between Laurel St/Parkview intersection, across Laurel St bridge, and around ball fields and day care center to Boulevard/Patteson Dr intersection	1	1	1	1	12	9	5	3	6	39	16	53
93	C	Install sidewalk on Rotary St between Collins Ferry Rd and Lions Av	1	1	1	1	10	5	3	2	4	28	38	139
94	S	Install crosswalk with pedestrian activated flashing beacon at unsignalized Collins Ferry/Rotary intersection	1	1	2	2	10	7	3	3	6	35	28	91
95	C	Install sidewalk on Lions between Rotary St and Pocahontas Av	1	1	1	1	10	5	3	2	4	28	38	139
96	C	Upgrade sidewalk on Junior Av between Univ Av and Aspen St	1	1	1	1	12	8	8	3	6	41	9	32
97	C	Install sidewalk on Fenwick between school at Junior Av and Mansfield St	1	1	1	1	12	8	8	3	6	41	9	32
98	C	Install crosswalks at Fenwick St/Harvard Av, Fenwick St/ Plymouth St, and Fenwick St/Princeton Av intersections	1	1	1	1	12	8	8	3	6	41	9	32
99	C	Install sidewalk on Kiwanis between school at Junior Av and Rotary St	1	1	1	1	12	6	10	3	6	41	9	32

100	S	Upgrade sidewalk on Van Voorhis between Killarney Dr and Elmer Prince Dr	1	2	3	3	12	7	7	3	6	44	4	15
101	C	Install sidewalk on Christy St between Van Voorhis Rd and Windsor Av	1	1	1	1	12	6	8	3	6	39	16	53
102	S	Install sidewalk on Windsor Av between Burroughs St and Munsey Av	1	1	1	1	12	6	4	2	6	34	29	97
103	S	Install sidewalk on Koontz Av between Munsey Av and Univ. Av	1	1	1	1	12	6	4	2	6	34	29	97
104	S	Install sidewalk on Van Voorhis Road between Killarney Dr and Kenwood St MPO	1	2	3	3	12	4	5	3	6	39	16	53
105	C	Install sidewalk on Killarney Dr between Van Voorhis Rd and Collins Ferry Rd	1	1	1	1	11	5	4	2	4	30	34	129
106	C	Upgrade sidewalk on Univ Av between Patteson Dr and city line	1	1	3	3	12	7	4	3	5	39	16	53
107	S	Install sidewalk on Munsey Av between Burroughs St and Windsor Av	1	1	1	1	12	6	4	2	4	32	31	113
108	S	Install pedestrian crossing on Burroughs St at unsignalized Munsey Av/Eastern Av intersection utilizing an overhead sign and a pedestrian activated flashing beacon	1	1	3	2	12	7	3	3	6	38	22	66
109	C	Install sidewalk or pedestrian/bike area on Pocahontas between Collins ferry and Univ Av	1	1	2	2	12	9	3	2	6	38	22	66
110	C	Establish greenway pedestrian corridor on Rawley Ln between Sellaro Plaza and Baldwin St (Beaut. Comm)	1	1	1	1	12	6	5	1	4	32	31	113
111	S	Upgrade sidewalk on Collins Ferry between University Av and Valley Rd	1	1	2	2	12	8	6	3	5	40	15	43
112	C	Install sidewalk on Eastern Av between Burroughs St and Killarney Dr.	1	1	1	1	12	6	3	2	5	32	31	113
113	C	Install sidewalk on Anderson between Aspen St and Longdon St	1	1	1	1	10	5	3	3	4	29	35	134
114	C	Install sidewalk on Longdon St between Colonial Dr and Killarney Dr	1	1	1	1	10	5	3	3	4	29	35	134
115	C	Install sidewalk on Western Av between Suncrest School and Somerset St	1	1	1	1	12	6	10	3	6	41	9	32
116	C	Install greenway trail connector between Krepps Park and Chipps Hollow Road MPO	1	1	1	1	12	5	2	1	3	27	40	144
117	S	Widen sidewalk on Burroughs or add standard sidewalk on north side of street between VanVoorhis Road and Collins Ferry Road	1	1	2	2	12	5	5	3	6	37	25	75

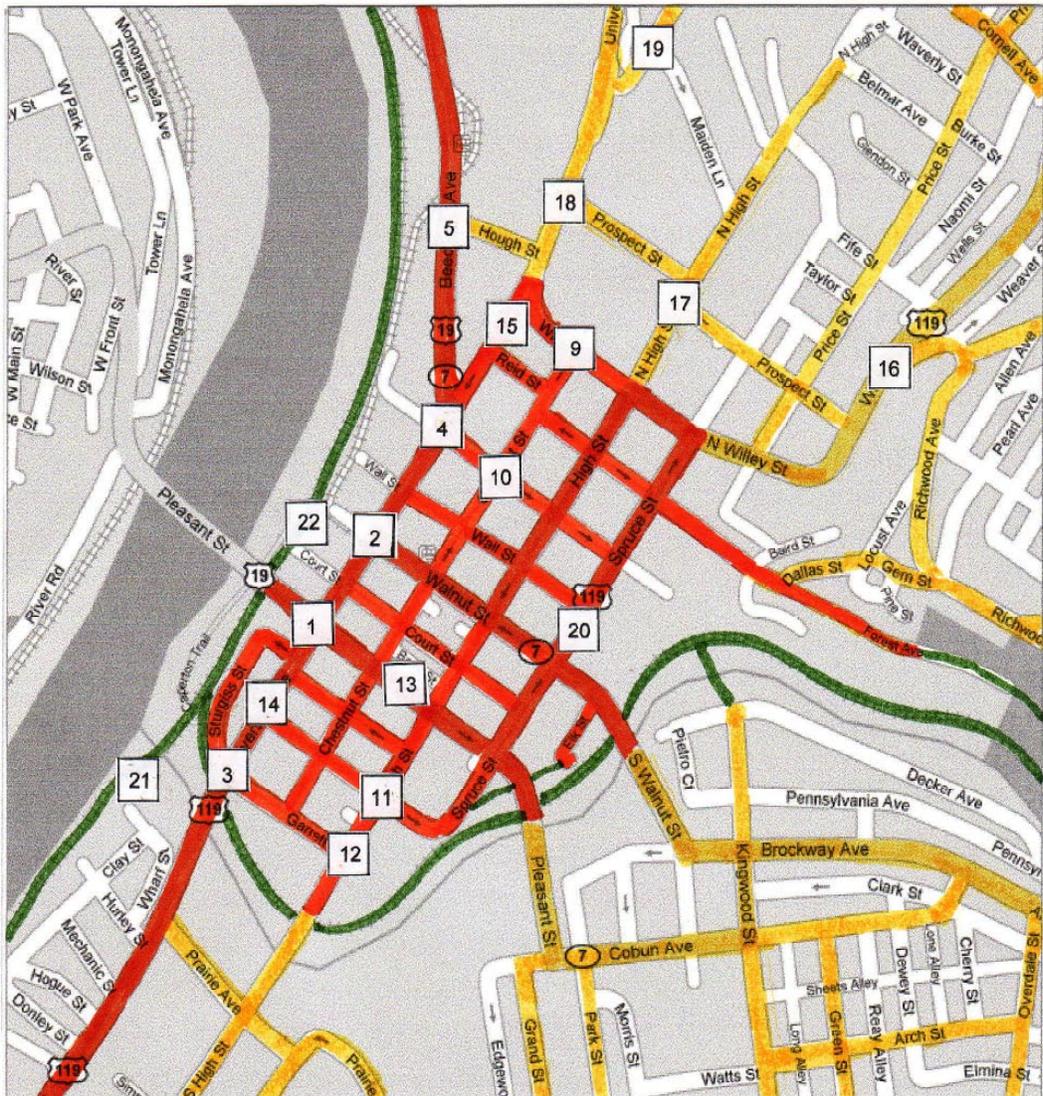
118	S	Install 4' shoulders on Boulevard from Patteson Dr intersection to Star City MPO	3	2	3	3	12	5	3	3	5	<b>39</b>	<b>16</b>	<b>53</b>
<b><i>Wiles Hill-Highland Park</i></b>													<b>HOOD</b>	<b>CITY</b>
119	C	Install sidewalk in Falling Run Rd/Protzman St between Campus Dr. and VanGilder MPO	1	1	1	1	12	10	8	3	6	<b>43</b>	<b>2</b>	<b>20</b>
120	C	Install sidewalk on Hoffman Av between Protzman St and McCullough	1	1	1	1	9	8	5	2	4	<b>32</b>	<b>11</b>	<b>113</b>
121	C	Install sidewalk on McCullough between Hoffman St and Willowdale Rd	1	1	1	1	9	8	5	2	4	<b>32</b>	<b>11</b>	<b>113</b>
122	C	Upgrade sidewalk on Jones Av between Stewart St and North St	1	1	1	1	12	7	8	3	5	<b>39</b>	<b>4</b>	<b>53</b>
123	C	Install sidewalk on Afton St between Willowdale Rd and Grove St	1	1	1	1	9	5	4	2	5	<b>29</b>	<b>14</b>	<b>134</b>
124	C	Establish Jones Av Greenway to extend Jones Av pedestrian corridor from North St to Stadium Dr	1	1	1	1	12	10	7	3	6	<b>42</b>	<b>3</b>	<b>22</b>
125	C	Upgrade/install sidewalk on Virginia Av between Jones Av and Morgan St	1	1	1	1	12	7	3	1	4	<b>31</b>	<b>13</b>	<b>122</b>
126	C	Install sidewalk on Grove St between Jones Av and Willowdale Rd	1	1	1	1	12	7	6	2	5	<b>36</b>	<b>5</b>	<b>83</b>
127	C	Install sidewalk on Center St between Willowdale Rd and Highland Av	1	1	1	1	12	7	3	3	4	<b>33</b>	<b>9</b>	<b>109</b>
128	C	Install sidewalk on Highland Ave between Jones Av and Morgan St	1	1	1	1	12	7	4	3	4	<b>34</b>	<b>6</b>	<b>97</b>
129	S	Install signalized crosswalk at Willowdale Rd/Stadium Dr signalized intersection	2	2	3	3	12	7	7	3	5	<b>44</b>	<b>1</b>	<b>15</b>
130	C	Upgrade stairs on Overhill between Univ. Ave and Highland	1	1	1	1	12	6	5	2	4	<b>33</b>	<b>9</b>	<b>109</b>
131	C	North Street – Install sidewalk in the one block between Univ. and Jones Av	1	1	1	1	12	5	5	2	6	<b>34</b>	<b>6</b>	<b>97</b>
132	C	Install a railing on the greenway staircase between Lorenz and First St	1	1	1	1	12	7	5	2	4	<b>34</b>	<b>6</b>	<b>97</b>





Neighborhood Pedestrian Network Maps

Figure 6: Central City pedestrian infrastructure network improvement projects

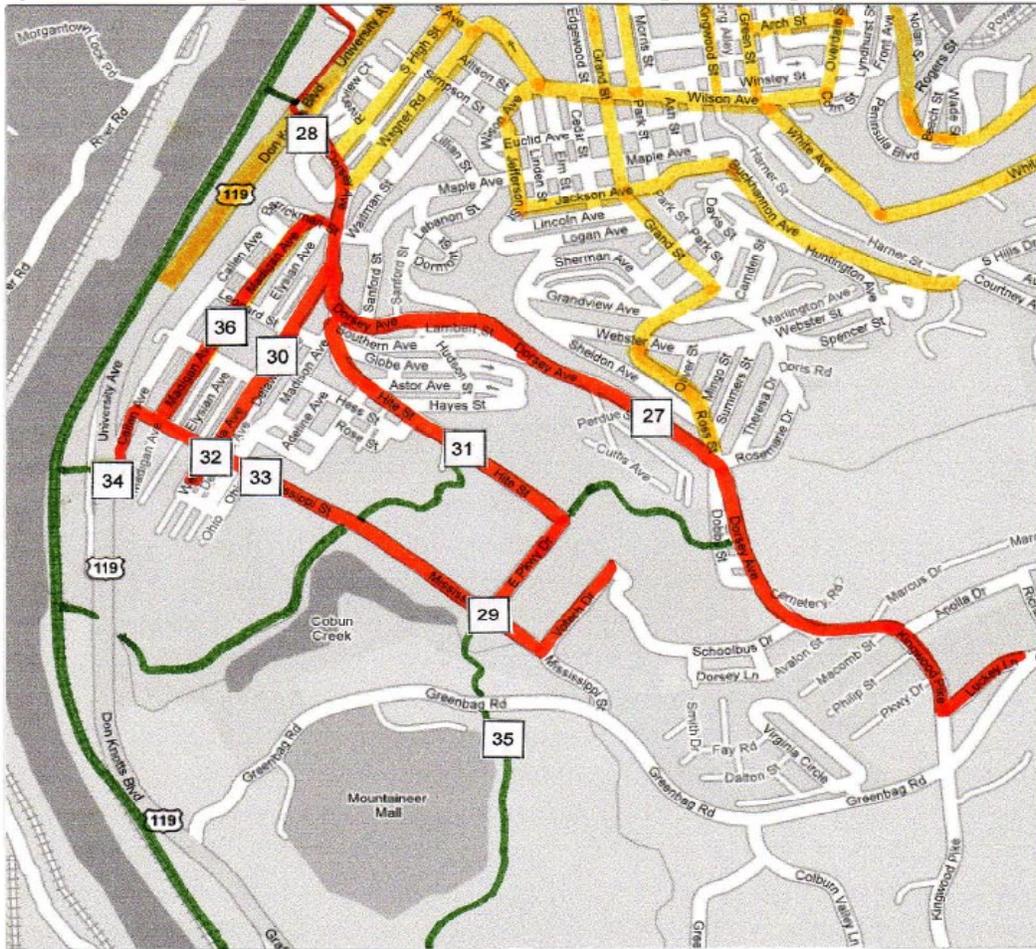


Scale: 1" = 500'

Orange: Connecting network sidewalks in Central City.  
Yellow: Connecting network sidewalks in adjacent areas.  
Green: Rail-trails and green-ways



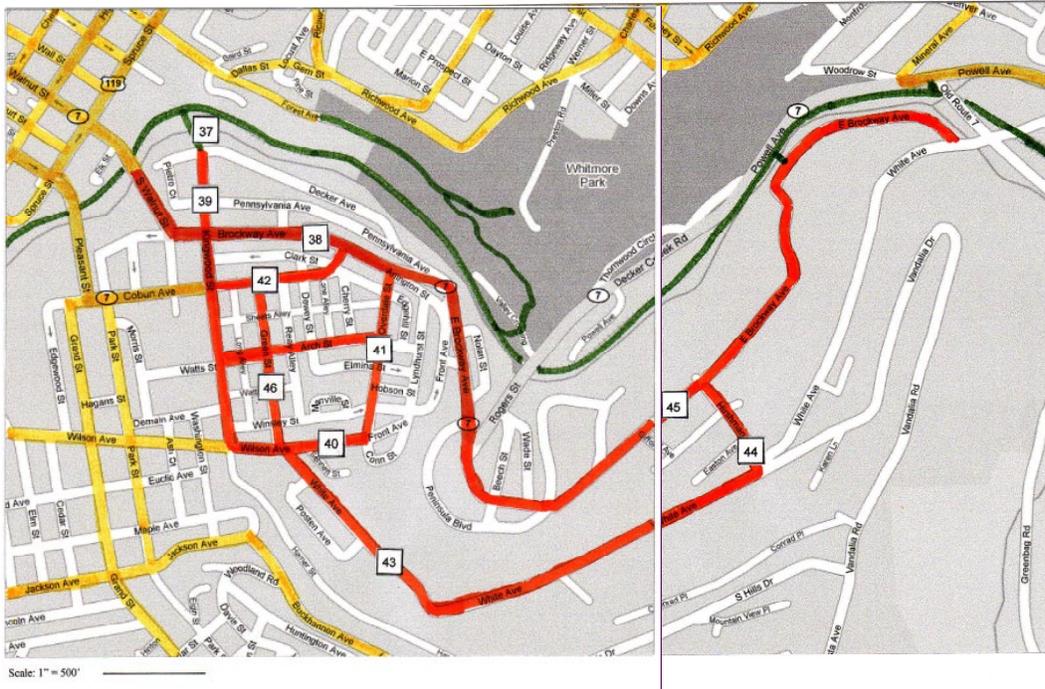
**Figure 8: First Ward pedestrian infrastructure network improvement projects**



Scale: 1" = 1,000'

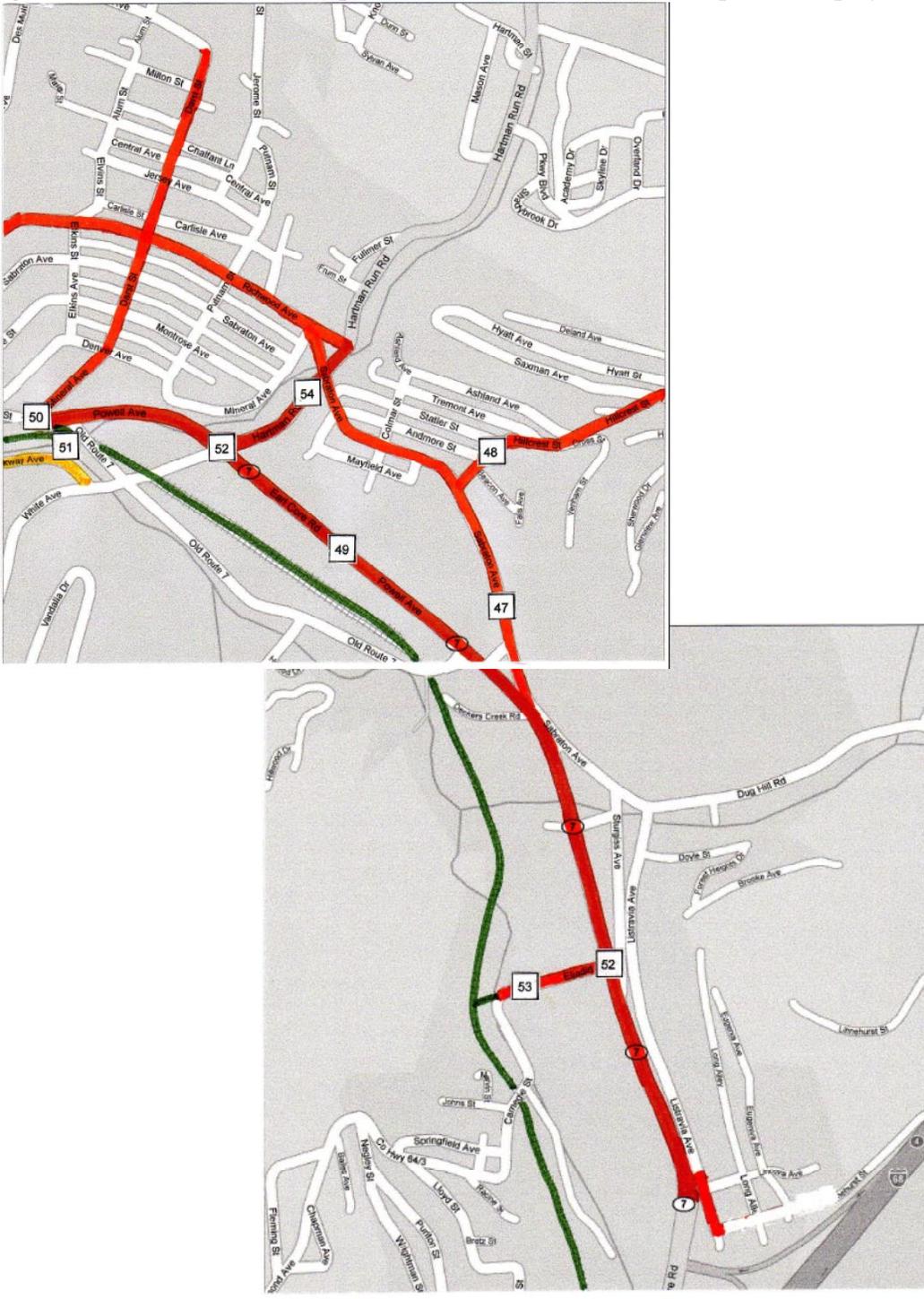
- Orange: Connecting network sidewalks in First Ward.
- Yellow: Connecting network sidewalks in adjacent areas.
- Green: Rail-trails and green-ways

**Figure 9: Greenmont pedestrian infrastructure network improvement projects**



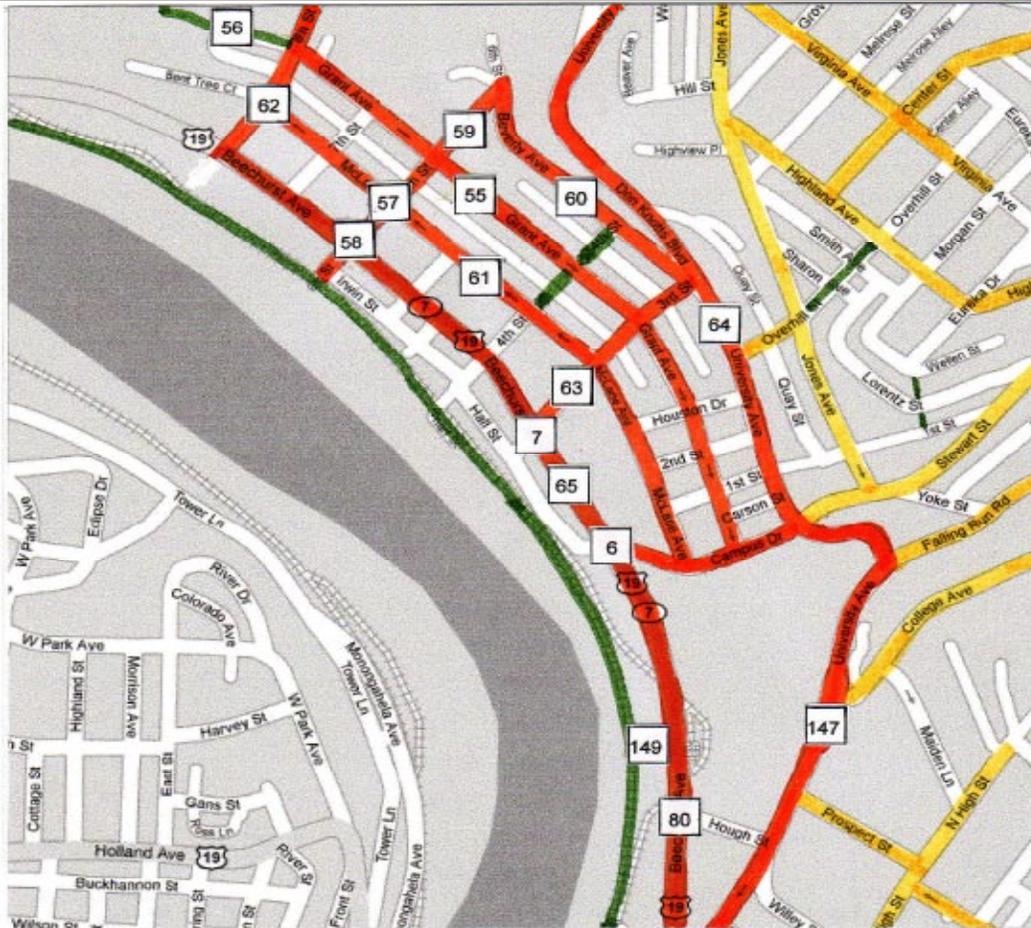
Orange: Connecting network sidewalks in Greenmont.  
 Yellow: Connecting network sidewalks in adjacent areas.  
 Green: Rail-trails and green-ways

