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Pedestrian Plan

Put One Foot in Front of the Other

Walking is the most basic mode of transportation. All trips begin with walking. Residents walk throughout the City of Shoreline to parks, libraries and businesses, to access transit and for exercise and recreation. Safety and connectivity are essential to supporting and encouraging walking.

Shoreline is a suburban community, with predominantly single-family residential development. Although much of Shoreline has been developed at relatively low densities, the grid pattern of the arterial and local streets lends itself well to pedestrian circulation and provides access to all areas of the City. As a city that is largely developed, the street pattern is unlikely to change and significant new roadways are not likely to be constructed. It is anticipated that Shoreline will continue to grow and improvements to existing roadways will be needed to address traffic issues resulting from increasing numbers of users of the City's street system.

Though much of Shoreline is built out, sidewalks are only located sporadically throughout the City. Most of the sidewalks in Shoreline were built prior to incorporation and are substandard in comparison with existing City standards, being too narrow and/or having little or no amenity zone separating the sidewalk from the roadway travel lane. Located predominantly on arterials, some of these sidewalks have adjacent planting strips that are too narrow for the trees planted there, which have now matured and are causing damage to sidewalks and roadways with their large root systems.

Since incorporation of the City of Shoreline in 1995, many sidewalks and walkways have been constructed throughout the City, including the Interurban Trail. Other City capital projects, including the Aurora Corridor Improvement Project and North City Project, included sidewalks as a fundamental part of their safety and circulation enhancements. The Priority Sidewalks program constructed sidewalks and walkways throughout the City from 2005 to 2011. Private development has also contributed to the City's sidewalk inventory through the construction of frontage improvements adjacent to development sites.

The community has repeatedly identified sidewalks as important. Residents want to use sidewalks and trails to go to work, catch a bus, walk to school, go shopping or participate

in recreation activities. In addition, many residents of the City's over 100 group homes have limited mobility and need the safety and access provided by sidewalks. According to a 2010 survey of residents, only 48 percent of respondents identified themselves as very satisfied or somewhat satisfied with the availability of sidewalks on major streets. Only 30 percent of respondents identified themselves as very satisfied or somewhat satisfied with the availability of sidewalks near their residence. In this same survey, 42 percent of respondents identified the availability of sidewalks near their residence as one of the top two aspects of transportation that should receive the most emphasis over the following two years.

Pedestrian Issues in Shoreline

The design and construction of a pedestrian system in Shoreline presents unique challenges to the City. With limited funding, a fully built-out roadway system and older, existing infrastructure to maintain and repair, sidewalk location and design must be carefully planned.

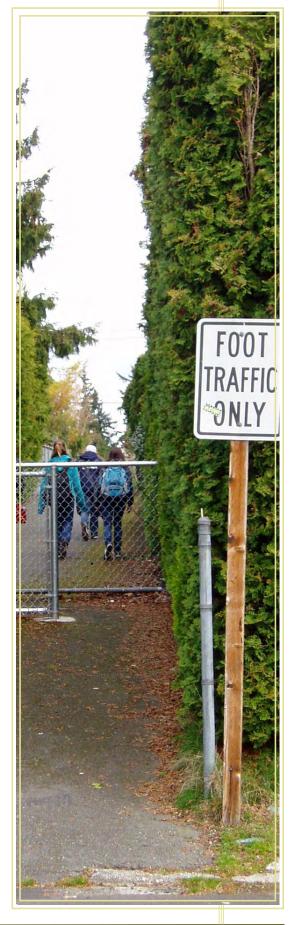
Sidewalk Design

Sidewalks in the City have been constructed for several decades, with the standards changing over time. As a result, sidewalk design varies throughout the City, including sidewalk width, construction materials, presence of amenity zone and the width and plantings of an amenity zone. The planned design for construction of future sidewalks throughout the City will vary depending upon traffic volumes, adjacent land uses, proximity to transit and connections to destinations such as commercial areas, schools and parks.

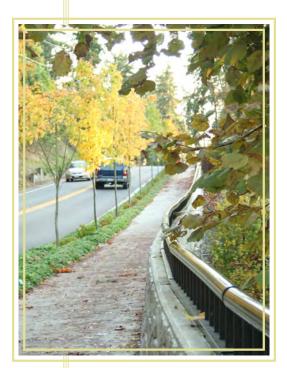
The materials used in construction of sidewalks and the vegetation planted in the amenity zone can help sidewalks serve as stormwater management and treatment facilities. Technologies such as pervious concrete can attenuate the flow of water into the ground or the City's stormwater system. The installation of appropriate soils and plants can also serve this function, as well as help to filter pollutants from stormwater.

Funding

For many jurisdictions, funding for sidewalk projects has historically been significantly less than what is available for design and construction of other transportation projects. Similarly, transportation grant funding from state and federal







agencies is predominantly focused on roadway projects. Sidewalks often are a component of funded roadway projects, such as the Aurora Corridor Improvement Project. With a fiscally constrained budget, the City must evaluate and prioritize its capital investments and fund them accordingly. Sidewalk projects generally make up a large portion of the City's six-year Transportation Improvement Program (TIP), which includes unfunded projects. Inclusion of these projects as part of the TIP makes them eligible for some sources of grant funding.