**Figure 10: Sabraton-Jerome Park pedestrian infrastructure network improvement projects**



Orange: Connecting network sidewalks in Jerome Park - Sabraton.  
 Yellow: Connecting network sidewalks in adjacent areas.  
 Green: Rail-trails and green-ways

Figure 11: Seneca-Sunnyside pedestrian infrastructure network improvement projects



Orange: Connecting network sidewalks in Seneca - Sunnyside.  
Yellow: Connecting network sidewalks in adjacent areas.  
Green: Rail-trails and green-ways

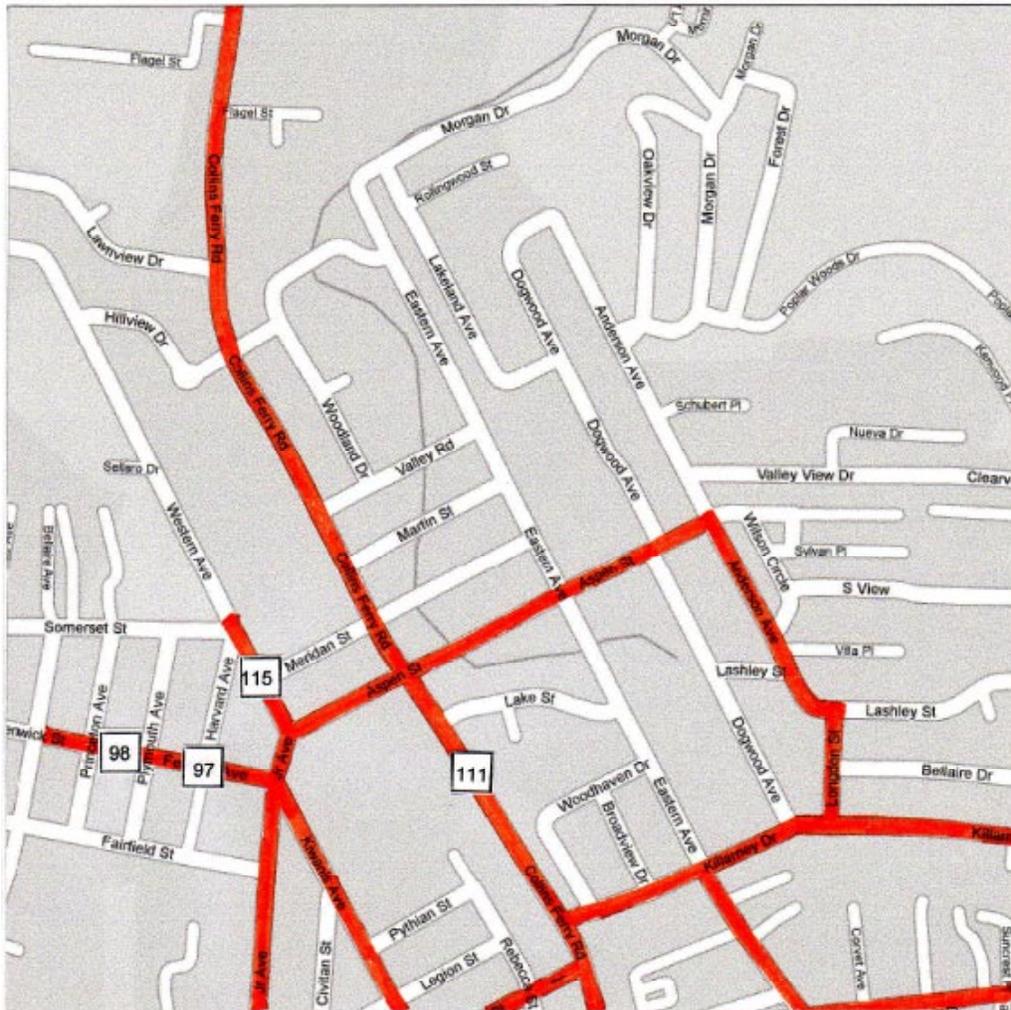
**Figure 12: South Park/South Hills pedestrian infrastructure network improvement projects**



Scale: 1" = 500'

Orange: Connecting network sidewalks in South Park.  
 Yellow: Connecting network sidewalks in adjacent areas.  
 Green: Rail-trails and green-ways

Figure 13: Suncrest (northwest) pedestrian infrastructure network improvement projects



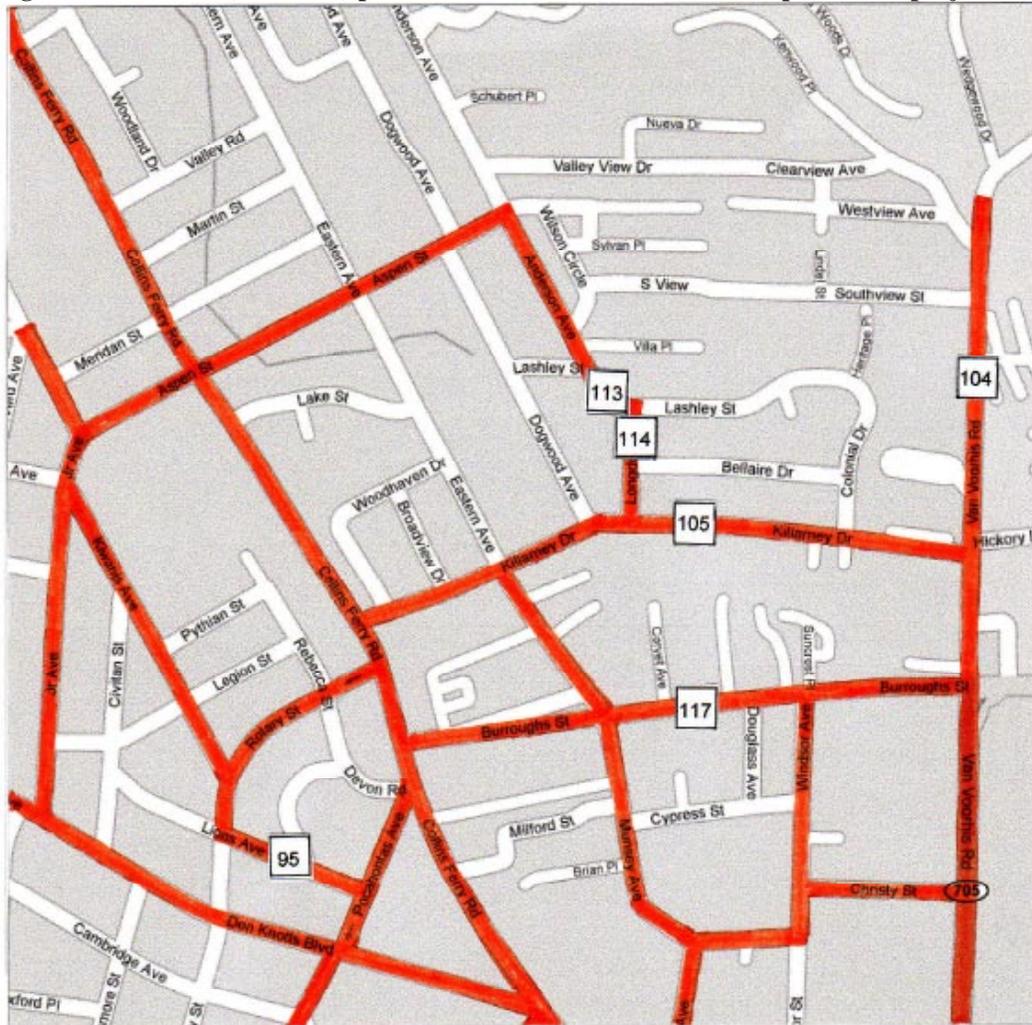
Scale: 1" = 500'

Orange: Connecting network sidewalks in Suncrest - Northwest.

Yellow: Connecting network sidewalks in adjacent areas.

Green: Rail-trails and green-ways

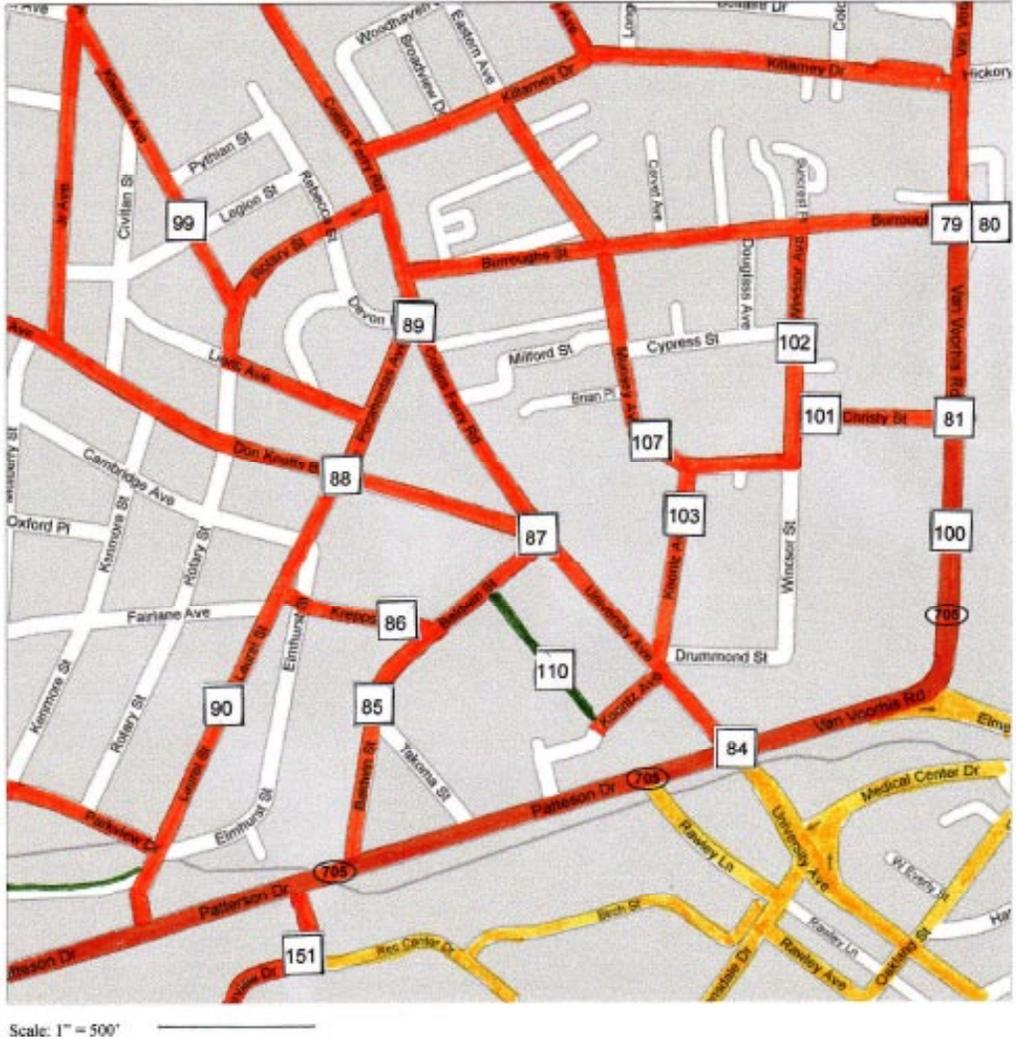
Figure 14: Suncrest (northeast) pedestrian infrastructure network improvement projects



Scale: 1" = 500'

- Orange: Connecting network sidewalks in Suncrest - Northeast.
- Yellow: Connecting network sidewalks in adjacent areas.
- Green: Rail-trails and green-ways

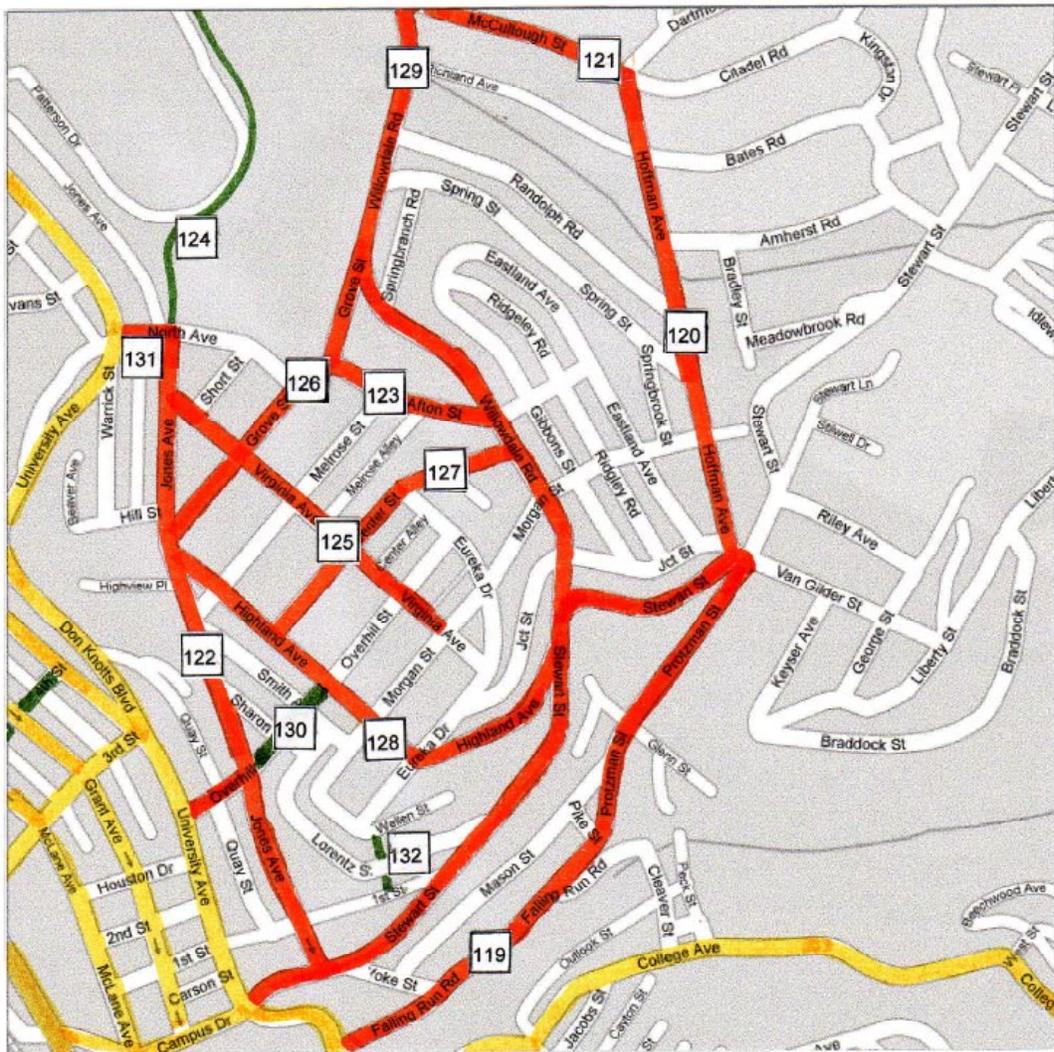
**Figure 15: Suncrest (southeast) pedestrian infrastructure network improvement projects**



Orange: Connecting network sidewalks in Suncrest - Southeast.  
 Yellow: Connecting network sidewalks in adjacent areas.  
 Green: Rail-trails and green-ways



Figure 17: Wiles Hill-Highland Park pedestrian infrastructure network improvement projects



Scale: 1" = 500'

Orange: Connecting network sidewalks in Wiles Hill – Highland Park.

Yellow: Connecting network sidewalks in adjacent areas.

Green: Rail-trails and green-ways

Figure 18: Woodburn pedestrian infrastructure network improvement projects



Scale: 1" = 500'

- Orange: Connecting network sidewalks in Woodburn.
- Yellow: Connecting network sidewalks in adjacent areas.
- Green: Rail-trails and green-ways

## ***Overall Policy Goals***

There are several priorities which the Pedestrian Safety Board has identified which related to pedestrian needs throughout the City as well as to various types of projects listed. These policy goals are listed in numbers 148 to 160 at the end of the list. For convenience and clarity, the projects are also listed as follows:

1. Renew and improve street lighting throughout the City (from MPO)\*\*
2. Upgrade, level by grinding or filling, and /or replace dangerous CNS throughout the City
3. Proceed with implementation of 24” block crosswalks to increase visibility to motorists and heighten pedestrian safety awareness
4. Utilize “triple four” block design with actuated overhead pedestrian flashing signals at mid-block crossings and unsignalized intersections
5. Install curb ramps at each intersection with designs based on ADA Accessibility Guidelines
6. Install crosswalks at each transit shelter to support access to transit services from all directions
7. Install thermoplastic markings wherever possible – especially at locations where there are high traffic volumes and/or heavy truck traffic
8. Illuminate crosswalks throughout the City.
9. At all signalized intersections in central city areas and school zones utilize countdown pedestrian signals and audible walk signals
10. Set downtown crosswalk signals to work in conjunction with cross traffic flow
11. Adjust timing on signalized crosswalks to reduce delay in count-down start-up
12. Install stop bars at stop signs to facilitate safer pedestrian crossing at intersections
13. Consult with Transit Authority Director in the planning of all new sidewalk projects.
14. Consult with neighborhood organizations in the identification, planning, and implementation of all pedestrian infrastructure projects
15. Eliminate the placement of utility poles and mail boxes on curbs and sidewalks
16. Make safety and aesthetic progress each year for all city pedestrians on placing wired utility services underground
17. Recommend that the City Manager deny all sidewalk installation waivers on CNS
18. Recommend that the City Manager confer with the Pedestrian Safety Board regarding waivers of sidewalk installation requirement on NAS

\*\* MPO denotes a pedestrian project or priority identified in Non-Motorized System Improvement Priorities section (pages 112-115) of the 2007 Regional Transportation Plan of the Greater Morgantown Metropolitan Planning Organization

## **Section 7: Safer City Initiatives and Support**

The League of American Bicyclists uses five E's to outline ways to improve safety and effectiveness in bicycling. This Plan will also use this format, but instead of presenting a section on "encouragement," it will have one of its E's be the pedestrian "environment" – a section in which it will discuss other impacts which influence the public's use of pedestrian infrastructure.

Also like the League of American Bicyclists, this Plan includes a sixth E – "equality" – a reminder of the prism through which pedestrian improvements must be considered. The six E's to be discussed in this section are as follows:

- Engineering
- Education
- Enforcement
- Environment
- Evaluation
- Equality

### ***Engineering***

Sections 4, 5, and 6 of this Plan have focused almost exclusively on the physical construction and re-construction of the City's pedestrian infrastructure. Each of the projects heretofore identified has been classified as 1) a connecting network sidewalk (CNS), 2) a neighborhood access sidewalk (NAS), 3) a crosswalk, or 4) a greenway connector or trail. This identification is the first step in a process to improve pedestrian infrastructure. Each project will require engineering planning to identify explicit implementation requirements and detailed costs. A basis for estimated costs is presented in Appendix I. This cost estimate was provided by the Morgantown City Engineer, who projects that the average cost per linear foot of a 4' wide sidewalk would be \$100 in Morgantown.

### ***Education***

Improved pedestrian infrastructure is essential for the City, but this alone will not make Morgantown an effective walking city. One of the additional components that will be needed is pedestrian and driver education. This Plan recommends the development of programs and activities by the Board and strategic partners (e.g., K-12 schools and the University) to encourage more use of walking as a means of travel and exercise and to support greater safety for the walking public.

Attached in Appendix G is a summary of pedestrian-vehicle accidents that occurred in Morgantown from 1998-2008. Pedestrians are particularly vulnerable during winter months, especially in the early evening hours as the end of daylight savings time approaches and immediately after daylight savings time ends (October/November). Darker times for walking make pedestrians harder to see by drivers. Pedestrians' walking habits of the summer months are also no longer applicable at the same times of day or evening in winter months, and so this is a vulnerable time of transition. Walking across a street may seem to be a simple undertaking, but most pedestrian accidents occur when pedestrians are crossing streets. In Morgantown such crossings can be a difficult challenge for people of all ages and abilities. The Pedestrian Safety Board believes that the number and severity of those accidents can be reduced even with a

growing percentage in the number of people walking through effective pedestrian and driver education.

The principles of a pedestrian safety program are summarized by the City of Maple Ridge, CA, in the following safety tips for pedestrians and drivers. These principles and the dissemination of pedestrian-related City Codes (see Appendices N and O) will be part of a pedestrian safety awareness promotion to be developed by the Pedestrian Safety Board for adults.

Safety tips for pedestrians:

- Make eye contact with drivers before crossing the street to ensure that you are seen.
- Use designated crossing points and obey pedestrian signs.
- Wear bright colored clothing or carry reflective articles, especially when walking at night.
- Always be cautious and pay attention to traffic, as drivers may sometimes disobey traffic signals and not stop.
- Look left, right and left again before stepping of the curb.

Safety tips for drivers:

- Always yield to pedestrians.
- Be aware of pedestrians who appear indecisive or inattentive.
- Be alert to vehicles stopped in the lane next to yours. They may be yielding to pedestrians.
- Be aware of pedestrians still attempting to cross the street on a flashing orange pedestrian signal.
- Always be alert for pedestrians, especially at intersections.

For children and dependent persons, there are other priority messages for parents and caregivers (from “Safe Kids Canada”):

- Children under nine should be accompanied by adults or older children when crossing the street.
- Teach your children the rules of the road – start when they are young. By the time your child is nine the rule of the road will be second nature.
- Teach your children through play. Play act with toy cars; talk about safety as you walk.
- Follow the same rules that you want your child to follow. Be a good role model.
- Teach children how to cross the street safely. Teach them to look, left, right, and then left again and to listen for traffic before stepping out into the street. They should look the driver in the eye before crossing.
- Children need to be extra alert when crossing at a corner without signals.
- Teach your child to stop at driveways, alleys and areas without curbs and to never run out into the street.
- Teach children to recognize pedestrian crossing signals but not to rely on them. Before crossing the children should make sure the traffic has stopped and make eye contact with the drivers. Remind them to continue across if the light changes to “Don’t Walk” while they are in the crosswalk.
- Teach children to respect the role of a crossing guard and to understand his/her signals.
- Teach children that whenever possible they should walk on a sidewalk. In areas without sidewalks, they should walk as far away from the road as possible.
- Teach children to walk facing traffic (when there is no choice but to walk on the road).
- Teach children about the dangers of crossing a street between parked cars or when not at a corner. Children should only cross at corners and pedestrian crosswalks, not diagonally or between parked cars.
- Teach children that playing games at railway crossings or around trains can be deadly. Teach children that the only way to cross railway tracks is to use designated railway crossings.

One type of neighborhood traffic safety program which has applicability for Morgantown neighborhoods is a traffic safety campaign in which neighbors in a specific area or on a specific block agree to post lawn signs calling for motorists to slow down. The signs heighten both the need for safety awareness and create an educational tool for motorists and neighbors. Maple Ridge, CA, a community which has utilized such campaigns, has found that a campaign works best when signs are placed on every second property within a block for a period of one to two weeks. An impact is created by the large number of signs as well as the concentrated time period for the campaign. The signs can then be moved to other locations within the community as determined by decision-making of individual neighborhood associations.

An important form of education has been the Speed Watch Program employed by the Morgantown Police Department. The program uses portable radar devices and electronic signs which provide instant feedback to drivers and other riders in vehicles. Drivers can tell whether they are driving too fast for a speed zone. This program has been successfully utilized throughout the City and has continuing educational as well as enforcement value.

Another form of neighborhood safety campaign is the “Heed the Speed” program which is a combination of education and enforcement Initiatives. The traffic safety educational program is initiated along with a short intensive police enforcement campaign. It starts out with warnings followed by citations with little tolerance. The education process is centered within a neighborhood. Yard signs, speed trailers, high police visibility – all pare part of the campaign. The program is repeated at intervals whenever speeds increase. Machine measurement helps record status of campaign effectiveness. (How to Develop a Pedestrian Safety Action Plan, pp 71-72, Office of Safety, FHA, 2006)

### ***Enforcement***

According to the Pedestrian and Bicycle Information Center, states need to provide better pedestrian safety training for police officers and state police academies. It is reported that many officers have not received training in pedestrian and bicycling issues and therefore have not been prepared to enforce pedestrian laws or to educate the public. Pedestrian and bicycling education material is available from the Federal Highways Administration. The State of Wisconsin DOT and the City of Madison have generated a DVD to assist with officer and community training.

There are several ordinances in the City Code of Morgantown which pertain to pedestrians (Part 3, Chapter 9, Article 371; see Appendix N), parking on sidewalks and crosswalks (Part 3, Chapter 7, Article 361; see Appendix O), and sidewalk construction and maintenance (Part 9, Chapter 1, Article 913; see Appendix H). The articles of the Code are presented on the following page. Please see the appendices of this Plan for full details.

#### ARTICLE 361: Parking Generally

- 361.01 Prohibition against parking on streets or highways.
- 361.02 Police may remove illegally stopped vehicles.
- 361.03 Prohibited stopping, standing or parking places.
- 361.99 Penalty.

#### ARTICLE 371 :Pedestrians

- 371.01 Compliance with traffic regulations.
- 371.02 Right of way in crosswalk.
- 371.03 Crossing roadway outside crosswalk.
- 371.04 Drivers to exercise due care.
- 371.05 Moving upon right half of crosswalk.
- 371.06 Walking along streets and highways; soliciting rides.
- 371.07 Persons working on streets and highways.
- 371.08 Protection of blind pedestrians.
- 371.09 Electric personal assistive mobility device.
- 371.10 Solicitation of persons traveling in vehicles on public rights of way prohibited.
- 371.99 Penalty.

#### ARTICLE 913: Sidewalks

- 913.01 Definitions.
- 913.02 Width of sidewalks.
- 913.03 Duties of owners and occupants.
- 913.04 Grading and paving.
- 913.05 Placing sidewalk pavement above or below curb elevation.
- 913.06 Sidewalk construction specifications.
- 913.07 Permit to lay sidewalk pavement.
- 913.08 Order to owner to grade and pave.
- 913.09 Work to be done by City; assessment of costs; lien.
- 913.10 Repairing and repaving.
- 913.11 Maintenance; removal of snow, ice and dirt.
- 913.12 Condemnation of sidewalk pavement; order to relay; work by City.
- 913.13 Repair or repaving when pavement broken.
- 913.14 Supervision and inspection of pavement construction; power to stop improper work.
- 913.15 Rooms or spaces under sidewalks.
- 913.16 Sidewalks required when building constructed or street paved.
- 913.99 Penalty.

#### ARTICLE 915: Curbs

- 915.01 Property owner to lay down curb within sidewalk area.
- 915.02 Width, height and materials of curb.
- 915.03 Costs of curb to be assessed against owner; lien.
- 915.04 Cost of repairs or relaying to be assessed against owner; lien.

#### OTHERS

- 313.04 Pedestrian control signals
- 373.08 Bicycle riding on sidewalks
- 349.14 Driving over sidewalks

- 905.02 Merchandise; displaying on sidewalks
- 373.08 (d) Skateboard prohibited on sidewalks
- 343.06 Driving onto roadway from place other than roadway; stopping at sidewalk
- 1369.07 (J) Conditions for permitted signs: Sandwich board sign

Some of the issues which have been reported as troubling to pedestrians during the past year are:

- 1) Riding of bicycles on sidewalks in the downtown area;
- 2) Stopped vehicles in crosswalks;
- 3) Parking of trucks on sidewalks for loading and unloading;
- 4) Driving of large truck vehicles over curbs and sidewalks;
- 5) Blocking sidewalks with trash cans;
- 6) Lack of snow removal from sidewalks in a timely manner;
- 7) Dirty sidewalks (garbage, broken glass, gum, etc.).

The active, efficient, and consistent enforcement of City Code regulations is critical to the implementation of this Plan. If insufficient police personnel are allocated to enforcement, however, the use of traffic calming (discussed later in this section of the Plan) to control traffic speed throughout the City will be an important step toward providing protection for residents.

### ***Environment***

There are many problems that need to be addressed in considering a walker's environment and yet there are many assets in the Morgantown walking environment. The needs for a connective network of routes and more consistent standards for sidewalk design have already been discussed in earlier sections.

Overall it would have to be said that the most serious compromises to a safe walking environment are: a) sidewalk designs which provide little or no barrier between pedestrians and heavy and/or fast moving vehicles; b) noxious emissions from truck engines and other exhausts; and c) loud noise from trucks and other heavy vehicles beginning before daylight and continuing late into the afternoon. Each of the three conditions seriously compromises the walkability, the livability and the desirability of the City and the sense of safety which is important to pedestrians. It is important that City policy makers find ways that these issues can be mitigated.

There are however, many opportunities (details following) in the Morgantown walking environment which need to be recognized and strengthened.

#### **Opportunity: Trail Development**

During the past 20 years Morgantown has taken important steps toward the development of rail-trails and other free standing trails throughout the community. The trails are considered by many to be one of the most significant community improvements that have been made in the City in the past several decades. At first the rail trails in particular were used for recreation but more recently pedestrians have used the trail system more and more for travel to classes, work and other daily activities – particularly during the day-light saving time period. The use of trails can be expanded into additional areas of the City as this Plan indicates.

#### Opportunity: Public Transit

With the assistance of West Virginia University, the City-County transit service for the Greater Morgantown area known as “Mountain Line” has become an important asset to walkability in Morgantown (see Appendix J for route map). Transit buses make it possible for a walking life style to be adopted. Transit provides a means for travel to more distant destinations whereas walking helps a person gain access to destinations which are a short distance away. Transit is an all-seasons and all-weather method of travel by pedestrians. Walking is required to gain access to buses and bus routes, and therefore the two forms of mobility are interdependent.

In the development of the connective network sidewalk routes within the City, special consideration was given to where transit routes have already been established. It is important to both the pedestrian and the transit system that pedestrians be able to walk to transit stops or bus stop shelters. Therefore, priority has been given to projects which are located near transit services routes.

It is anticipated that improved safe pedestrian movement will increase transit ridership and may assist the transit system in gaining the resources necessary to increase bus frequency within the service.

#### Opportunity: Taxis and Zip Cars

At present the residents and students living in Morgantown are under-served by existing taxi service. Additional taxi service capacity could be a boon to the walking public because it too is an important inter-modal connective resource. Additional taxi service, with affordable fares, is a need which should be addressed.

In some U.S. cities, “zip” cars and pick-up trucks can be rented and dropped off at curbside locations by swiping a credit card and a driver’s license. As students continue to bring fewer cars with them to the university, Morgantown can become a potential market for zip vehicle services.

#### Opportunity: “Complete the Streets” Policy for Road and Street Improvement

In December 2008 the City of Morgantown adopted a “Complete the Streets” Policy which will be used in the future upgrading of streets. A “Complete the Street” policy is a commitment to building or upgrading streets to be “Complete Streets” which address the needs of transit users, bicyclists, and pedestrians as well as automobile operators in ways that fit the context of the community and appropriate safety standards.

A “Complete the Streets” policy is a commitment to include pedestrians in street planning, design development and maintenance located within or adjacent to the City. It is a policy which is an important element in planning and working toward Morgantown becoming a more walkable community. A copy of the Morgantown “Complete the Streets” Resolution is attached as appendices in this Plan. The policy was also adopted by the Greater Morgantown Metropolitan Planning Organization (MPO) in March 2008.

### Opportunity: Traffic Commission's Traffic Calming Program

The Committee on Traffic Calming of the Morgantown Traffic Commission has prepared a traffic city-wide calming plan in order to reduce the speed of traffic in residential areas (see Appendix M). In order for streets to serve their multiple function of offering opportunities for multi-modal travel, providing opportunities for social interaction and commercial exchange, automotive travel speed must be curtailed. Traffic calming barriers help change a driver's perception of a street and help change the speed of travel.

For this reason traffic calming is an integral element in fostering safer travel by pedestrians in residential areas. With reduced traffic speed, persons are encouraged to walk more frequently for short trips around a neighborhood and even to and from commercial areas. Traffic calming increases the likelihood that people walking in a neighborhood will interact with other residents and results in less air pollution and vehicle noise. All such benefits have the impact of increasing the livability of a community.

### Opportunity: Tree Board Tree Planting Initiatives

The Municipal Tree Board works to expand the availability and replacement of street trees throughout the pedestrian corridors and parks of the City. In September 2008 the United States Conference of Mayors reported cities of all sizes throughout the country reporting attention being given to protecting and renewing urban tree canopy. The re-treesing of Morgantown needs to be part of the City's effort to establish a more walkable community and to generate greater public support for quality of life.

Dan Burden, transportation planner and urban designer, provided the following list of "22 Benefits of Urban Street Trees" in a May 2006 article. Most of these are directly or indirectly related to pedestrian use and safety:

1. Reduced and more appropriate urban traffic speeds. A Texas A&M study noted drivers slowing down in a treed-scape between 3 mph and 15 mph.
2. Create Safer Walking Environments by forming and framing visual walls and providing distinct edges to sidewalks. Trees give a sense that a tree can stop or deflect a motorist from hitting pedestrians.
3. Trees call for planting strips which further separate motorists from pedestrians.
4. Increased security. Trees create more pleasant walking areas, bring about increased walking, more pride in place, etc. which in turn fosters more surveillance of homes, blocks, businesses, etc.
5. Improved business. Businesses located on treescaped streets show 20% higher income – often an essential competitive edge for competing with malls, plazas, etc.
6. Less drainage infrastructure. Trees absorb the first 30 % of most precipitation and allow evaporation back into the atmosphere. Another 30% is absorbed into the ground.
7. Rain, sun, heat and skin protection. For light and moderate rains, pedestrians need less rain protection. In cities with trees there is less need for chemical skin blocking agents. Temperature differentials of 5-15degrees are felt by walking under a canopied street.
8. Reduced harm from tailpipe emissions. Impacts are reduced significantly from proximity to trees. This is especially important for Morgantown which has reach non-attainment levels of air pollution.
9. Gas transformation efficiency. Trees in street proximity absorb 9 times more pollutants than distant trees, converting harmful gases back into oxygen and other useful gases.
10. Lower urban air temperatures. Asphalt and concrete streets and lots are known to increase urban temperatures 3-7 degrees. Street trees can reduce household energy bills by 15-35%.
11. Lower Ozone. Increases in urban street temperatures increase the creation of harmful ozone and other noxious gases impacting the health of people, animals and surrounding agricultural lands.

12. Convert streets, parking lots and walls into more aesthetically pleasing environments. Trees soften the sense of grayness created by wide streets, parking lots, and sometimes necessary blank walls.
13. Soften and screen necessary street features such as utility poles, light poles and other needed street furniture
14. Reduced blood pressure, improved overall emotional and psychological health. People are impacted by the ugly or attractive environments where they spend time. A University of Washington researcher notes that trees have a calming and healing effect on ADHD adults and teens.
15. Time in travel perception. Research and observation confirm that treeless environment is perceived to be longer than one that is treed.
16. Reduced road rage. Burton states that there is strong compelling research that motorist road rage is less in green urban versus stark suburban areas.
17. Improved operations potential. Properly positioned, the backdrop of shade trees allows features which should be dominant to be better seen. The absence of a well developed greenscape allows a mass of grey to dominate the visual world. At the same time, poorly placed signs, signals or poorly maintained trees reduce this positive gain.
18. Added value to adjacent homes, businesses and tax base. Realtor based estimates of street tree versus non street tree comparable streets relate a \$15-25,000 increase in home or business value.
19. Provide a lawn for a splash and spray zone, storage of snow, driveway elevation transition and more. Tree laws are an essential part of the operations side of a street.
20. Filtering and screening agent. Softens and screens utility poles, on street and off-street parking and other features creating visual pollution to the street.
21. Longer pavement life. Studies conducted in a variety of California environments show that shade from street trees can add 40-60% more life to costly asphalt.
22. Connection to nature and the human senses. Urban street trees provide a canopy, root structure and a setting for interesting natural elements existing in urban life. Urban designs are rarely ever provided for any urban product without trees being included

### ***Evaluation***

The Pedestrian Safety Board will advocate for the continual evaluation, refinement, and adaptation to changing pedestrian needs in the City. Some of the changes that will be made will come as a result of direct requests by the City Council or the City administration to address specific issues. Other changes will come as a result of the Board's implementation of walking promotion and safer city programs. Still other changes will come as a result of program evaluation as the Board monitors and documents what it is able to accomplish: 1) by various projects or services, 2) utilizing what types of strategies, 3) with what target audience, 4) in what kind of time frame.

The forms of evaluation which are most likely to be undertaken are process evaluation (e.g., what we have learned and how that should change what is being done). It is anticipated that there will also be some opportunities to assess impact (e.g., the results of a specific project or program).

The work of the Board will be influenced by evaluation data and community input as it works to promote a complete public mobility system in which walking is a fully-considered and valued component. If it is effective in doing so, the quality of life and the economic prosperity of Morgantown will improve as a location for social and cultural interaction, business activity, and community life.

## *Equality*

Equality is a prism through which pedestrian safety must be viewed and supported. In a democracy, universal participation in the benefits of a community is a paramount concern – be it for individual freedoms, education, public safety, health care, or other common concerns. In the case of restoring a more walkable community, serving the transportation interests of non-motorists creates more equal access and benefits all persons in a community by increasing property values and quality of life.

The vast majority of state and municipal funding spent on transportation infrastructure is directed to investment in roadways for construction, maintenance, signs and signalization, enforcement, public safety, etc. According to information summarized in the Complete the Streets resolution (see Appendix D), approximately 1/3 of the national population does not drive motorized vehicles and has greater dependence on pedestrian facilities. In fact, most persons can be classified as pedestrians in some part of each day.

In Morgantown in the year 2000 16% of the population was identified as not using motor vehicles to travel to and from employment, classes or other destinations. Yet a proportionate share of state and municipal resources has not been invested in pedestrian infrastructure, resources and services for approximately the past 60 years. In order for the total public to achieve greater equality in benefiting from transportation resources, we must create a change in public policy.

All individuals, including pedestrians, bicycle riders and transit riders, must be considered to be legitimate transportation infrastructure users and not just the motorists. Streets must become “complete” in order for all citizens to receive a fair share of public resources to enable safe, accessible, connected travel to destinations within and around the community. A more equitable resource distribution is needed to address the transportation infrastructure safety needs for a safer city for all citizens.

## Section 8: School Pedestrian Safety Plan Development

There are eight public schools located within the City Limits of Morgantown:

- 1) Morgantown High School
- 2) North Elementary School
- 3) South Middle School
- 4) Suncrest Middle School
- 5) Suncrest Primary School
- 6) Vocational Technical Center
- 7) University High School building (future public school)
- 8) Woodburn Primary School

These schools serve households in many areas of the City. Some residences are located in neighborhoods within a one mile radius of the school and its playground. Some children walk or could walk with parents or family members to school if there were supportive plan and safe infrastructure for doing so. Due to present safety concerns, few children can walk safely to school by themselves without some type of program. One example is a “walking school bus,” in which adults walk with children, starting in one location and picking up other children along the way.

Many primary school students are dropped off along the streets near the schools. Neither the Suncrest nor Woodburn primary schools have adequate sidewalks or curbs to support school drop-off and visitation. Installing curbing and sidewalks especially within the school block is a major priority to improve the safety of drop-off and stand by areas.

At the South and Suncrest Middle Schools, a greater percentage of students ride buses to school, but there are still many students who are dropped off by family members either regularly or occasionally. Some middle students already walk to and from middle school. It is likely that an increased percentage would walk if there were safer sidewalks, crosswalks, and school crossing guards available at nearby arterial roads and at the school site. Adult crossing guards need to be equipped with bright and reflective Class 2 safety vests (as specified in the Manual of Uniform Traffic Control Devices) and a STOP paddle. Student safety patrols also can be important in assisting adults crossing guards and in improving safety in drop-off zones.

No survey has been conducted to determine how many Morgantown High School students presently walk or would walk to and from high school. Car and bus traffic is very heavy around the school at the beginning and end of the school days, and therefore pedestrian safety continues to be an important concern. Even though there are sidewalks on both sides of Wilson Ave. there is only one sidewalk on Prairie Ave. – an important pedestrian thoroughfare and drop off site for regular school days and for special events.

In all school zones, the utilization of advance stop lines before crosswalks at intersections and mid-block crossings where there are STOP/YIELD HERE FOR PEDESTRIANS signs is deemed important. Pavement markings, signs and even flashing signs on a timer can be useful resources for increasing safety. Traffic calming installations can also be important to areas where traditional signage is not effective in reducing traffic speed.

Recommendation – The Board recommends that the City of Morgantown, through its Pedestrian Safety Board, request that each school be asked to develop a School Area Pedestrian Safety Plan

utilizing the collaboration of faculty, parent, student, and neighborhood association representatives.

The purpose of each Plan would be to make safer routes to school for students living in adjacent neighborhoods located up to one-mile from the school. These plans would be forwarded to the Board of Education and then submitted to the Traffic Commission and the Pedestrian Safety Board for review, clarification, and prioritization for implementation.

It is likely that some steps such as the establishment of volunteer crossing guards, safety patrols, and other pedestrian safety programs and activities could be implemented by the school itself in collaboration with the Board of Education.

The Pedestrian Safety Board will provide personnel and materials to assist each school in creating their School Area Pedestrian Safety Plan. Information is also available online at the National Center for Safe Routes to Schools website (<http://www.saferoutesinfo.org/>).

**Table 3: The Five Es for Safe Routes to Schools Programs**

Engineering	Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails, and bikeways.
Education	Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills, and launching driver safety campaigns in the vicinity of schools.
Enforcement	Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), and initiating community enforcement such as crossing guard programs.
Encouragement	Using events and activities to promote walking and bicycling.
Evaluation	Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention(s).
*source: Federal Highway Administration, 2007	

## Section 9: ADA Accessibility Audit

As noted in the Section 4 references to “complete the streets” policies, public thoroughfares need to serve the diverse needs of a total population and not just those of motoring public. The US Department of Transportation and its Federal Highway Administration in its publication FHWA-SA-93-019 identifies part of the pedestrian public as having a variety of abilities in agility, balance, cognition, coordination, endurance, flexibility, hearing, problem solving, strength, vision, and walking speed. Accordingly, sidewalk design is important to all pedestrians but particularly important to those with disabilities who have limited travel choices and who rely most on the pedestrian environment.

The US Department of Transportation Guide on Accessible Sidewalks goes on to explain the legal framework and the nature of the resources available to integrate pedestrian travel into the transportation system and to protect the civil rights of persons with disabilities in that system.

The most familiar protective legislation to most Americans is the Americans with Disabilities Act (ADA) of 1990. This act was part of a progression of several laws and regulations being developed mandating accessible environments and programs that have been passed or adopted since the American National Standards Institute was adopted in 1961 to address building accessibility.

The year after the ADA was adopted the Intermodal Surface Transportation Efficiency Act (ISTEA) was passed with specific attention being given to pedestrian transportation. This act was expanded in 1998 with the passage of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) which increased funding available for pedestrian facilities. This source of funding has been utilized for the renewal of the pedestrian infrastructure on High Street in recent years.

Recommendation - The utilization of the recommended standards presented in Section 4 of this Pedestrian Safety Plan will improve pedestrian access in all parts of the City. Conducting an ADA access audit would further assist the City in prioritizing construction projects for implementation and allow the City to bring more areas into compliance with ADA standards. The Board recommends that such an audit be undertaken as a timely, inclusive step in the development of a walkable community. This audit should include creating a geo-referenced spatial inventory of pedestrian infrastructure.

## **Section 10: Financial Planning for Pedestrian Infrastructure Improvements**

Sidewalks and pedestrian infrastructure are often considered to be one-time expenses. Over the years since World War II, some communities, such as Morgantown, have not given consistent and proportionate attention to sidewalks because higher priority has been given to the section of roadways which supports automotive transportation. But the times have been changing – especially during the past decade when walkability has become a rediscovered priority for quality of life.

With the 1979 passage of an ordinance (including Section 916.13) amending the original municipal sidewalk ordinance of 1967, the City of Morgantown required new dwellings and buildings to have sidewalks constructed adjacent to the property as part of the new construction. Previously in 1969 an ordinance had been passed requiring street paving to include construction and re construction of sidewalks. Both ordinances were intended to address the deficiency in sidewalks identified in the original city code in 1967. But both requirements included a provision for waivers, and over the years too many waivers have been given – especially with sidewalk construction or reconstruction in relation to street paving projects as originally provided for in the original 1967 city code (Section 911.01).

In recent years approximately \$100,000 has been allocated in annual city budgets for sidewalk construction and re-construction. Some of the recent projects have included replacement of the Beechurst sidewalk on the hill side of the high traffic corridor; new sidewalk construction on Falling Run Road, James St., Darst St., Collins Ferry Road and the Elmhurst/Laurel Streets intersection. Replacement work of sidewalks has also been completed on Stewart St., and a collaborative sidewalk construction project has been completed with WVU Student Government leadership and WVDOT support on Willowdale Road.

In order to address the extensive needs for sidewalk construction and maintenance represented in Section 6 of this Plan - and the on-going maintenance that such projects involve - it is important that the City establish an on-going means for addressing pedestrian infrastructure needs. In addition to addressing pedestrian safety via infrastructure projects, it is also important for the City to support traffic calming initiatives which are also important for pedestrian and neighborhood safety and quality of life.

The process to establish a revitalized care of sidewalks and neighborhood safety was most recently initiated in 2005. During that year the Traffic Commission established a Traffic Calming subcommittee, and the City Council began to discuss ways to address the need for city-wide sidewalk improvement. In response to the interest in establishing a plan for sidewalk improvement, the City Manager recommended that City Council decide what type of financial mechanism it would use to address sidewalk issues. Clearly the City was falling further behind with expenditure of only \$100,000 per year to address the deficient sidewalks and lack of sidewalks within the City.

It has become clear that establishing and maintaining a sidewalk system in a city such as Morgantown is not simply a matter of making periodic capital expenses every three or four decades. The sidewalk construction, reconstruction, repair and maintenance needs are so pervasive, complex, and on-going that there needs to be a regular expenditure of resources to address, maintain and adjust evolving pedestrian infrastructure and traffic calming needs.

In addition, in as much as sidewalk investments tend to address the needs of more than one generation, it is appropriate for responsibility for paying for sidewalk investments be made not just by a single generation every 30-40 years but by on-going investments by the citizens each year. The use of an on-going designated fee would permit the City to buy bonds for pedestrian safety projects in a manner similar to those purchased by the Parking Authority for parking garage construction which are also designed to serve more than one or two generations. The problem with use of bonds, however, is the debt service. Should bonds be utilized, approximately twice as much support would need to be generated for projects. If bonds are not used, the City can generate nearly twice as much sidewalk progress for half the amount of resources. Unlike a parking garage, sidewalks do not have to be completed in full in order to be useful to the public.

Several crosswalk and some sidewalk projects in this Plan are clearly related to maintenance functions of the WVDOH. If this Pedestrian Safety Plan is approved by City of Morgantown and Greater Morgantown MPO decision makers, the City will need to make formal requests that these projects be completed and funded by the WVDOH.

Grant resources are likely to continue to be available to supplement local core expenditures from the Safe Routes to School program, the WVDOT TEA-21 funding, the Community Development Block grant program, and possibly a “hometown economic stimulus package” during the Obama administration. Such resources must be considered as supplements to a sustained, on-going local effort to improve neighborhood safety and livability as well as walkability city-wide.

#### Recommendation

Section 913.16 of the current City Code of Morgantown requiring that when dwellings or building are constructed within the city that plans include the construction or replacement of sidewalks must be closely followed in all development and redevelopment in the city. The Pedestrian Safety Board believes that the Chair or Vice Chair of the Pedestrian Safety Board should be contacted whenever an exemption of the code is considered. The Chair or Vice Chair would respond with their recommendation within 48 hours of being contacted. If a sidewalk construction exemption is to be approved, then an ordinance amendment needs to provide a means by which the property owner involved may pay a proportionate cost to a dedicated city sidewalk fund.

On October 21, 2005, the City Manager provided four options for supporting sidewalk policies and programs (see Appendix F). One of the four proposals would provide on-going support for a pedestrian infrastructure system. Accordingly, the Pedestrian Safety Board recommends that City Council establish an on-going annual Walkway, Walkway Lighting, and Traffic Calming Fee based on per linear foot of property facing a street.

Based on current construction and MPO Plan cost estimates, the Board estimates that approximately \$31,500,000 will be needed to complete the projects outlined in Section 6 of this Plan (see Appendix I for details). In addition, approximately \$1,000,000 will be needed to complete the proposed neighborhood Traffic Calming Plan projects (see Appendix M) planned by the Traffic Commission. Engineering studies, and associated costs, will be necessary to determine detailed project costs for all projects as implementation proceeds.

To address these financial needs and establish an ongoing strategy for addressing pedestrian infrastructure construction and repair projects, the Board recommends the City establish the Walkway, Walkway Lighting, and Traffic Calming Fee at \$1 per linear foot of road frontage per

year on all property within City limits. Properties having boundaries on more than one street would be assessed for only the road frontage at the front of the house. To improve the fairness of this fee, the Board further recommends implementing the following:

- (1) A 10 year fee credit for recently replaced, repaired, or newly constructed sidewalk built in accordance with section 913.06 of city code; and
- (2) A cap on the assessed frontage feet at the building frontage plus up to a maximum of 40 feet each side of the building or 150 feet whichever is less (i.e., a \$150 cap)

Based on estimates from the City Manager (see Appendix F), a \$1 per linear front foot fee would generate approximately \$1,000,000 annually which would allow the City to progress within a relatively short time frame toward the completion of the projects. This fee would also create a stable financial foundation by which long-term bonds could be structured so that some resources could be set aside for matching grant funds as opportunities become available. The fee may also have a tax benefit to Class IV property tax payers. A U.S. District Court has ruled that municipal service fees are taxes; therefore, like fire service fees, a walkway fee may be claimed as a federal tax deduction (***\*\*individuals should consult with a tax preparer to confirm this ruling\*\****).

The Board further recommends that the priority use for collected fees be sidewalk, crosswalk, lighting, and traffic calming projects on the connecting network sidewalks (CNS) as identified in Section 5 of this Plan as well as traffic calming projects. The second priority use of the collected fees would be sidewalk, crosswalk, lighting, and traffic calming projects on neighborhood access sidewalks (NAS). The Board further recommends that the collected fees be placed each year in a dedicated fund specified for the *exclusive support of sidewalk, crosswalk, lighting, and traffic calming projects outlined in this Plan and the Traffic Calming Plan*. As with any other fund, it must be audited annually and publicly reported.

In addition, the Board recommends that the provision for sidewalk construction as specified for new construction of buildings (Section 913.16, paragraph c) be retained and enforced. This change would require a modification of paragraph (b) in Section 913.16.

Whenever a sidewalk installation waiver is requested, the Board recommends that the City administration act based on the type of sidewalk affected. Specifically, the Board recommends that all waivers on CNS streets be denied by the City and that the City administration promptly consult with the Board to evaluate a waiver request on NAS streets. The designated Board representative(s) should be contacted by email and given one week to provide a response to the City administration.

If granted a waiver by the City Manager upon consultation of the Board, the Board recommends the builder of the new construction be required to pay an amount to the City roughly comparable to the general costs of constructing a sidewalk at the project site which will be revenue for the Walkway, Walkway Lighting, and Traffic Calming Fund to support other sidewalk construction, preferably in the general neighborhood area of the new construction project. The amount to be paid should be comparable to the general costs of constructing a sidewalk at the project site rather than a flat fee utilized city-wide.

It is recommended that the Complete the Street policy requirement that sidewalks be included with all reconstruction and paving of streets be limited to CNS only. For NAS, it is recommended that property owners be required to pay 40% of the total construction, reconstruction or repair costs with City paying the other 60% (from the Walkway, Walkway

Lighting, and Traffic Calming Fund). Adding this provision would require an addition to Article 913. The NAS projects would not be available to individual homeowners but would be placed on a list for installation only if two-thirds of the property owners on an NAS street block petitioned to have the sidewalk constructed or re-constructed.

Whenever a new street is constructed, the Complete the Streets policy should be followed regardless of street sidewalk classification. Further, whenever a new sidewalk is constructed, the Board recommends the Transit Authority be contacted so that space for constructing a future transit shelter may be incorporated in the sidewalk design, if feasible.

## Section 11: Sidewalk and Curb Maintenance

The present Sections 913 and 915 of the City Code of Morgantown assign primary responsibility for sidewalk and curb re-construction, repair and maintenance to the property owner (Section 913.03). Should the property owner fail to act upon disrepair or dilapidated conditions, the City Manager is empowered to “cause such work be done” and to assess the cost plus a 20% commission for personnel costs for supervision and collection over and above the actual cost of the work. The total cost, if not paid directly, shall be assessed as a lien against the property (Sections 913.09, 913.12, and 915.04).

With the revision in sidewalk funding policies as set forth in this Plan (Section 10) the above cited articles will need to be revised to assign proportionate responsibility for sidewalk structural maintenance for both connecting network sidewalks (CNS) and neighborhood access sidewalks (NAS).

On the matter of maintenance and removal of snow, ice and dirt, the municipal code in Article 913.11 assigns responsibility to the property owner, lessee or occupant of the property abutting any street upon which a sidewalk is located. This code (913.11) permits the City Manager to give a 24-hour notice, excluding Sundays, to remove the snow, ice, dirt or refuse in the event that a property owner, lessee or occupant of any property does not maintain a sidewalk free from snow, ice, dirt, or refuse. In the case of snow fall, it is recommended that the code be amended to specify the time by which snow shall be removed. As with other cities in snowy areas, it is recommended that snow be required to be removed from sidewalks *within 24 hours of the completion of an accumulating snowfall*. With this additional specificity, a public information campaign can be initiated each year and public information reminder spots can be presented at the time of larger snowfalls. To accomplish this, the Board recommends that ordinance 913.11 be *revised and strictly enforced* to:

- (1) Change the requirement for snow and ice removal (not dirt or refuse) to require snow and ice be removed within 24 hours of the completion of a snowfall or ice storm with measurable accumulation or allow for spreading of sand, etc on ice that cannot be removed, and
- (2) Change the mechanism of citing/fining property owners for snow and ice removal to a process of (1) observation of property by City Manager *or authorized personnel*, (2) citing the property owner in writing, (3) set fees at \$25-50 for 1st offense and \$50-\$100 for each offense thereafter (each day is a separate offense), and (4) allow City Manager to order a property be cleaned by City crews and charge the expenses annually to the property owner as provided in Section 913.09

All sidewalks located in the central city are classified as CNS. The City Public Works Department has established a sidewalk clean-up capacity with the use of a sidewalk sweeper which is utilized daily (except for Thanksgiving and Christmas) with extra capacity on “heavy days” (i.e., Friday, Saturday and Sunday). This service enables downtown sidewalks to be cleaned and picked up to allow the central city area to be presentable every day of the year.

## **Section 12: Administration and Continuing Role of Pedestrian Safety Board**

### Administration

The public perceptions of sidewalks in Morgantown today are mixed. In the January 28, 2010 public forum conducted by *The Dominion Post* of the Walkway, Walkway Lighting and Traffic Calming Fee (“WALK”), most speakers expressed support for sidewalks. Many expressed dissatisfaction, however, with the prospect of paying a \$1.00 front foot fee in support of a comprehensive program.

Sidewalk construction and maintenance has been both compromised and neglected in Morgantown since the 1950s. Current City Codes require property owners to maintain and repair sidewalks, but these standards have not been enforced. To complicate the situation further, some areas, such as Suncrest and South Hills, have been annexed to the City after being developed without any sidewalks being installed by original developers. There are even locations bordering City parks and other municipal properties which lack sidewalks.

No one in the city administration has been assigned specifically to oversee and repair sidewalks. Sidewalk and curb construction today requires engineering and engineering certification. If attention is to be given to a walkway development program, there would need to be someone directed to: 1) oversee walkway inventories and need analysis, 2) serve as a liaison with WV DOH, utilities and the ADA, 3) implement a Pedestrian Safety Plan, 4) provide/oversee engineering design for curbs-sidewalks and retaining walls, 5) schedule projects and oversee private contracting, 6) monitor structural changes, repair needs, and property owner maintenance, 7) monitor sidewalk obstruction issues, such as, mailboxes, utility pole placement, trash cans and snow; 8) issue/oversee issuance of citations for violations; and 9) coordinate traffic calming plan implementation.

Responsibilities for a dedicated, visible program cannot be relegated to a maxed-out general department with the expectation that such a program will be managed in a manner that will earn public trust and satisfaction. Visible progress will have to be made and public confidence earned. It is hope that project signage will be installed, as it has been in Charleston, WV, to show the results of the WALK program.

It is important that the scope of the program not be underestimated by the fee payers or by the City government itself. There are at present approximately 11,500 residential units in Morgantown, a multitude of businesses, and 39 traffic calming sites already identified. By having a person, such as a sidewalk engineer, assigned to and funded by the WALK program, the likelihood of public expectations being met will be significantly increased.

### The Future role of the Pedestrian Safety Board

Since 2008 the Board has directed primary attention to the development of this Pedestrian safety Plan. With the adoption of the Plan, the City Administration will generate modifications to the Plan and City ordinances to facilitate implementation. It is anticipated that the role of the Board will shift toward: 1) serving as an evaluation resource and advocate on Plan implementation, 2) facilitating public education on pedestrian safety concerns, such as those presented in Section 7, 3) providing problem solving review and recommendations on pedestrian issues as they arise, and 4) serving as a resource to the City Manager, and Traffic and Planning commissions.

## **Appendix A: Mission of the Pedestrian Safety Board**

The Morgantown Pedestrian Safety Board's mission is to promote a walkable environment throughout the City by developing safe, attractive, and accessible walkways that connect neighborhoods and destinations.

The Morgantown Pedestrian Safety Board meets the 2<sup>nd</sup> Monday of every month from 4:00-5:30 PM in the Morgantown Public Safety Building.

## **Appendix B: Guidelines for the Pedestrian Safety Board**

### **Article I - Organization**

**1.1 Authority:** Morgantown City Traffic Commission is authorized to appoint standing committees and thereby has acted to appoint a Municipal Pedestrian Safety Board. The Pedestrian Safety Board shall serve as a standing committee of the Traffic Commission. At least one member of the Traffic Commission shall be designated to serve as a member of the Pedestrian Safety Board. The Traffic Commission is responsible to the City Manager.

**1.2 Purpose of the Pedestrian Safety Board:** The purpose of the Pedestrian Safety Board shall be to:

1. review and support the implementation of Article 913 on Sidewalks and any other provisions in the Morgantown Municipal Code pertaining to pedestrian travel, safety, and accessibility;
2. work to improve the safe walkability of Morgantown so as to reduce traffic demands, afford better air quality, increase public access, reduce pedestrian accidents, and improve public health;
3. promote and lead the development of a Pedestrian Safety Action Plan in accordance with the standards established by the Federal Highways Administration and the West Virginia Department of Transportation;
4. Make recommendations for expanding and improving pedestrian infrastructure, signage, safety, capacity, facilities, and streetscapes for pedestrians on streets, trails, or other land use design which facilitates pedestrian movement;
5. advocate for the provision of pedestrian travel opportunities to and from locations such as residential, employment, commercial, education, recreational areas, and transit routes and centers;
6. encourage practice, enjoyment, and awareness of the benefits of walking and the development of a walkable community.

**1.3 Duties:** The duties of the Pedestrian Safety Board shall be as follows:

- a. advise and consult with the Traffic Commission, the City Manager, and the City Engineer on any matter pertaining to pedestrian accessibility and safety;
- b. study the transportation problems and needs of the City and make specific recommendations to the Traffic Commission and the City Manager and to the City Council and Greater Morgantown Metropolitan Planning Organization as authorized;
- c. review City plans and policies which contain matters relating to roadways, transit, and non-motorized transportation;
- d. create a City pedestrian safety plan which promises by specific time frames the creation and maintenance of pedestrian access to strategic services throughout the City;

- e. facilitate the planning and implementation of public education on walking and walking opportunities throughout the City;
- f. promote and coordinate participation in all public planning in order to assure representation of public interests pertaining to pedestrian needs;
- g. work with the Traffic Commission and other City Departments as needed to fulfill the purpose of the Pedestrian Safety Board.

## **Article II - Membership**

**2.1 Membership:** The members of the Pedestrian Safety Board shall be appointed by the Traffic Commission and have an interest and experience in pedestrian issues as well as the ability to attend no less than four meeting per year. The membership of the Pedestrian Safety Board shall include ten representatives from the City, five appointees from the Greater Morgantown area, one member from the Youth Commission, a representative of WVU Administration, and a representative designated by the WVU Student Administration. One or more members shall be appointed members of the Traffic Commission. Pedestrian Safety Board members shall serve three-year terms without compensation. Representatives of the Transit Authority, the Board of Parks and Recreation Commissioners and other city departments or commissions may be invited to serve as ex-officio voting members.

## **Article III - Meetings**

**3.1 Regular Meetings:** Meetings shall be conducted in compliance with the West Virginia Public Meetings Law and open to the general public. Meetings shall occur monthly or no less than quarterly. Dates of meetings will be decided upon at the previous meeting. All meetings will be publicized using whatever reasonable means available. Notices shall be distributed no less than seven (7) days before a meeting is to take place. However, failure by a member to receive a meeting notice does not mean that a meeting is invalidated.

**3.2 Special Meetings:** Special Meetings of the members may be called upon the written request of a majority of the voting members to consider a specific subject. Meetings shall be conducted in a location owned and operated by the City of Morgantown which is handicapped accessible. Notice for time and place of any Special Meeting is to be given using whatever reasonable means available. No business other than the subject of the Special Meeting shall be transacted at said meeting.

**3.3 Quorum:** Fifty percent (50%) of the voting members shall constitute a quorum for the transaction of business. Meeting attendance reports shall be reported to the City Clerk by the Secretary.

## **Article IV - Officers**

**4.1 Officers:** The officers of the Pedestrian Safety Board shall be a Chairperson, Vice Chairperson, and Secretary, all of whom shall be elected from the Pedestrian Safety Board Membership. Officers elected shall hold term for one (1) year and be eligible for re-election. All nominees shall be inquired as to their willingness to serve if elected, prior to their name being placed in nomination.

**4.2 Chairperson:** The Chairperson of the Pedestrian Safety Board shall prepare an agenda, call all meetings, preside at all meetings, and be a consulting member of all committees formed.

**4.3 Vice-Chairperson:** The Vice Chairperson shall act as Chairperson in the absence of the Chairperson. The Vice-Chairperson shall have such other duties, as the Pedestrian Safety Board may authorize from time to time to be assigned to the office.

**4.4 Secretary:** The Secretary shall be responsible for keeping a recording of adequate records of all meetings of Pedestrian Safety Board and for submitting reports of the Pedestrian Safety Board to the City Manager as needed or requested.

## **Article V - Committees**

**5.1 Committees:** The Pedestrian Safety Board may establish committees to carry out the functions related to its responsibilities.

## **Article VI - Finances**

**6.1 Fiscal Responsibilities:** The Pedestrian Safety Board shall not have the authority to maintain any account or to receive any gifts, endowments, bequests and investments. Any such account shall be maintained as directed by the City Manager.

## **Article VII - Change to These Standards of Operation**

**7.1 Amendments:** Changes to these procedures may be recommended by a two-thirds (2/3) vote of the Pedestrian Safety Board membership and must be approved by the Traffic Commission.

Approved by action of the Morgantown Traffic Commission,

*Date: August 1, 2007*

Dr. Ron Eck  
*Traffic Commission Chair*

Terry Hough  
*Director of Public Works*

## **Proposed Addition to Pedestrian Safety Board Guidelines – March 17, 2008**

**5.2 Sponsorship of Events:** Whenever the Pedestrian Safety Board plans to sponsor a public event, the Board must review all program plans, publicity, and financial planning by the event committee in advance of any publicity. After reviewing the plans and giving its approval, the Board must in turn receive approval for the complete plans by the Traffic Commission and receive authorization in advance of publicity for event sponsorship by the City Manager. A written report on the event shall be submitted to the Pedestrian Safety Board by the event committee. The Board shall also submit a written report on the outcome of the event to the Traffic Commission and the City Manager.

## Appendix C: Pedestrian Safety Board Membership

### *Officers:*

Christiaan Abildso (2<sup>nd</sup> Ward), **Chairperson;**

Bill Reger-Nash (outside city limits), **Vice Chairperson;**

Angela Wiley (Youth Commission), **Secretary**

### *Contributing Members:*

Bob Anderson (1<sup>st</sup> Ward)

Roz Becker (2<sup>nd</sup> Ward)

Tom Bias (1<sup>st</sup> Ward)

Ilana Chertok (outside city limits)

Stan Cohen (2<sup>nd</sup> Ward)

Becca Fint-Clark (2<sup>nd</sup> Ward)

Greg Good (2<sup>nd</sup> Ward)

David Harshbarger

Rick Landenberger

George Lilley (outside city limits)

Rob Moyer

Jonathon Bond (WVU Student Government Association)

Judy Reckart (outside city limits)

Pat Reilly

Jimmie Simmons (3<sup>rd</sup> Ward)

Don Spencer (Traffic Commission)

Martha Summers

Maria Smith (ex-officio, Mountain Line Transit Authority)

## **Appendix D: City Council “Complete the Streets” Policy**

### **RESOLUTION ON USE OF COMPLETE THE STREETS POLICY IN PLANNING ROAD IMPROVEMENTS IN THE CITY OF MORGANTOWN AND ADJACENT AREAS**

*Whereas*, the Morgantown Traffic Commission and its Bicycle and Pedestrian Safety Boards encourage the development of a transportation system that enhances, and not discourage, transit, bicycling and walking to reduce traffic congestion, and

*Whereas*, the 2007 Greater Morgantown MPO Regional Transportation Plan recommends 41 improvements for non-motorized transportation including installations and upgrades in sidewalks, street lighting and bicycling capacities on roadways in addition to a significant increase in transit services to address vehicle miles traveled (VMT) and congestion issues, and

*Whereas*, the West Virginia Department of Transportation identified Morgantown in the year 2000 as already having 16% of its population using modes of travel other than automobiles to travel to work, and

*Whereas*, the National Complete the Streets Coalition has presented studies which suggest that as many as 1/3 of all Americans do not drive motorized vehicles and thereby advocates for state and local governments and planners to create streets which are safe, comfortable, convenient for travel via foot, bicycle, transit as well as automobiles by multi-modal users of all ages and abilities, and

*Whereas*, Complete Streets are cited to 1) improve safety for people walking and bicycling, 2) encourage healthy travel alternatives which help reduce obesity and promote public health, 3) increase the capacity of a transportation network, 4) help children get physical activity and gain independence, 5) support the well-being of increasing numbers of older adults, 6) address air quality concerns, and 7) make fiscal sense by preventing the needs for retrofitting streets after initial project construction is complete and by reducing the per capita demand for investment in auto infrastructure such as expensive parking garages, and

*Whereas*, there is no one specific prescription for establishing Complete Streets but some common features which need to be present such as sidewalks, bike lanes (road space), wide shoulders, plenty of crosswalks, refuge medians, bus pullouts or special bus lanes, raised crosswalks, audible pedestrian signals, and sidewalk bulb-outs, and

*Whereas*, 14 states, six counties, 10 regional governments, and 52 cities have Complete Streets policies and since last year states such as Illinois, California and Massachusetts with 11 more cities including Seattle, WA, Honolulu, HI, Chicago, IL, Salt Lake City, UT, Madison, WI, Jackson, MI, Martinsville, VA, and Binghamton, NY have approved Complete Streets policies since last year, and

*Whereas*, the American Planning Association has selected 10 streets for “Great Places” recognition and each street includes all features proposed by Complete the Streets Coalition, and

*Whereas*, Federal policy on roadway improvement calls for the inclusion of non-motorized improvements within transportation corridors in a manner which creates a comprehensive, continuous, and connected infrastructure for non-motorized travelers, and

*Whereas*, the availability of infrastructure for non-motorized travelers serves as an incentive for people to use transit, walking (study: +74%), and their bicycles (study: + 23%) as transportation to help reduce congestion, to allow more residents to complete day-to-day errands without a car, and to increase street safety and promote public health, and

*Whereas*, a Complete the Streets policy for Morgantown would call for street capacity to include transit, bicycle and pedestrian infrastructures which will improve the City’s and the surrounding area’s transportation infrastructure,

*Now, Therefore, Be It Resolved*, the City of Morgantown agrees to support the indispensability of Complete Streets solutions for its total population in the planning, design, development, construction and maintenance of all corridor and connector street projects located within or adjacent to the City and generated by the State or the County resources, and

*Let it be further resolved*, that Complete Street solutions include provision for use by transit services, bicyclists, and pedestrians as well as automobiles in a manner that fits the context of the community, its Comprehensive Plan, and federal transportation safety standards.

Adopted this \_\_\_\_\_ day of December, 2007

\_\_\_\_\_  
Mayor, City of Morgantown

Attest: \_\_\_\_\_  
City Clerk

*REFERENCES*

National Complete the Streets Coalition Steering Committee includes: AARP; America Walks; American Planning Association; American Society of Landscape Architects; Institute of Transportation Engineers; League of American Bicyclists; McCann Consulting; National Center for Bicycling and Walking; Natural Resources Defense Council; National Parks Conservation Association; Smart Growth America; Surface Transportation Policy Project; Thunderhead Alliance.

According to the National Complete the Streets Coalition, the one-third of all Americans who do not drive licensed motorized vehicles includes: 21 % of all persons over the age of 65; all young people under the age of 16; many persons who are disabled; and persons who do not have incomes sufficient to purchase and operate a motorized vehicle.

A 1999 study by Macbeth on bicycle lanes in Toronto found a 23% increase in bicycle traffic after the installation of a bicycle lane. Another study by Giles-Corti and Donovan in 2002 includes outcomes which suggest that residents were 65% more likely to walk in a neighborhood with sidewalks.

The implementation of a Complete Streets approach in Portland, OR, in the 1990's is reported to have resulted in a 74% increase in bicycle commuting. Since 1971 Oregon state laws has required that "Footpaths and bicycle trails...shall be provided whenever a highway, road or street is being constructed or relocated."

The National Conference of State Legislators found in a study by Robbins and Morandi in December 2002 that the most effective policy avenue for encouraging bicycling and walking is "Complete Streets." In another one of its cited studies, it was found that 16% more people will improve their activity to recommended levels with safe places to walk.

The Institute of Medicine, based on a study conducted in 2004, recommends fighting childhood obesity by designing streets with pedestrians in mind – sidewalks, raised medians, better bus stop placements, traffic calming measures, and treatments for disabled travelers. Another one of its cited studies conducted in 2003 found that installing these measures reduced pedestrian risk by 28%.

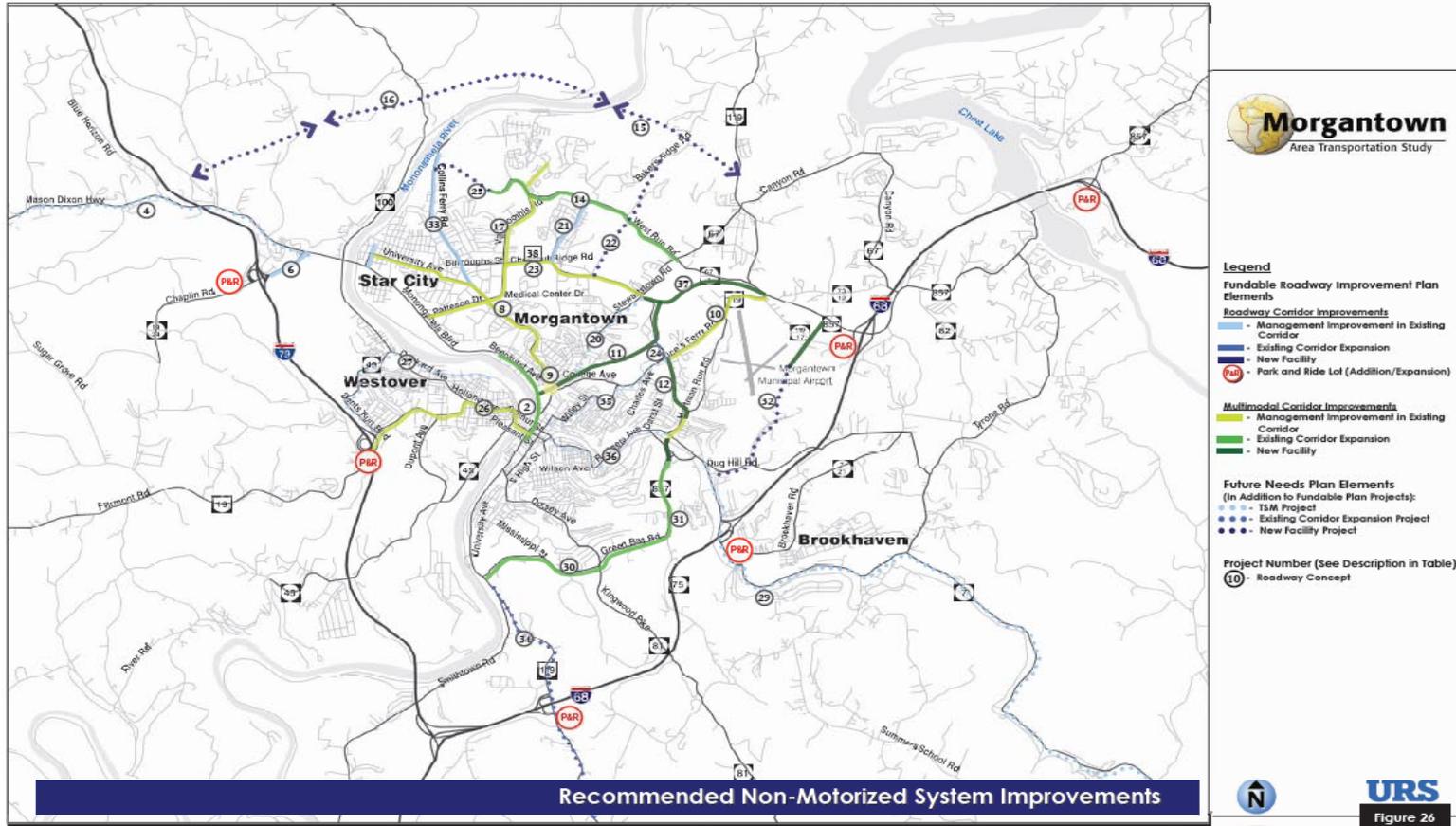
In a National Household Transportation Survey by Clarke it was found that half of all trips in urbanized areas are three miles or less, manageable distances for walking and bicycling. Two polls by Belden, Russonello and Stewart in 2003 found that the majority of Americans would like to bike and walk more.

*Local references are based on data and recommendations presented in the Greater Morgantown MPO Regional Transportation Plan published by the Greater Morgantown MPO, May 2007.*

*The sources for other references, information and statements have been on the Complete the Streets Coalition, America Bikes, and Wikipedia websites*

# Appendix E: MPO Plan Non-Motorized Transportation Recommendations Map

Figure 19: MPO non-motorized transportation recommendations map



Note: from [www.plantgether.org](http://www.plantgether.org), figure 26, pg 114

**Appendix F: Memo from the City Manager on Sidewalk Programs  
10/21/05**

**M E M O**

TO: The Honorable Mayor and Members of Council

FROM: The City Manager

SUBJECT: Sidewalk Programs

DATE: October 21, 2005

Currently the City of Morgantown participates in limited new sidewalk programs. They are as follow:

1. By virtue of land use controls, new construction projects are required to put in place new sidewalks as part of the development unless waived by the City (for example, a short section of new sidewalk would be the only sidewalk in the entire block—does not become part of a larger system). The City could suspend these waivers recognizing that over the long term the system could be created.
2. The City has access to transportation grants that can be used to construct sidewalks. Currently though these funds have been targeted to the Downtown BID improvements.
3. Community Development Block Grant entitlement proceeds can fund new sidewalks in low and moderate income neighborhoods. To date, this has been a limited application because of competing uses for housing programs, contributions to social services, and other qualifying projects.
4. Several years ago, City Council established the Capital Escrow Account Sidewalk Program. In this program, funds were budgeted to hire part time crews in the summer and purchase materials to construct new sidewalks. Today \$168,305 remains in that budget to continue the program.

The largest benefit in the above described, existing programs is that with the exception of the first one, the abutting property owners do not have to pay any part of the cost of the new sidewalks. The biggest disadvantage in the above described, existing programs is that they are all limited in scale and produce few new sidewalks per year.

As per your direction, the balance of this memo describes options that could be used to significantly accelerate sidewalk construction in the City. The common denominators in these options are that they would all use private contractors to construct the sidewalks and they all would employ a new revenue source to fund the work. The options are:

1. **Special Levy Sidewalk Program:** This option would present the issue to the voters of the City in a Special or Regular City Election to authorize an excess levy on property taxes. As way of illustration, with 60% approval of the voters in the election, a \$500,000 annual sidewalk program could be put in place by raising property taxes \$26.82 per year on a house with a fair market value of \$100,000.
2. **Sidewalk Assessment Program:** State law allows City Council to authorize construction of new sidewalks and assess adjacent property owners up to 100% of the cost on a linear foot basis (cost of one foot of new sidewalk is approximately \$82 with curb (4 feet wide) –\$500,000 in assessments per year would construct 6,097 feet of new sidewalk per year). Property owners could pay the assessment at once or could finance it for 10 years with a 6% interest rate. Failure to make annual payments would result in 10% penalties.
3. **Sidewalk Service Fee:** City Council could establish an annual service fee to construct new sidewalks in the City by charging every property owner in the City a linear foot fee on properties facing a street. The difference with the option immediately above is that above each property owner pays just for his or her own sidewalk. In this option, everyone helps pay for everyone's sidewalk. To generate a \$500,000 program per year, the linear foot fee would be approximately \$.50 per foot (based upon 200 lane miles of City streets).
4. **Public Works Service Fee:** Dependent upon a pending State Supreme Court decision, Council may have the authority to establish a service fee charged to wages and salaries of people that work in the City limits of Morgantown. A \$.50 per week service fee of this type on 10,000 jobs in the City would generate \$520,000 per year.

Levies, assessments, and fees are the most feasible financial tools to fund an accelerated sidewalk program. How they are employed, packaged, and tailored would be a matter of Council discretion if used.

I hope you find this memo helpful. If you should have any questions about it or need additional information, please call upon me at once.

---

Dan Boroff, City Manager

## Appendix G: DOH Pedestrian Accident Data: 1998-2008

According to analyses conducted on December 1, 2008 by Christen Seaman of the West Virginia University Injury Control Research Center, 226 reported pedestrian injuries occurred from 1/1/98 to 6/4/08. Details of all pedestrian injuries are provided below.

**Table 4: Morgantown Pedestrian-Vehicle Accident Data Summary, 1998 to 2008**

<b>Time of day</b>	<b>#</b>	<b>% of total</b>
12:00 PM - 5:59 AM	43	19.0%
6:00 - 9:59 AM	23	10.2%
10:00 AM-1:59 PM	41	18.1%
2:00 - 5:59 PM	62	27.4%
6:00 - 11:59PM	57	25.2%
	226	
<b>Month</b>	<b>#</b>	<b>% of total</b>
Jan	24	10.6%
Feb	22	9.7%
Mar	17	7.5%
April	30	13.3%
May	12	5.3%
June	10	4.4%
July	14	6.2%
Aug	20	8.8%
Sept	28	12.4%
Oct	28	12.4%
Nov	12	5.3%
Dec	9	4.0%
	226	
<b>Intersections with 4 or more accidents</b>		
	<b>#</b>	<b>% of total</b>
Spruce & Walnut	9	4.0%
High & Willey	8	3.5%
S University & Pleasant	8	3.5%
University & College	8	3.5%
N Willey & Prospect	7	3.1%
Spruce & Pleasant	5	2.2%
University/Beechurst/Fayette (by Co-op)	5	2.2%
Beechurst & Campus	5	2.2%
Chestnut Ridge/Van Voorhis/Burroughs	5	2.2%
High & Walnut	4	1.8%
High & Fayette	4	1.8%
University & Prospect	4	1.8%
<b>TOTAL</b>	<b>72</b>	<b>31.9%</b>

## Appendix H: Morgantown City Code, Article 913 – Sidewalks

### ARTICLE 913 Sidewalks

- 913.01 Definitions.
- 913.02 Width of sidewalks.
- 913.03 Duties of owners and occupants.
- 913.04 Grading and paving.
- 913.05 Placing sidewalk pavement above or below curb elevation.
- 913.06 Sidewalk construction specifications.
- 913.07 Permit to lay sidewalk pavement.
- 913.08 Order to owner to grade and pave.
- 913.09 Work to be done by City; assessment of costs; lien.
- 913.10 Repairing and repaving.
- 913.11 Maintenance; removal of snow, ice and dirt.
- 913.12 Condemnation of sidewalk pavement; order to relay; work by City.
- 913.13 Repair or repaving when pavement broken.
- 913.14 Supervision and inspection of pavement construction; power to stop improper work.
- 913.15 Rooms or spaces under sidewalks.
- 913.16 Sidewalks required when building constructed or street paved.
- 913.99 Penalty.

#### CROSS REFERENCES

General powers relative to sidewalks - see W. Va. Code 8-12-5(1) et seq.  
Low cost improvements - see W. Va. Code Art. 8-17  
Sidewalk assessments - see W. Va. Code Art. 8-18

#### **913.01 DEFINITIONS.**

The term "sidewalk" includes all of the ground between the face of the curb of any public street or alley and the property line of the abutting property owner. The term "sidewalk pavement" means that part of the sidewalk paved or required to be paved, and may be only a portion of the full width of the sidewalk as defined above.

(1967 Code Sec. 29-28.)

#### **913.02 WIDTH OF SIDEWALKS.**

The sidewalks of the streets and alleys of the City shall be of such width as Council may, upon recommendation of the City Engineer, establish by orders duly made; and, unless otherwise ordered by Council, the sidewalks on the opposite sides of any street or alley shall be of equal width.

(1967 Code Sec. 29-29.)

#### **913.03 DUTIES OF OWNERS AND OCCUPANTS.**

In all cases where there has been heretofore established, or where there is hereafter established, one or more sidewalks along any street or alley or part thereof

within the City, it shall be the duty of the owners or occupants of any ground fronting or abutting on such sidewalks to pave and repave the same, whenever required by an order of Council to do so, and to keep such sidewalks in repair and to keep the same clean.

The property owners shall be responsible for any such sidewalk being out of repair.

(Ord. 06-17. Passed 6-20-06.)

#### **913.04 GRADING AND PAVING.**

Sidewalks shall be graded and paved, and repaved or repaired, in the manner and with the materials and according to the specifications as provided in this article.

(1967 Code Sec. 29-31.)

#### **913.05 PLACING SIDEWALK PAVEMENT ABOVE OR BELOW CURB ELEVATION.**

The paved portion of all sidewalks or the sidewalk pavement where there is a grass plot between it and the curb, may, at the direction of the City Engineer with the approval of Council, be placed above or below the elevation of the curb in order to conform as nearly as practicable to the topography of the abutting land and street; provided, that the slope of such grass plot shall not be steeper than one and one-half horizontal to one vertical. Where the sidewalk pavement is placed above or below the elevation of the curb, the owner of the corner lot shall provide concrete steps from such sidewalk pavement to the curb, such steps to be of similar materials and workmanship as the sidewalk pavement and the design thereof to be approved by the City Engineer.

(1967 Code Sec. 29-82.)

#### **913.06 SIDEWALK CONSTRUCTION SPECIFICATIONS.**

All sidewalks shall be constructed of concrete pavement according to the following specifications:

- (a) Width and Location. Council shall be order prescribe the width of all concrete sidewalk pavements hereafter paved or repaved, taking into consideration the nature and class of traffic on such street and sidewalk. Such sidewalk pavements shall not be less than three feet in width in R1, R2 and R3 Zoning Districts and within the public right of way as designated by the City administration, so that the grass plot, if any, shall be between the sidewalk pavement and the curb line of the street.  
(Ord. 7-18-78.)
- (b) Subgrade. When the subgrade is composed of a fill it shall be laid in layers, not exceeding twelve inches, and the same shall be thoroughly wetted and tamped or rolled. The tops of all fills shall extend at least twelve inches beyond the sidewalk pavement, and in cases where there are no curbs the slope shall not be steeper than one and one-half to one.
- (c) Drainage Course. The drainage course shall consist of coarse aggregate, as hereinafter defined, of a depth of not less than six inches, except where solid rock is encountered, and shall be thoroughly compacted by tamping or rolling.
- (d) Concrete. The concrete shall consist of a mixture of one part of cement, as hereinafter defined, and three parts of fine aggregate, as hereinafter defined, and

- three parts of coarse aggregate, as hereinafter defined, to a depth of not less than four inches. It shall be worked to an approximately true surface and shall be roughened. The concrete pavement shall be monolithic and no mortar course shall be permissible for surface.
- (e) Water Used. All water used in mixing materials for sidewalk pavements shall be clean and free from oil, acid, strong alkalies or vegetable matter.
  - (f) Forms. All forms used for setting sidewalk pavements shall be free from warp, and of sufficient strength to resist springing out of shape. All mortar and dirt shall be carefully removed from forms that have been previously used. All forms shall be well staked to the established lines and grades, as indicated by the stakes set by the City Engineer, and all forms shall be so set as to provide for the specified slope of one-fourth of an inch to the foot toward the curb.
  - (g) Expansion Joints. Expansion joints shall be made three-fourths of an inch wide for the whole of all sidewalk pavements, and shall be spaced at intervals of not more than forty feet, and shall be filled with sand, felt, tar or other suitable material. The wearing surface at all expansion joints shall be cut clear through with a jointing tool.
  - (h) Drainage. Where the drainage course is at the same elevation as, or above the drainage course of the curb, a blind drain or ditch of suitable size and filled with broken stone shall be laid with a proper degree of fall from the bottom of the drainage course of all sidewalk pavements at such points as will properly drain the water from the drainage course to the curb. Where the drainage course of the sidewalk pavement is below that of the curb, a three inch agricultural tile drain shall be laid in the lower part of the drainage course, and vitrified tile drainage connection made from it to the storm sewer in the street.
  - (i) Precautions Against Freezing. Concrete shall not be mixed or deposited at a freezing temperature, unless special precautions are taken to avoid the use of materials that are frozen or covered with ice crystals, and adequate means are provided to prevent the concrete from freezing after being placed in position and until it is thoroughly hardened; and no such concrete shall be mixed or deposited in freezing weather, without the written consent of the City Engineer.
  - (j) "Cement", "Fine Aggregate" and "Coarse Aggregate" Defined. "Cement", as used in this article, shall meet the requirements of the specifications for Portland cement, adopted by the American Society for Testing Materials, as set forth in its bulletins and other publications. "Fine aggregate", as used in this article, shall consist of clean sharp sand, crushed stone or gravel screenings, free from all vegetable loam or other deleterious matter. "Coarse aggregate", as used in this article, shall consist of inert matter, such as crushed stone, brickbats, gravel or cold crushed slag. All such materials shall be hard and durable and free from all deleterious matter.  
(1967 Code Sec. 29-34.)

### **913.07 PERMIT TO LAY SIDEWALK PAVEMENT.**

The owner of any property abutting on a public street shall, before laying any sidewalk pavement on the part of such street intended to be used for sidewalk purposes, apply to the City Manager for a permit therefor, and such permit when granted shall show the location and width of such sidewalk pavement and shall recite the specifications

required therefor. If such application is to lay a sidewalk pavement on a street within the fire limits on which the width between the curbs of such street shall be paved has not been determined, Council shall, before a permit is granted, specify by order, resolution or ordinance the width of sidewalk pavements on each side thereof, and the location and width of grass plots, if any; and if a grade has not been established on such street, Council shall not grant such permit until a grade is established on such street by the City Engineer and adopted by Council. In no case where a permit is granted to lay a sidewalk pavement shall the work be commenced until the City Engineer shall have first set stakes or had the same done under his direction, showing the exact location of the same. The City Manager shall have the power and authority to grant such permits, without referring the same to Council, and to report the same at the next meeting of Council when it shall be made a matter of record.

(1967 Code Sec. 29-37.)

### **913.08 ORDER TO OWNER TO GRADE AND PAVE.**

Council may order the owner of any property abutting on any public street or alley within this City to grade that part of the sidewalk of such street abutting on such property, if not then already graded, and to construct thereon a sidewalk pavement, the same to be constructed according to the specifications therefor. Such grade shall conform to the adopted grade of such street. Such order shall designate the width of such sidewalk pavement so ordered to be constructed. The City Manager shall cause notice of such order to be served upon the owner of such property, such notice to be served in the manner provided by the laws of the State for the service of notices generally, or by publication in a newspaper of general circulation published in the County in the manner provided by the laws of the State for the publication of notices generally.

(1967 Code Sec. 29-38.)

### **913.09 WORK TO BE DONE BY CITY; ASSESSMENT OF COSTS; LIEN.**

If any property owner shall have failed or refused to comply with the order provided for by the preceding section within fifteen days after the service or publication thereof, then the City Manager may cause such work to be done, and the cost thereof, including a commission of not exceeding twenty percent (20%) of the net cost thereof to the City for the time of City employees in supervising such construction, laying the assessment therefor and collecting the same, over and above the actual cost to the City of such work, shall be assessed against such property. Such assessment shall bear interest at six percent (6%) per annum and shall be immediately due and payable and may be collected in the same manner provided by law for the collection of City taxes. If such assessment is not paid within thirty days after the same is made, the City Clerk may certify the amount of any such assessment with a description of the property chargeable therewith, and the name of the owner thereof, to the Clerk of the County Court to be recorded in the trust deed books of such Clerk's office; and such assessment shall be and constitute from and after the date of such recordation the first lien against such property, subject only to State, County and Municipal taxes and prior assessments.

(1967 Code Sec. 29-39.)

**913.10 REPAIRING AND REPAVING.**

All owners of property abutting upon a public street where there is a sidewalk shall keep the sidewalk in good repair so as to minimize public or private liability. Any concrete sidewalk which is broken or deteriorated to the extent of needing repair shall be repaired by replacing the entire block or section thereof and not by surface patching.

The City Manager on his own initiative may or upon direction of Council shall require any such property owner to make needed repairs by having served upon such owner a notice as provided by Section 913.08. Each thirty day period during which the owner fails to comply with the provisions hereof shall constitute a separate violation.

When deemed proper by the City Manager, he may cause the repairs to be made either by the City employees or by an independent contractor and assess the cost thereof as a lien against the property as provided in Section 913.09.

(1967 Code Sec. 29-40.)

**913.11 MAINTENANCE; REMOVAL OF SNOW, ICE AND DIRT.**

The owner, lessee or occupant of property abutting on any street shall keep the sidewalk adjacent thereto in a clean and sanitary condition and free from snow, ice, dirt or refuse. In the event the owner, lessee or occupant of any property shall fail to keep the sidewalk adjacent to such property in a clean and sanitary condition and free from snow, ice, dirt or refuse the City Manager is hereby empowered and authorized to give notice to such property owner, lessee or occupant to clean such sidewalk of snow, ice, dirt or refuse and to put such sidewalk in a clean and sanitary condition, such notice to be served as provided by Section 913.08, and upon the failure or neglect of such property owner, lessee or occupant to put such sidewalk in a clean and sanitary condition and to remove snow, ice, dirt or refuse therefrom within twenty-four hours, excluding Sunday, after such notice has been given, the City Manager may cause the same to be done and the cost thereof shall be assessed against such property and become a lien upon such property in the manner provided by Section 913.09.

(1967 Code Sec. 29-41.)

**913.12 CONDEMNATION OF SIDEWALK PAVEMENT; ORDER TO RELAY; WORK BY CITY.**

When, in the judgment of Council, the public necessity may require it, any sidewalk pavement may be condemned because of its unsafe condition, or because it is not laid out of suitable materials or in the manner and according to the specifications provided therefor; and the owner of the abutting property may be required to relay the same, after notice of the order of Council, in the same manner as provided by Section 913.08; and upon the refusal or failure of such property owner to do so, the City Manager may cause the same to be done and the cost thereof assessed against such property owner in the manner provided by Section 913.09, and such assessment shall become a lien against such property in the manner provided by Section 913.09.

(1967 Code Sec. 29-42.)

**913.13 REPAIR OR REPAVING WHEN PAVEMENT BROKEN.**

When any person shall break or injure any sidewalk pavement by driving a truck or vehicle upon or over the same, or in any other manner, he shall be required to repair it, or if necessary to relay the same and put it in as good condition as it was before such injury occurred; and in the event of his failure to do so, after being served with an order of Council requiring him to do so, the City Manager may have such sidewalk repaired or relaid and the cost of the same shall be charged against such person, and collected by legal process; and where, in order to properly repair such broken or injured sidewalk pavement, it is necessary to repave the same, such repaving shall be with the materials and in the manner and according to the specifications set forth in this article.

(1967 Code Sec. 29-43.)

**913.14 SUPERVISION AND INSPECTION OF PAVEMENT CONSTRUCTION; POWER TO STOP IMPROPER WORK.**

All sidewalk pavements laid under the provisions of this article shall be under the direct and immediate supervision and inspection of the City Engineer, or his authorized representative. Any owner of property who may desire to lay a sidewalk pavement or repair the same shall, upon being granted permission therefor, notify the City Engineer of the time he expects to begin such work; and when, in the judgment of the City Engineer such work is not being done with the materials and in the manner and according to the specifications required by this article, he shall have the power and authority to stop such work until such owner indicates his willingness to do such work with the materials and in the manner and according to the specifications required by this article.

(1967 Code Sec. 29-44.)

**913.15 ROOMS OR SPACES UNDER SIDEWALKS.**

No person shall excavate or construct any room or space or use the space in and under any sidewalk until and unless the owner of the property adjacent thereto shall have first obtained a permit therefor from the City, such permit to be granted by the City Manager and confirmed by Council; and the City Manager and Council shall have full and absolute discretion in granting or refusing such permit.

In applying for such permit, the applicant shall furnish the design, plans and specifications for the construction of such room or space intended to be used under such sidewalk, and such design, plans and specifications shall be subject to the approval of the City Engineer.

The space between the surface of the sidewalk and the ceiling of any room constructed thereunder shall be not less than eighteen inches in thickness.

Such property owner shall be responsible for the construction and maintenance and safety of any such room under any sidewalk and of the sidewalk over the same, and if any person or his property is injured or damaged as a result of the construction or improper maintenance of any such space under any sidewalk or the sidewalk thereover, the owner of the property adjacent thereto shall protect and save harmless the City from any liability therefor.

Where there now exists a space or room underneath any sidewalk used or intended to be used in connection with the property adjacent thereto, it shall be the duty of the owner of such adjacent property to maintain safely and to keep in good repair such room or space under such sidewalk and the sidewalk thereover, and to protect and save harmless the City from any and all liability to any person who is injured or his property damaged by reason of the failure of such property owner to maintain safely and keep in good repair any such room or space under such sidewalk or the sidewalk thereover.

No openings, chutes or ways shall be made from the surface of the sidewalk or street to any room or space under such sidewalk now or hereafter constructed unless and until a permit therefor shall have been obtained from the City, such permit to be granted by the City Manager and confirmed by Council. The design, plans and specifications therefor shall be subject to approval by the City Engineer. The doors or coverings to such openings, chutes or ways shall be of design and constructed according to the approval of the City Engineer, and the same shall be maintained safely and kept in good repair by the property owner, who shall be responsible for any injuries or damages to persons or property for failure to do so and who shall protect and save harmless the City from any and all liability therefor. Such openings, chutes and ways shall not be left open and unguarded and it shall be the duty of the property owner in connection with whose property the same are being used to protect persons and property from injury or damage while such openings, chutes and ways are being used.

If, upon inspection, any room or space heretofore or hereafter constructed under any sidewalk shall be found to be in an unsafe or unsanitary condition, Council may order the same to be repaired or put in a sanitary condition at the expense of the owner of the adjacent property. If such property owner shall fail to do so, Council may cause the same to be done and the cost thereof charged against and collected from such property owner.

The granting of any permit heretofore or hereafter for the construction and maintenance of any space or room under any sidewalk or street in the City shall not be construed as vesting or granting any permanent or perpetual right, interest or title thereto in or to the owner of the adjacent property, but the same is only a temporary privilege. Council may at any time without notice and without the payment of any compensation or damages to the property owner annul and revoke any permit theretofore granted therefor and take exclusive possession of such space or room under such sidewalk and convert the same to public use or cause the same to be abandoned, and, where necessary, cause the same to be filled at the expense of the owner of the adjacent property. In such event the adjacent property owner shall have no further right or privilege to use such space or room.

(1967 Code Sec. 29-45.)

### **913.16 SIDEWALKS REQUIRED WHEN BUILDING CONSTRUCTED OR STREET PAVED.**

- (a) Findings of Council. Council finds as a fact that sidewalks within the City are deficient as to quantity and quality, which contributes to the hazards confronting pedestrians and in order to initiate a program of providing more sidewalks, it is declared to be the policy of the City to require, unless otherwise directed, the

construction or replacement of sidewalks for the use of pedestrians within the City.

(1967 Code Sec. 29-68.)

- (b) Order When Street or Alley Paved; Exception. In furtherance of the stated policy concerning sidewalks, Council shall order the construction or reconstruction of a sidewalk or sidewalks at the same time that it orders the paving or repaving of any street or alley as provided for by Article 911, unless Council makes a special finding in such paving ordinance that existing sidewalk or sidewalks are adequate or the physical characteristics of the terrain, neighborhood or pedestrian traffic would not warrant the construction or reconstruction of sidewalks, in which event the construction or reconstruction of sidewalks in conjunction with the paving of the street or alley shall be waived.

(1967 Code Sec. 29-69.)

- (c) Required When Dwelling or Building Constructed; Exception. In addition to the requirements of this article, any person who obtains a permit to construct a dwelling or building pursuant to the provisions of Part Seventeen - Building and Housing Code, the plans shall include the construction or replacement of a sidewalk or sidewalks. Should there be an existing adequate sidewalk adjacent to the property on which construction is to take place and it is so deemed by the City Manager, then this section shall be inapplicable. In all other cases, a sidewalk shall be constructed or replaced unless on appeal to the City Manager such requirement is waived by appropriate order.

(Ord. 1-16-79.)

### **913.99 PENALTY.**

(EDITOR'S NOTE: See Section 101.99 for general Code penalty if no specific penalty is provided.)

In addition to the lien created by Section 913.09, any owner, lessee or occupant who violates any provision of Section 913.11, or fails to comply with any notice given thereunder, shall be fined twenty-five dollars (\$25.00) for the first offense and fifty dollars (\$50.00) for each subsequent offense.

Each twenty-four hour period that such owner, lessee or occupant violates any provision of Section 913.11 or fails to comply with any notice issued thereunder, shall constitute a separate offense.

(1967 Code Sec. 29-41.1; Ord. 90-8. Passed 4-3-90.)

## **Appendix I: Financial Prospectus for Infrastructure Supported by a Neighborhood Sidewalk and Safer City Fee**

### Sidewalks

Estimated miles of streets in Morgantown	200 miles
Estimated number of miles of Connecting Network Sidewalks (CNS) @ 100%	50 miles
CNS sidewalks X 5280' per mile	264,000 linear feet
Estimated miles of Requested Neighborhood Access Sidewalks to be funded @ 60%	10 miles
NAS sidewalks X 5280' per mile	52,800 linear feet
Working Cost Estimates:	
1 linear foot X 4' in width	\$60/ft
1 linear foot of curbing	\$40/ft
Average total cost per linear foot	\$100/ft
Estimated Total Sidewalk Costs:	
CNS – 264,000 linear feet	\$26,400,000
NAS - 52,800 linear feet	\$5,280,000

### Traffic Calming

Implementation of City-wide Plan	\$1,000,000
----------------------------------	-------------

### Additional Pedestrian Safety Plan Expenses

Crosswalk development  
 Sidewalk/Crosswalk maintenance and repair  
 Trails/Green way construction, lighting, safety equipment, signage  
 Trail/Greenway maintenance and repair  
 Safer City education expenses

<u>Projected Annual Fee Revenues @ \$1 per front foot</u>	\$1,000,000
---	-------------

*N.B. Sidewalk and curbing costs estimates have been provided by the City Engineering Department based on actual 2008 sidewalk construction costs for the High Street sidewalk construction projects. Actual sidewalk expense will vary city-wide based on existing conditions, topography, right-of-way, and changes in construction costs.*

## Appendix J: Transit Authority Morgantown Transit Routes

MOUNTAIN LINE TRANSIT SERVICE ROUTES – 2008 (www.busride.org)

**Blue Line Bus Route 12** - Spruce, Willey, Richwood, Hartman Run, Canyon, Greenbag, Mountaineer Mall, Mississippi Street and Depot. This route offers stops at the DMV in Sabraton as well as Marilla Park. This route operates hourly from 6:50 am through 6:00 pm (except 1:00 PM) Monday through Friday with reduced Saturday hours. This route alternates directions hourly.

**Blue & Gold Connector Bus Route 38** - Additional Runs for Fall 2008! Beginning August 18, the Blue & Gold now runs every 10-minutes from 8:00 am through 3:20 pm, Monday through Friday during regular WVU sessions. Otherwise, this service continues to provide 20 minute trips connecting Towers, Lincoln Hall, the Law School, 8th Street, Grant Avenue, Summit Hall, Life Sciences, Campus Drive, Beechurst, the CAC, Engineering, and Ag Sciences by way of Evansdale Drive. This service operates Monday through Sunday, year round.

**Brown Line Bus Route 10** - This route provides limited service from the Depot to the Suncrest area of Morgantown. This bus travels from the Depot (please see schedule for partial trip details), along Beechurst, Down Patteson Drive, left onto Laurel Street, onto University Avenue turning onto Collins Ferry Road, stopping at Unity House, proceeding on to Burroughs Place on Burroughs Street. At this point the route begins its return trip via Pocahontas to Laurel where it will stop at the Krepps Park parking lot entrance before returning downtown to the Depot via Beechurst.

**Campus PM Bus Route 1** - Late night service connecting Towers, Lincoln Hall, College Park Apartments, Valley View, Stewart Street, Sunnyside, the Lair and Downtown Morgantown. This route operates Thursday, Friday and Saturday when WVU is in Fall and Spring Sessions, running every 10 minutes from 10:30 pm through 3:10 am.

**Cassville Bus Route 11** - Running every 30 minutes beginning April 14, 2008! This route serves the western end of the County traveling from the Morgantown Depot, through Westover, Granville, Osage, Cassville, turns at New Hill and makes a return trip. This route includes a stop at the University Town Center Mall.

**Crown Bus Route 13** - This route serves the southern part of the County with three trips daily departing from the Morgantown Depot, traveling through Westover, stopping at the Westover Terminal, traveling to Laurel Point, Arnettsville, Crown, Everttsville, Opekiska, Booth, and Waitman Barb Elementary. This route changes directions for the last run of the day.

**Downtown/Morgantown Mall PM Bus Route 2** - This hourly route operates 6-days per week (Monday through Saturday) departing Towers and Lincoln Hall hourly, beginning at 6:00 pm. The route connects to Downtown Morgantown by way of College Park Apartments, Valley View, and Stewart Street, stopping at the Lair. The route continues through Westover on its way to the Morgantown Mall. Service ends at 12:00 midnight

**Gold Line Bus Route 6** - This service begins at the Morgantown Depot, stops at the Lair, travels University Avenue to Ruby Hospital before traveling out VanVoorhis Road and Bakers Ridge. Its return trip includes West Run Road, North Hills, Mon General Hospital, back to Ruby and returning to the Depot. This route operates Monday through Saturday, 6:00 am through 6:00 pm running every 80 minutes.

**Grafton & Fairmont Road Bus Route 15** - This twice daily run departs the Morgantown Depot, travels to the Grafton Road Wal-Mart and continues on the Grafton Road passing by Clinton, Chasewood, Healthy Heights, Brown's Chapel, Halleck, Tom's Run, and the Goshen Road. This route changes directions for its second run of the day.

**Green Line Bus Route 3** - This hourly run connects the Morgantown Depot to the Morgantown Mall and Grafton Road Wal-Mart. Trips include stops at Aldi in the South University Avenue Plaza and connects at the Westover Terminal on its way to the Morgantown Mall. This service operates Monday through Saturday, 8:00 am to 6:00 pm.

**Grey Line Bus Route 29** - This service provides daily trips, 365 days per year, connecting north central West Virginia to the Pittsburgh area. This service includes early morning connections to Fairmont and Clarksburg, returns to Morgantown to travel on to Pittsburgh Greyhound and the Pittsburgh International Airport. This service offers business class amenities and other features and comforts not found on common public transit services.

**Mountain Heights Bus Route 14** - This service connects the Depot to Sabraton, the Summer School Road, Mountain Heights, the Kingwood Pike and the Mountaineer Mall. This service offers three (3) daily trips Monday through Friday and two trips on Saturdays.

**Orange Line Bus Route 4** - This service connects the Depot to the Westover Terminal, the Morgantown Mall, the University Town Center Mall, Patteson Drive, Towers, Lincoln Hall, Beechurst and Downtown Morgantown. This service operates 7-days per week during WVU Fall and Spring Semesters beginning at 8:30 am with extended weekend hours.

**Pink Line Bus Route 16** - **New Service!** This service is a partial split for the former Purple Line. The change in this service is intended to help this part of the former Purple Line to better stay on schedule. The Pink Line Departs the Downtown Morgantown Depot, travels up Spruce Street, Willey Street, across the Mileground, down Easton Hill and arrives at its end point at the Glenmark Center. The Pink Line immediately reverses its route and returns to the Depot via the same route. This service runs Monday through Friday with limited service on Saturdays.

**Purple Line Bus Route 9** - **New Service!** and in combination with the new Pink Line (Bus Route 16), will cover the areas formerly covered by the Old Purple Line. The purpose of this change is to help service to this area with new route alignments enabling the bus to stay on schedule. This route departs the Depot with runs up Spruce Street, fronting the MountainLair, traveling up Stewart Street to Chestnut Ridge Road, traveling to Chestnut Hill Apartments, then traveling to Valley View by way of Willowdale Drive, connecting to Chestnut Ridge Road, then proceeding to Stewart Street for the return trip along the same route used for arrival. This new alignment offers connections in Sunnyside for the Red Line and Gold Line, both traveling to Ruby Hospital and the Evansdale and Suncrest areas. This route terminates at the Depot for connections to all other routes.

**Red Line Bus Route 7** - This route departs the Depot, travels by Boreman Hall and the Lair, through Sunnyside by way of University Avenue and stops at Ruby Hospital. The Red Line then continues into Suncrest by way of University Avenue, traveling Junior Avenue connecting to Fairfield Street then traveling into Star City. This route also covers Western Avenue, Collins Ferry Road and returns to Ruby before stopping by Towers and Lincoln Hall for its return to the Depot. This service operates Monday through Saturday

with reduced service on Saturday. The route begins at 6:20 am running every 80 minutes until 6:00 pm.

**Riverside Commons 46** - This route began September 2, 2008 and departs the Depot and travels out to Riverside Commons via University/Beechurst/Monongahela Blvd and Jerry W Blvd. Your frequent and regular use of this service may determine if this increase in service becomes permanent.

**Southside Bus Route 5** - This hourly service begins at 7:00 am connecting the Depot to historic South Park, Morgantown High School, Greenmont, Dorsey Avenue, Marjorie Gardens area, Bluegrass Village, and the Mountaineer Mall. For its return trip, the Southside includes travel through White Park by South Junior High, the Mon County Tech Ed Center, the Ice Rink, and includes service in Morgantown's First Ward neighborhood. The last run ends at 6:00 pm.

**The District Bus Route 26** - This Monday through Friday service begins at 7:30 am and provides 20 minute trips until 8:50 pm, with extended evening and weekend hours during regular WVU Fall & Spring Semesters. This service connects The District Living Complex to the Med Center PRT and other bus routes by way of VanVoorhis Road.

**The District Late Night Bus Route 26** - This service offers just what the name implies. This service offers late night trips from the District, via VanVoorhis Road, all the way to and from Downtown Morgantown. These 30 minute trips begin at 9:00 pm and continue until 2:50 am, Thursday, Friday and Saturday during Fall and Spring WVU Semesters.

**Tyrone Road Bus Route 8** - This service operates Monday through Saturday and connects the Depot to Cheat Lake and points between. This route travels by Unity Manor, Richwood Avenue, Sabraton, Brookhaven, Rock Forge, Dellslow, Culp's MHP, Tyrone, Trinity, Glenmark Center, Cheat Lake Resort and beyond. This 90 minute route begins at 6:30 am and ends at 6:15 pm with reduced Saturday service.

**Valley View Bus Route 44** - This **new service** operates Monday through Friday year round and connects Valley View Road, Chestnut Ridge Road, Falling Run, Loop area of University Avenue, and Willowdale & Junction. This service runs on a 15 minute loop providing 7 minute service to the Loop Area on University Avenue.

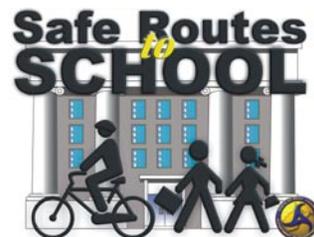
**West Run Bus Route 30** - **Expanded evening service, Monday through Friday until 8:50 PM to begin Monday, September 8!** This service operates Monday through Friday, 7:10 am through 8:50 pm, with additional late night service from 9:00 pm through 3:00 am, Thursday, Friday and Saturday evenings during WVU Regular Semesters. This 20 minute round-trip route begins at the West Run housing complex and serves a portion of Stewartstown Road, Hampton Center, Stewart Street and Sunnyside and WVU's Life Sciences Building. Connections with the Blue & Gold, Red Line and Gold Line provide trips to the Evansdale and Suncrest areas of Morgantown as well as connections to Downtown Morgantown and the Mountain Line Depot on Garrett Street.

**Fairmont-Marion County Transit Authority** - Operates daily runs connecting Morgantown and Fairmont. Stops in Morgantown include the Morgantown Depot for connections. This service is not a part of Mountain Line and is a separate operator. For more information, please refer to the FMCTA link.

**Buckwheat Express (Preston County)** - Operates daily runs connecting Morgantown and Preston County. Stops in Morgantown include the Morgantown Depot for connections. This service is not a part of Mountain Line and is a separate operator. For more information, please refer to the Buckwheat Express link.

## Appendix K: 2009 Safe Routes to School Intent-to-Apply Forms

### SAFE ROUTES TO SCHOOL WEST VIRGINIA DIVISION OF HIGHWAYS



### FY 2009 INTENT-TO-APPLY FORMS

#### WHAT IS THE SAFE ROUTES TO SCHOOL PROGRAM?

The Safe Routes to Schools Program is a Federal-Aid program of the US Department of Transportation's Federal Highway Administration. The program was created by Section 1404 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Each state will receive a portion of federal funds based on its percentage of the national total of school-aged children in grades K-8. West Virginia will receive a minimum of \$1 million each year for a total of at least \$5 million dollars. Safe Routes to School encompasses five components: Engineering, Education, Encouragement, Enforcement, and Evaluation.

#### ELIGIBILITY

Applicants include any state, local and regional agency, including nonprofit organizations registered with the West Virginia Secretary of State's Office and having Department of Treasury Internal Revenue Service Tax Determination as a Non-Profit Organization 501 (c). This reimbursable grant program is 100 percent federally funded and is managed through the West Virginia Division of Highways. Grants will be awarded through a statewide competitive process.

**Applicants requesting funding for Infrastructure-Related Projects are required to submit both an Infrastructure-Related Project Intent-to-Apply Form and a Non-Infrastructure-Related Activity Intent-to-Apply Form.**

#### FUNDING

Seventy to 90 percent of funds are for Infrastructure-Related Projects, which may range from a minimum total cost of \$10,000 to a maximum total cost of \$100,000.

No less than 10 percent and no more than 30 percent of funds are required to be spent on Non-Infrastructure-Related Activities, which may range from a minimum total cost of \$10,000 to a maximum total cost of \$30,000.

Applicants are not required to provide a funding "match" for the federal share of a project or activity under this program. Applicants are encouraged to maintain existing funding courses since the Safe Roads to School Program supplements current funding streams that support walking and bicycling transportation. Funds provided for this program are on an eligible cost reimbursement basis.

**Note:** Any work performed by the applicant prior to receiving written "Notice to Proceed" is not eligible for reimbursement.

#### ELIGIBLE INFRASTRUCTURE-RELATED PROJECTS

The **Engineering** component includes funding for the planning, design, and construction of Infrastructure-Related Projects that will substantially improve the ability of students to walk and bicycle to school safely. Planning, design, and engineering expenses, including consultant services, associated with developing eligible Infrastructure-Related Projects are

also eligible to receive Infrastructure funds. Infrastructure-Related Projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools (approximately two [2] miles). Construction and capital improvement projects also must be located within approximately two miles of a primary or middle school (grades K-8). Some potential Infrastructure-Related Projects are:

- **Sidewalk Improvements:** new sidewalks, sidewalk widening, sidewalk gap closures, sidewalk repairs, curbs, gutters, and curb ramps.
- **Traffic Calming and Speed Reduction Improvements:** roundabouts, bulb-outs, speed humps, raised crossings, raised intersections, median refuges, narrowed traffic lanes, lane reductions, full- or half-street closures, automated speed enforcement, and variable speed limits.
- **Pedestrian and Bicycle Crossing Improvements:** crossings, median refuges, raised crossings, raised intersections, traffic control devices (including new or upgraded traffic signals, pavement markings, traffic stripes, in-roadway crossing lights, flashing beacons, bicycle-sensitive signal actuation devices, pedestrian countdown signals, vehicle speed feedback signs, and pedestrian activated signal upgrades), and sight distance improvements.
- **On-Street Bicycle Facilities:** new or upgraded bicycle lanes, widened outside lanes or roadway shoulders, geometric improvements, turning lanes, channelization and roadway realignment, traffic signs, and pavement markings.
- **Off-Street Bicycle and Pedestrian Facilities:** exclusive multi-use bicycle and pedestrian trails and pathways that are separated from a roadway.
- **Secure Bicycle Parking Facilities:** bicycle parking racks, bicycle lockers, designated areas with safety lighting, and covered bicycle shelters.
- **Traffic Diversion Improvements:** separation of pedestrians and bicycles from vehicular traffic adjacent to school facilities, and traffic diversion away from school zones or designated routes to a school.

#### **ELIGIBLE NON-INFRASTRUCTURE-RELATED ACTIVITIES**

- **Education** – Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills, and launching Driver safety campaigns in the vicinity of schools. Grade-appropriate Health, Physical Education, Social Studies, Science, Math, and English/Language Arts content standards and objectives (West Virginia Department of Education Policy 2510) for kindergarten through eighth grade should be incorporated into this component. School teachers, health professionals, law enforcement officers, and certified bicycle safety instructors may provide the education component. Photocopying, duplicating, mailing and printing costs and pedestrian, and bicycle safety education CDs and DVDs may be eligible education expenses. Safe Routes to School Workshops that target school and community-level audiences will be scheduled through the Safe Routes to School Coordinator.
- **Encouragement** – Using events and activities to promote walking and bicycling. Examples are Annual Walk to School Day; Walking School Buses; Walking Wednesdays; Bicycle Trains; Golden Sneaker Award; and modest incentives such as water bottles, pens, pencils, markers, highlighters, colored pencils, chalk, Frisbees,

fluorescent zipper pulls, slap bracelets, wash off tattoos, balloons, stickers, certificates, banners, foam board, signs, maps, and pedometers.

- **Enforcement** – Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools, which includes enforcement of speeds, yielding to pedestrians in crossings, proper walking and bicycling behaviors, and initiating community enforcement such as adult crossing guard programs. This may include equipment such as MUTCD approved Class 2 safety vests, hand-held stop paddles, portable in-street pedestrian crossing signs, reflective fluorescent traffic cones, and adult crossing guard training.
- **Evaluation** – Monitoring and documenting outcomes and trends through the collection of data before and after the intervention(s) using standardized student and parent surveys, including costs for data gathering, analysis, and evaluation reporting. The National Safe Routes to School Clearinghouse has developed standardized student and parental surveys. Sponsors are required to partner with their school to administer the surveys if selected as a grant recipient.

**INAPPROPRIATE USES OF SAFE ROUTES TO SCHOOL FUNDS**

Safe Routes to School funds **cannot** be used for:

- Reoccurring costs such as paying crossing guard salaries;
- For projects that reorganize pick-up and drop-off primarily for the convenience of drivers rather than to improve child safety and walking and bicycling access;
- For education programs that are primarily focused on bus safety; and
- For improvements to bus stops.

**WHAT IS THE APPLICATION PROCESS?**

The application process is intended to establish communication between the WVDOH and the various applicants. Therefore, we have established the following process:

<b>Step 1</b>	Complete the Infrastructure-Related Project Intent-to-Apply Form <b>and</b> the Non-Infrastructure-Related Activity Intent-to-Apply Form <b>and</b> submit them together.
<b>Step 2</b>	<u>Only if your proposed project meets requirements for eligibility will you be asked to continue by filling out Infrastructure-Related Project and Non-Infrastructure-Related Applications.</u> An Application packet with instruction booklet will be mailed to the contact person listed on the Intent-to-Apply Form. School site visits to the proposed project location(s) may be conducted by the WVDOH.
<b>Step 3</b>	A Safe Routes to School Board meets to review applications and make funding recommendations to the Department of Transportation (DOT) Cabinet Secretary.
<b>Step 4</b>	The DOT Cabinet Secretary makes the final selection of successful applicants.
<b>Step 5</b>	The Governor announces grant recipients.

This Intent-to-Apply Form can be accessed on line at:  
[http://www.wvdot.com/3\\_roadways/rp/SRTS/SRTSdefault.htm](http://www.wvdot.com/3_roadways/rp/SRTS/SRTSdefault.htm).

Mail completed forms to: Safe Routes to School  
 Rebecca A. Davison, Coordinator  
 West Virginia Department of Transportation  
 West Virginia Division of Highways  
 Program Planning and Administration Division  
 Grant Administration Unit  
 Building 5, Room 863

1900 Kanawha Boulevard, East  
Charleston, WV 25305-0430

**Note:**

- **Intent-to Apply Forms are due to West Virginia Division of Highways' Program Planning and Administration Division Office by November 15<sup>th</sup> each year by 4:00 p.m.**
- **Intent-to-Apply Forms must be returned either by mail or delivered.**
- **Faxed or e-mailed forms will NOT be accepted.**

**WEST VIRGINIA DIVISION OF HIGHWAYS  
SAFE ROUTES TO SCHOOL  
INFRASTRUCTURE-RELATED PROJECT INTENT-TO-APPLY FORM  
FY 2009**

**Organization**

\_\_\_\_\_

**Project Title**

\_\_\_\_\_

**Contact Name**

\_\_\_\_\_

**Contact Title**

\_\_\_\_\_

**Sponsoring  
Organization**

\_\_\_\_\_

**Mailing**

**Address**

\_\_\_\_\_

**City, State, Zip**

\_\_\_\_\_

**Best Daytime  
Phone**

**#**

**to**

**Call**

\_\_\_\_\_

**Contact E-mail**

\_\_\_\_\_

**Contact Fax**

\_\_\_\_\_

**Amount of Infrastructure-Related  
Funding Requested**

\_\_\_\_\_

**School Name(s)**

\_\_\_\_\_

**School Principal**

\_\_\_\_\_

**County Board of  
Education**

\_\_\_\_\_

**Participating  
Governmental  
Organizations**

\_\_\_\_\_

**Supporting  
Organizations**

---

**WVDOH District**

---

(Infrastructure-related projects must comply with Davis-Bacon Act Wage Codes and/or West Virginia prevailing wages, competitive bidding, and other contracting requirements.)

---

**Signature and Title of Person Submitting the Proposal\***

**Date**

\*By signing, applicant certifies that he/she is authorized to sign for \_\_\_\_\_  
(name of organization) and that all the information contained herein is true and correct to the best of his/her knowledge.

**Provide a brief description of the proposed project. Describe how you will include and meet the needs of children with disabilities in this project.**

**Cite obstacles and risks facing students (physical or perceived) walking and/or bicycling to your school. Cite any other concerns such as accident data, traffic counts, demographics, community and school surveys or audits, speed limits, and environmental factors as appropriate. Describe the affected student population and give a brief history of the neighborhood traffic issues that might provide some context and background for the project.**

**Describe how this project will provide connectivity to the school.**

**Describe how this project will address pedestrian and bicyclist safety.**

**WEST VIRGINIA DIVISION OF HIGHWAYS  
SAFE ROUTES TO SCHOOL  
NON-INFRASTRUCTURE-RELATED ACTIVITY INTENT-TO-APPLY FORM  
FY 2009**

**Organization**

\_\_\_\_\_

**Activity Title**

\_\_\_\_\_

**Contact Name**

\_\_\_\_\_

**Contact Title**

\_\_\_\_\_

**Sponsoring  
Organization**

\_\_\_\_\_

**Mailing**

**Address**

\_\_\_\_\_

**City, State, Zip**

\_\_\_\_\_

**Best Daytime  
Phone**

**#**

**to**

**Call**

\_\_\_\_\_

**Contact E-mail**

\_\_\_\_\_

**Contact Fax**

\_\_\_\_\_

**Amount of Non-Infrastructure-Related  
Funding Requested**

\_\_\_\_\_

Must be a minimum of 10% up to 30% of any requested Infrastructure-Related Project Funds. For example, Sponsor requests \$100,000 for Infrastructure-Related Project AND \$15,000 for Non-Infrastructure-Related Activities (15% of \$100,000) for a TOTAL grant funding request of \$115,000.

**School Name(s)**

\_\_\_\_\_

**School Principal**

\_\_\_\_\_

**County Board of  
Education**

\_\_\_\_\_

**Participating**

**Governmental  
Organizations**

---

**Supporting  
Organizations**

---

---

**Signature and Title of Person Submitting the Proposal\***

**Date**

\*By signing, applicant certifies that he/she is authorized to sign for \_\_\_\_\_ (name of organization) and that all the information contained herein is true and correct to the best of his/her knowledge.

**Please summarize the proposed Activities. Be sure to describe how you will include and meet the needs of children with disabilities in these activities.**

**Education:**

**Encouragement:**

**Enforcement:**

**Evaluation:**

**Describe how this is a collaborative action plan involving the school and its staff, law enforcement, and parents and others within your community.**

## Appendix L: AARP Bulletin on Walkability, May 14, 2009

Downloaded from:

[http://bulletin.aarp.org/yourworld/gettingaround/articles/america\\_s\\_streets\\_aren\\_t\\_ready\\_for\\_aging\\_population.html](http://bulletin.aarp.org/yourworld/gettingaround/articles/america_s_streets_aren_t_ready_for_aging_population.html)

# **AARP Bulletin today**

## **America's Streets Aren't Ready for Aging Population**

### Report signals lack of planning for older drivers and pedestrians

By: [Carol Kaufmann](#) | Source: AARP Bulletin Today | May 14, 2009

A majority of transportation planners and engineers say that they don't explicitly consider the needs of older people in their work. In a study released by AARP today—the first comprehensive evaluation of how street policies address the needs of older adults—two-thirds of more than 1,000 professionals admitted measures that would increase safety for those with specific challenges don't enter their minds when they design roadways, sidewalks and intersections.

"This is a finding that the transportation industry should not take lightly," says Jana Lynott, a strategic policy adviser for AARP's Public Policy Institute and the author of the report "[Planning Complete Streets for an Aging America](#)." "Older drivers may find their roads unnecessarily difficult to navigate and thus give up their keys before they would otherwise. For those wishing to get to their destinations on foot or public transportation, they put themselves in peril."

This information arrives just as the first boomers approach retirement age. In a little more than 15 years, one in nearly four drivers in the United States will be age 65 and older. Surveys have shown that older drivers today drive farther and more often than ever before.

However, physical and mental decline often associated with aging puts older road users at greater risk. In 2007, older adults, who only make up 13 percent of the total population, accounted for 14 percent of all traffic fatalities, 14 percent of all vehicle occupant fatalities and 19 percent of all pedestrian fatalities.

### **Completing the streets**

The lack of attention to the transportation needs of older people comes as no surprise to many. In a poll conducted for the AARP study, 40 percent of adults age 50 and over said the sidewalks in their neighborhoods are inadequate. Nearly 50 percent reported they cannot cross main roads close to their home safely, yet half of them would walk, bicycle or take a bus more often if the problems were fixed.

Mobility activists assert that the best way to address these problems is with “complete streets” policies, which allow pedestrians, bicyclists and those who use public transportation to share the road safely and comfortably with automobiles. More than 85 communities across the nation have already done so; California and Hawaii have even adopted a state law, and just in the last few weeks Delaware Gov. Jack Markell, D, [signed an executive order](#) adopting such measures. And though it’s still early to collect statistics that appraise the results of complete streets, other benefits are well documented. Practically, this means ensuring streets have adequate resting places, ramps on the crosswalks, visible signs, bike lanes, on-street parking, wide sidewalks and other amenities.

[Boulder, Colo.](#), has been incorporating paved shoulders, more than 380 miles of dedicated bikeways and a transit network of buses into the city and surrounding area. As a result, between 1990 and 2006, more people walked or bicycled and mass transportation trips grew by 500 percent, according to the National Research Center, a research firm in Boulder.

In 1999, San Francisco put Valencia Street on a “road diet,” converting four through lanes to three plus creating a center turn lane and bicycle paths. As a result, the city discovered that bike traffic increased 144 percent and collisions decreased. Advocates of the new bicycle-pedestrian path on the

[Ravenel highway bridge in Charleston, S.C.](#), commissioned a study that found 65 percent of users are getting adequate exercise due in large part to using the bridge path.

Such projects are “very visible in the communities that are doing it,” says Barbara McCann, director of the [Complete the Streets Coalition](#), which includes diverse groups ranging from AARP, the Institute of Transportation Engineers, the American Public Transit Association, the League of American Bicyclists and the Society of Landscape Architects. “It’s rather inspiring.”

U.S. Rep. Doris Matsui, D-Calif., agrees. Her home district includes Sacramento, which has started to implement complete-streets policies. “Our recent reconfiguration of several miles of streets in central Sacramento have been well received by both residents and commuters, and we have seen a tremendous increase in the amount of people—of all ages—walking and bicycling,” Matsui says. “We have also seen a reduction of speeding by motorists, and I think Sacramentans have really taken a fresh look at the way street design can improve our quality of life.”

Earlier this year, Matsui and Sen. Tom Harkin, D-Iowa, introduced the Complete Streets Act in their respective houses of Congress. The measure would direct states and metropolitan regions that receive federal dollars for roadways to comply with a mandate that future road investments take into account the needs of people of all ages and abilities as pedestrians, bicyclists, transit riders and drivers. Proponents of the bills hope the measure will be included in the federal surface transportation authorization act, expected to be passed later this year. But as with many broad national initiatives, funding remains a problem.

### **Addressing needs of older drivers and pedestrians**

However, less than one-third of state and local complete-streets policies explicitly address the needs of older road users, the AARP study concludes. “The big difference [between older road users and the rest of the population] is that because of decline in eyesight, reaction time and focus and the ability to judge the speed of moving vehicles, older users cannot as readily navigate hostile travel environments,” says Lynott.

Because half of all older driver deaths occur at intersections, reducing the speed limit in areas where vehicles and pedestrians meet would assist them substantially, the study says. So would spreading traffic broadly throughout a connected network of streets with lower-speed routes and reducing the number of neighborhood streets that connect to a single artery. Using left turn lanes in areas of heavy traffic and pedestrian crossing reduces the need for drivers to judge if they have enough time to make a safe turn.

Designated green arrows can cut left turn crashes in half, according to a 2004 Department of Transportation and Institute of Transportation Engineers [report on intersection safety](#).

“Older drivers also have trouble making sharp turns,” says Lynott. Adding bike lanes and parallel parking increases the turning arc at intersections, making it easier for older drivers to turn.

Phil Caruso, the deputy director for technical programs of the Institute of Transportation Engineers, says he’s not surprised that transportation planners don’t necessarily consider the needs of older Americans and the disabled when planning. “Historically, the tendency is to look at capacity—incorporating the maximum number of vehicles, safely, into a design,” says Caruso. “Those in the profession now were trained to think of the capacity, rather than the types of people who are going to be driving the vehicles or walking.”

But Caruso says this thought process is changing. In the past 10 to 15 years, professional organizations like the [Institute of Transportation Engineers](#), which has a membership of 17,000 traffic engineers and transportation planners, have begun to train professionals to consciously address the value of older drivers and pedestrians.

“Now, the sensitivity is there,” he says, “and it’s starting to happen because it’s a national priority.”

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*Carol Kaufmann is a contributing editor at the AARP Bulletin.*

## Appendix M: Morgantown City Traffic Calming Plan (version 2.0)

Excerpts of presentation made to Morgantown City Council October 28, 2008, updated May 5, 2009; downloaded November 19, 2009 from <http://www.morgantown.com/traffic.htm>

*Traffic Calming Recommended Plan  
Morgantown, WV  
V 2.0*

*Version 2: May 5, 2009 Updates to Woodburn  
May 5, 2009 Updates to Wiles Hill*

*Presented to: Morgantown City Council Oct 28, 2008  
Approved by: Morgantown Traffic Commission Oct 8, 2008*

### Slide 2: Goals of Traffic Calming

- Support the local Morgantown neighborhoods to improve livability (this includes walkability)
- Support MPO and DoH to “improve **continuous traffic flow**” on all State owned roads
- Most importantly, support neighborhoods by **reducing** and preventing **cut-through traffic** in Morgantown neighborhoods

### Slide 3: PROBLEM

- **Speeding** complaints in neighborhoods has become an epidemic
- **Traffic Volume** in the neighborhoods has contributed to the volume of “speeding” complaints to the City Council and to the Traffic Commission

### Slides 4 & 5: Immediate Recommendations

#### 1. “**25 means 25**” Campaign

- A public relations blitz regarding stepped up speeding enforcement
  - Announce in papers and on radio
    - (similar to DUI checkpoint announcements)
- An Enforcement blitz in announced areas
  - To enforce the speed limit in neighborhoods.
    - i.e. 25 mph is the MAXIMUM according to state law
  - To enforce stop signs in neighborhoods
- (Later, more active enforcement in neighborhoods)

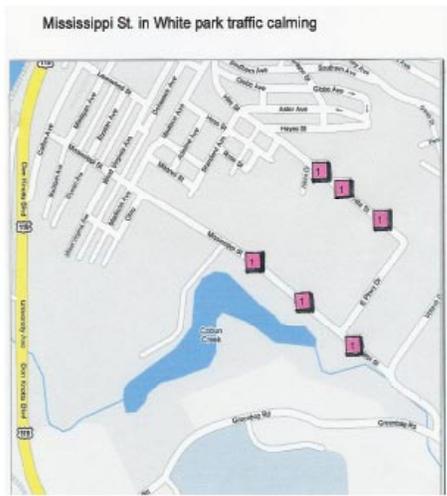
#### 2. **Install STOP BARS** at all stop signs in the city

- Improved visibility
- “no excuse” enforcement possible
- Contributes to impeding traffic in the neighborhoods
- Contributes to moving traffic to the main arteries
- Obvious contribution to safety

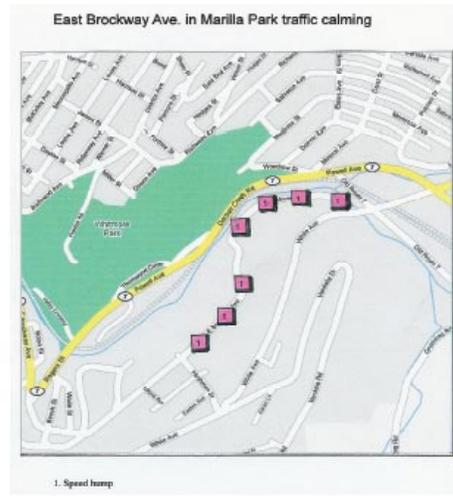
Slide 6: Completed Traffic Calming Projects

- Willowdale Road
  - o Installed lane dividers and Operational
  - o (Being re-evaluated by Ron Eck, Retired-WVU)
- Mississippi St and White Park
  - o Installed and operational
- East Brockway Ave and Marilla Park
  - o Installed and operational
- Evansdale
  - o Installed and operational

Slides 7 & 8

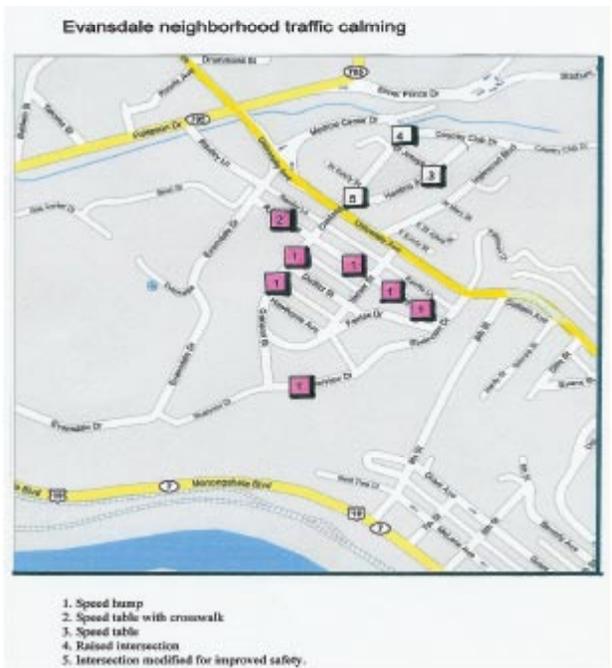


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1. Speed hump

Slide 9



Slide 22: Phase 2: Traffic Calming Projects

- Wiles Hill
  - o Recommendations accepted from WHNA
  - o Still needs to be reviewed by WHNA
- Woodburn
  - o Recommendations accepted from WAN
  - o Still needs to be reviewed by WAN
- South Park
  - o Submitted and reviewed by SPAN
- Suncrest Area
  - o Submitted and reviewed by SNA

Slides 23 & 24



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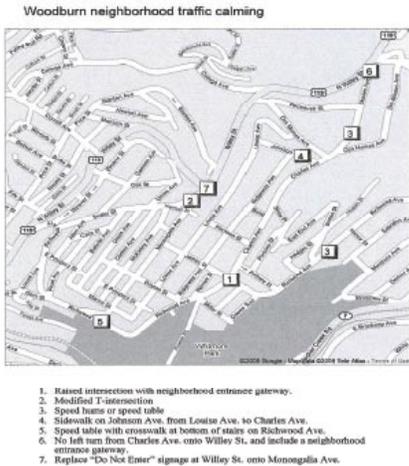
Hampton Ave. & Darst St. neighborhood traffic calming



1. Right turn only from Hampton Ave. onto Willey St.
2. One-way for last 100ft. from Dix Mable to Hampton to prevent cutback traffic to Willey St.
3. No right turn on Red from Highland Ave. Eastbound to Darst St.
4. Raised intersection at Darst St. and Montrose St.

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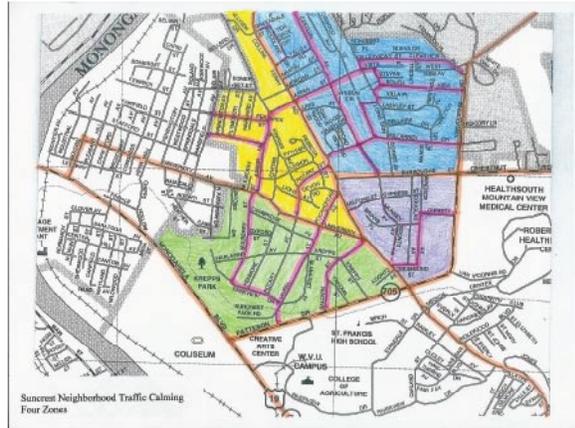
Slides 25 & 26



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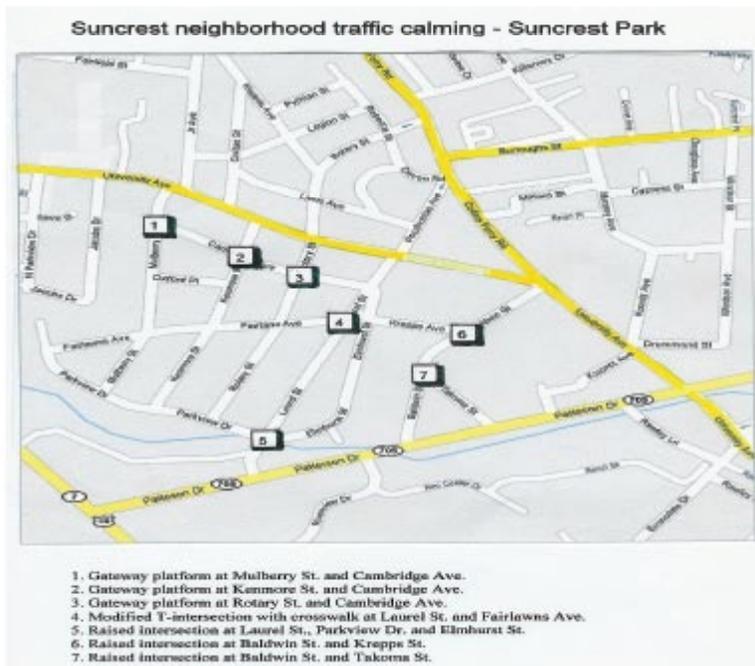
Slides 27 & 28



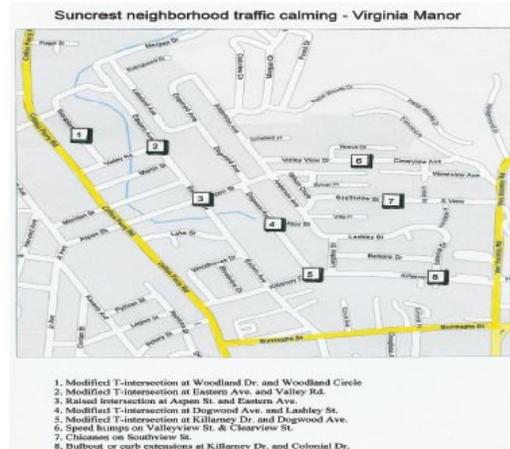
Slide 29: Recommendation for WVDotH

- **A traffic circle at Collins Ferry, University Ave and Baldwin St**
  - o Should be installed to relieve congestion on University and on Collins Ferry.
  - o This should:
    - Make the intersection considerably safer
    - Assist continuous traffic flow on two main arteries of Morgantown.
    - Assist local traffic calming efforts by assisting continuous traffic flow on the main arteries of Morgantown.

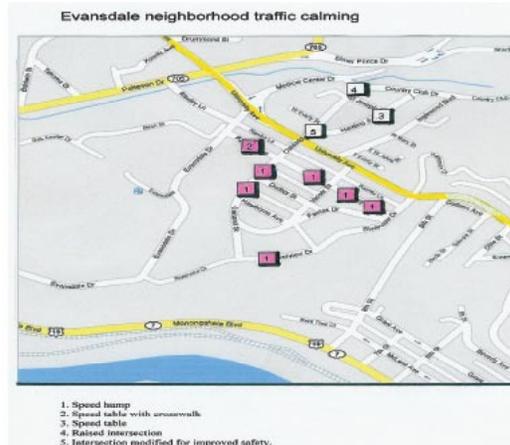
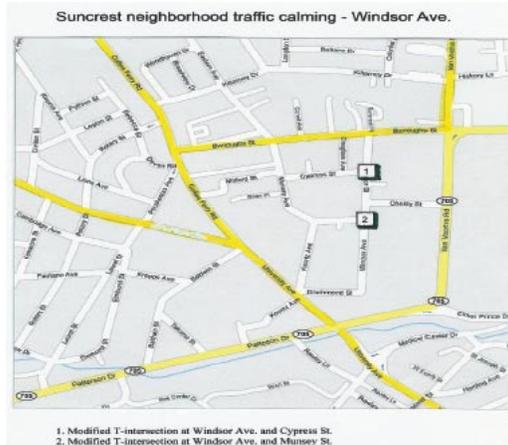
Slide 30



Slides 31 & 32



Slides 33 & 34



Slide 36

Estimated Total Costs					
Base Costs (California)	# used	Low	High	Low \$	High \$\$
Speed hump	8	\$2,000	\$2,000	\$16,000	\$16,000
Speed Table	2	\$5,000	\$15,000	\$10,000	\$30,000
Raised Intersection	17	\$25,000	\$70,000	\$425,000	\$1,190,000
Modified T	9	\$30,000	\$60,000	\$270,000	\$540,000
Small Traffic Circle	2	\$8,000	\$15,000	\$16,000	\$30,000
Gateway platform	3	\$5,000	\$60,000	\$15,000	\$180,000
Bulbout or curb extension	3	\$5,000	\$20,000	\$15,000	\$60,000
Road Paint	0	\$100	\$5,000	\$0	\$0
Chicane	1	\$10,000	\$20,000	\$10,000	\$20,000
Mini Roundabout	0	\$45,000	\$150,000	\$0	\$0
<b>GRAND TOTALS:</b>				<b>\$777,000</b>	<b>\$2,066,000</b>

## **Appendix N: Morgantown City Code, Part 3, Chapter 9 – Pedestrians and Bicycles**

### **ARTICLE 371 Pedestrians**

- 371.01 Compliance with traffic regulations.**
- 371.02 Right of way in crosswalk.**
- 371.03 Crossing roadway outside crosswalk.**
- 371.04 Drivers to exercise due care.**
- 371.05 Moving upon right half of crosswalk.**
- 371.06 Walking along streets and highways; soliciting rides.**
- 371.07 Persons working on streets and highways.**
- 371.08 Protection of blind pedestrians.**
- 371.09 Electric personal assistive mobility device.**
- 371.10 Solicitation of persons traveling in vehicles on public rights of way prohibited.**
- 371.99 Penalty.**

#### **CROSS REFERENCES**

- See sectional histories for similar State law
- Pedestrian defined - see TRAF. 301.21
- Pedestrians at traffic signal - see TRAF. 313.03
- Pedestrian control signal - see TRAF. 313.04

#### **371.01 COMPLIANCE WITH TRAFFIC REGULATIONS.**

Pedestrians shall be subject to traffic control signals at intersections as provided in Section 313.03, but at all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this article.

(WVaC 17C-10-1(a))

#### **371.02 RIGHT OF WAY IN CROSSWALK.**

- (a) When traffic control signals are not in place or not in operation the driver of a vehicle shall yield the right of way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger, but no pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield. This provision shall not apply under the conditions stated in Section 371.03(b).
- (b) Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

(WVaC 17C-10-2)

**371.03 CROSSING ROADWAY OUTSIDE CROSSWALK.**

- (a) Pedestrian crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right of way to all vehicles upon the roadway.
- (b) Any pedestrian crossing a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right of way to all vehicles upon the roadway.
- (c) Between adjacent intersections at which traffic control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk.  
(WVaC 17C-10-3)

**371.04 DRIVERS TO EXERCISE DUE CARE.**

Notwithstanding any other provision of this article every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian upon any roadway and shall give warning by sounding the horn when necessary and shall exercise proper precaution upon observing any child or any confused or incapacitated person upon a roadway.  
(WVaC 17C-10-4)

**371.05 MOVING UPON RIGHT HALF OF CROSSWALK.**

Pedestrians shall move, whenever practicable, upon the right half of crosswalks.  
(WVaC 17C-10-5)

**371.06 WALKING ALONG STREETS AND HIGHWAYS; SOLICITING RIDES.**

- (a) Where sidewalks are provided, no pedestrian shall walk along and upon an adjacent roadway.
- (b) Where sidewalks are not provided any pedestrian walking along and upon a street or highway shall when practicable walk only on the left side of the roadway or its shoulder facing traffic which may approach from the opposite direction.
- (c) No person shall stand in a roadway for the purpose of soliciting a ride from the driver of any vehicle.  
(WVaC 17C-10-6)

**371.07 PERSONS WORKING ON STREETS AND HIGHWAYS.**

The driver of a vehicle shall yield the right of way to persons engaged in maintenance or construction work on a street or highway whenever he is notified of their presence by an official traffic control device or flagman.  
(WVaC 17C-10-8)

**371.08 PROTECTION OF BLIND PEDESTRIANS.**

The driver of a vehicle approaching a blind pedestrian who knows, or in the exercise of reasonable care should know, that such pedestrian is blind because such pedestrian is carrying a cane predominantly white or metallic in color with or without a red tip, or is using a guide dog or otherwise, shall exercise care commensurate with the situation to avoid injuring such pedestrian.  
(WVaC 5-15-5)

**371.09 ELECTRIC PERSONAL ASSISTIVE MOBILITY DEVICE.**

- (a) For purposes of this section, the definition of an “electric personal assistive mobility device” is the same definition as previously set forth in Section 301.081 and “operator” shall refer to the operator of an electric personal assistive mobility device. (WVaC 17C-10A-1)
- (b) An electric personal assistive mobility device shall be equipped with:
  - (1) Front, rear and side reflectors;
  - (2) A braking system that enables the operator to bring the device to a controlled stop; and
  - (3) If operated at any time from one-half hour after sunset to one-half hour before sunrise, a lamp that emits a white light that sufficiently illuminates the area in front of the device.
- (c) An operator of an electric personal assistive mobility device traveling on a sidewalk, roadway or bicycle path shall have the rights and duties of a pedestrian and shall exercise due care to avoid colliding with pedestrians. An operator shall yield the right of way to pedestrians.
- (d) Except as provided in this section, no other provisions of the motor vehicle code shall apply to electric personal assistive mobility devices. (WVaC 17C-10A-2)

**371.10 SOLICITATION OF PERSONS TRAVELING IN VEHICLES ON PUBLIC RIGHTS OF WAY PROHIBITED.**

- (a) For purposes of this Code section, “solicit”, “solicitation” or “soliciting” shall mean asking for money or objects of value, with the intention that the money or object be transferred from the occupant of a vehicle within a public roadway to the solicitor at that time, and at that place. “Soliciting” shall include using the spoken, written, or printed word, bodily gestures, signs or other means with the purpose of obtaining an immediate donation of money or other thing of value or soliciting the sale of goods or services.
- (b) It shall be unlawful for any person, while standing in any portion of a public right of way to solicit business, or contributions of money or other property, from any person traveling in a vehicle within a public right of way; provided, however, that the foregoing prohibition shall not apply to services rendered in connection with emergency repairs requested by the operator or passengers of such vehicle.
- (c) Having received a license or permit from the City to conduct solicitation, peddling, or other municipal regulated activity within the City shall not constitute an exception to the solicitation activities prohibited by this Code section.
- (d) Any person violating this Code section shall be guilty of a misdemeanor and subject to a minimum fine of fifty dollars (\$50.00) and a maximum fine of five hundred dollars (\$500.00).

Severability is intended throughout and within the provisions of this section. If any section, sentence, clause or phrase of this section is held invalid or unconstitutional by a court of competent jurisdiction, then such judgment shall in no way affect or impair the validity of the remaining portions of this section. This section shall be effective upon date of adoption.

(Ord. 05-21. Passed 7-19-05.)

**371.99 PENALTY.**

(EDITOR'S NOTE: See Section 303.99 for general Traffic Code penalty.)

## **Appendix O: Morgantown City Code, Part 3, Chapter 7 – Parking**

### **ARTICLE 361**

#### **Parking Generally**

**(only those provisions related to pedestrians are presented below)**

- 361.01 Prohibition against parking on streets or highways.**
- 361.02 Police may remove illegally stopped vehicles.**
- 361.03 Prohibited stopping, standing or parking places.**
- 361.99 Penalty.**

#### **361.01 PROHIBITION AGAINST PARKING ON STREETS OR HIGHWAYS.**

- (a) Upon any street or highway outside of a business or residence district no person shall stop, park or leave standing any vehicle, whether attended or unattended, upon the paved or main-traveled part of the street or highway when it is practicable to stop, park or so leave such vehicle off such part of the street or highway, but in every event an unobstructed width of the street or highway opposite a standing vehicle shall be left for the free passage of other vehicles and a clear view of such stopped vehicles shall be available from a distance of 200 feet in each direction upon such highway or street.
- (b) This section shall not apply to the driver of any vehicle which is disabled while on the paved or main-traveled portion of a street or highway in such a manner and to such extent that it is impossible to avoid stopping and temporarily leaving such disabled vehicle in such position.

(WVaC 17C-13-1)

#### **361.02 POLICE MAY REMOVE ILLEGALLY STOPPED VEHICLES.**

- (a) Whenever any police officer finds a vehicle standing upon a street or highway in violation of Section 361.01, such officer is hereby authorized to move such vehicle or require the driver or other person in charge of the vehicle to move the same, to a position off the paved or main-traveled part of such street or highway.
- (b) Whenever any police officer finds a vehicle unattended upon any bridge or causeway or in any tunnel where such vehicle constitutes an obstruction to traffic, such officer is hereby authorized to provide for the removal of such vehicle to the nearest garage or other place of safety.

(WVaC 17C-13-2)

#### **361.03 PROHIBITED STOPPING, STANDING OR PARKING PLACES.**

- (a) No person shall stop, stand or park a vehicle except when necessary to avoid conflict with other traffic or in compliance with law or the directions of a police officer or traffic control device, in any of the following places:
  - (1) On a sidewalk;
  - (2) In front of a public or private driveway;
  - (3) Within an intersection;
  - (4) Within fifteen feet of a fire hydrant;

- (5) In a properly designated fire lane;
- (6) On a crosswalk;
- (7) Within twenty feet of a crosswalk at an intersection;
- (8) Within thirty feet upon the approach to any flashing beacon, stop sign or traffic control signal located at the side of a roadway;
- (9) Between a safety zone and the adjacent curb or within thirty feet of points on the curb immediately opposite the ends of a safety zone, unless a different length is indicated by signs or markings;
- (10) Within fifty feet of the nearest rail of a railroad crossing;
- (11) Within twenty feet of the driveway entrance to any fire station and on the side of a street opposite the entrance to any fire station within seventy-five feet of such entrance (when properly signposted);
- (12) Alongside or opposite any street excavation or obstruction when stopping, standing or parking would obstruct traffic;
- (13) On the roadway side of any vehicle stopped or parked at the edge or curb of a street;
- (14) Upon any bridge or other elevated structure upon a street or highway or within a street or highway tunnel;
- (15) At any place where signs prohibit stopping, standing or parking, or where the curbing or street is painted yellow or red, or at any place in excess of the maximum time limited by signs;
- (16) Within twenty feet of any mail receptacle served regularly by a carrier using a motor vehicle for daily deliveries, if such parking interferes with or causes delay in the carrier's schedule;
- (17) Upon any controlled-access highway;
- (18) At any place on any street or highway where the safety and convenience of the traveling public is thereby endangered;
- (19) Over or across any lines or marks established by the Municipality to indicate parking spaces;
- (20) In front of a wheelchair accessible ramp or curb cut which is part of a sidewalk designed for use by the general public when the ramp or curb cut is properly marked with blue paint.

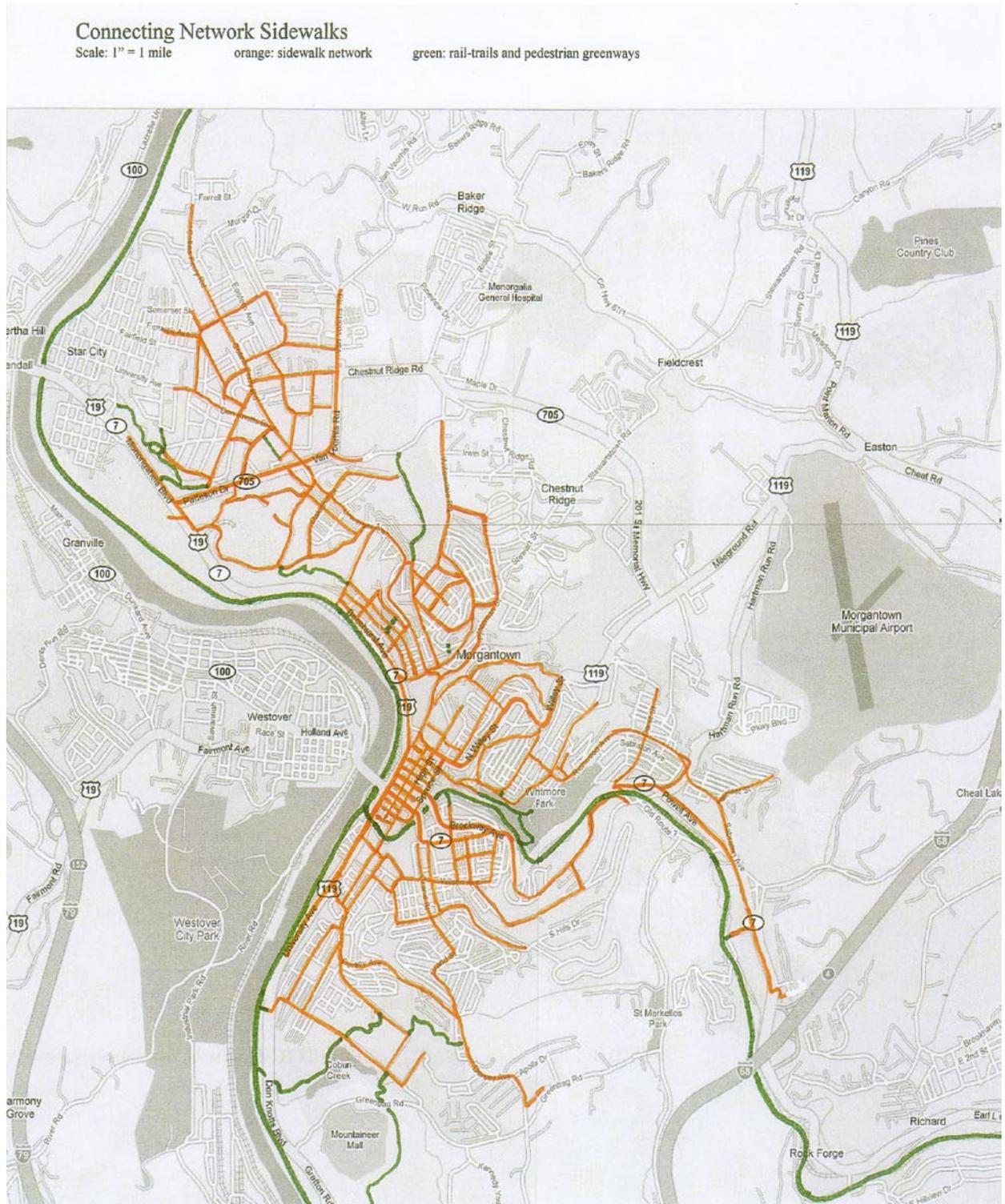
(b) No person shall move a vehicle not lawfully under his control into any such prohibited area or away from a curb such distance as is unlawful.

(Ord. 98-19. Passed 6-16-98.)

**361.99 PENALTY.**

(EDITOR'S NOTE: See Section 303.99 for general Traffic Code penalty.)

# Appendix P: Morgantown Connecting Network Sidewalks (CNS) Map



## Appendix Q: Rationale for Community-Based Sidewalk System

### PROPERTY OWNER-BASED SIDEWALK INSTALLATION vs. COMMUNITY NETWORK-BASED SIDEWALK INSTALLATION - A Morgantown Comparison -

<b>Issue</b>	<b>Owner-Based</b>	<b>Community-Based</b>
1. Capital Expense to Individual Property Owners for <u>Front Sidewalk</u> Construction, Repair, Replacement Capital Expense to Individual Property Owners on <u>Corner Properties</u> for Sidewalk Construction, Repair, and Replacement	Several Thousands of \$ for Owner Several More Thousands of \$ for Owner	None
2. Annualized Cost to Individual Owners for Construction, Repair, Replacement	None	Annual Fee (IRS Deductible for Class IV Properties)
3. Provides Funds to Pay for Sidewalks Adjacent to Public Areas (Parks, Schools, Water Towers, etc.)	None, Must be Taken from Other Uses	Included
4. On-Going Municipal Management Costs – Inspections, Assessments, Enforcement	High Management Costs	Low Management Costs
5. Continuity of Sidewalks (Lack of gaps due to vacant properties, Topography, legal variances granted by Council/Manager for decades, etc)	Difficult and Complex	Continuity
6. Legal History of Individual Waivers and Exemptions	Complex	Not an Issue
7. Continuity of Curbing (Lacks gaps which affect Storm Water Mgmt.)	Less Consistent	More Consistent
8. Symmetry of Sidewalks and Curbs	Difficult – even w/ standards	Symmetric
9. Engineering Efficiency/Approval	Inefficient, Fragmented	Efficient, Unified
10. Provision of Access to Destinations (Post Offices, Commerce, etc.)	Inconsistent	Planned, Consistent
11. Priority in Construction given to Access to Destinations	Dependent on Compliance	Dependent on Plan
12. Supports Family Confidence in Child Safety, Access to Schools	Lower	Higher
13. Increases Individual Property Values, Livability, Storm Water Control	Lower	Higher
14. Increases Value of Neighborhoods to New Families	Lower	Higher
15. Walkability of Area Supportive of Intergenerational Safety, Public Health, Recreation, Independence of Youth, and Access to Employment, Education and Transit	Inconsistent	Consistent