System Continuity

Sidewalks are not located in all areas of the City. They can be sporadic, ending abruptly in neighborhoods or commercial districts or extending the width of a single parcel when constructed in conjunction with redevelopment at that site. As a result, Shoreline does not have a continuous system of sidewalks that facilitate pedestrian circulation throughout all parts of the City. A system of sidewalks, trails and walkways that connects people to their homes, businesses, services and transit is necessary in order to encourage walking as an appealing form of transportation.

Maintenance

All transportation facilities, including sidewalks, require maintenance and repair. This includes minor maintenance, such as keeping walkways free of vegetation intrusion, ice and snow, as well as repairing damage resulting from root intrusion, accidental damage from vehicles and normal wear and tear. It is common for municipalities to request or require property owners adjacent to the sidewalks to maintain vegetation in the right-of-way and keep sidewalks clean and clear. Repair of facilities is generally the responsibility of the City. Oversight by the City helps ensure that repair work is performed in accordance with City standards.

Lighting

Pedestrians should feel safe walking through their community. One element that adds to safety is the presence of lighting. There is some degree of street lighting present throughout the City, mostly along arterials, with some street lights scattered along non-arterial streets and a few neighborhoods not containing any street lights. Almost all of the street lights in Shoreline are designed and directed to illuminate public right-of-way along roadways and the adjacent walkways. The City

has very little pedestrian-scale lighting. The Aurora Corridor Improvement Project has installed some pedestrian-scale lighting at bus stops on Aurora Avenue N.

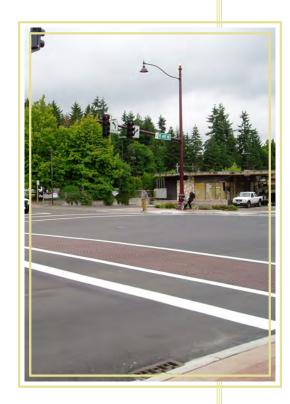
Crossings

Another factor that contributes to safety is the ability to cross streets. By definition (RCW 46.04.160), there are crosswalks at every intersection whether there are markings present or not. Unless posted otherwise, it is legal for a pedestrian to cross the street at any intersection. Drivers are required to stop for pedestrians waiting at crosswalks and once a pedestrian enters a street. There are a number of factors to consider when determining the need for enhancing crosswalks with markings and other traffic control devices. These include the volume of traffic and pedestrians, presence of bus stops and adjacent land uses. Many crossings do not require identification or signage. For those locations that qualify for added traffic control, a variety of methods are available to identify and enhance pedestrian crossings including roadway markings, signs, flashing lights and traffic signals. The City must balance the location of traffic signals and controlled pedestrian crossings with the need to sustain traffic flow through and within Shoreline. Driver and pedestrian education are also important factors in helping pedestrians cross streets safely.

Shoreline's Pedestrian Plan

Walking can help fulfill a variety of the City's goals, including expanded transportation choices, reduced costs for transportation, congestion relief, improved physical health and reduced contributions to climate change through fewer greenhouse gas emissions. The Pedestrian Plan includes a description of the existing pedestrian system in Shoreline, and the goals, policies and implementation strategies support and encourage walking and help the City achieve its vision for pedestrian movement.

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Existing Facilities Inventory

Existing Pedestrian Facilities

The City of Shoreline is a fully built-out community, with almost all of the land in the City developed. Most of the development in the City occurred while a part of unincorporated King County. Almost all of the sidewalks in the City were constructed in accordance with County standards, which were different than the current City standards.

Pedestrian facilities in the City include concrete sidewalks, asphalt trails, walkways and widened shoulders. Sidewalks are present along arterials including:

- N/NE 155th Street
- N/NE 175th Street
- N/NE 185th Street
- Meridian Avenue N
- 5th Avenue NE
- 10th Avenue NE
- 15th Avenue NE
- · NW Richmond Beach Road

These sidewalks vary in width and material and are sometimes not continuous. Most sidewalks on City arterials were constructed in the 1960s under a bond issue known as Forward Thrust. These sidewalks are narrower than the City's current standard, as are the landscaping strips between the sidewalk and travel lane, if landscaping is present at all. There are a few areas in the City with asphalt paths serving as pedestrian facilities. **Figure K, Existing Pedestrian Facilities**, illustrates existing sidewalks, asphalt paths and widened shoulders (the map does not identify if sidewalks are consistent with Shoreline's current development standards for width, materials and amenity zones).

Much of the City's recent sidewalk construction has been focused around schools as part of the Priority Sidewalks program. The commercial and transit corridor along Aurora Avenue N will have continuous sidewalks constructed along both sides of the roadway as part of the Aurora Corridor Improvement Project. These sidewalks are seven feet wide, with a four-foot wide, vegetated amenity zone separating the sidewalk from the adjacent travel lane.

In addition to sidewalks, Shoreline has two off-street mixed use trails. The Interurban Trail runs roughly parallel to Aurora Avenue

N. This trail is both a bicycle and pedestrian facility, with a 12-foot wide asphalt path along the majority of its length. From N 175th Street to N 185th Street, the trail is constructed of concrete. This change in materials results in a more urban feel and reinforces the pedestrian orientation of the future Town Center, through which this segment runs. Two bridges provide elevated crossings over N 155th Street (at Aurora Avenue N) and Aurora Ave N (at N 157th Street). The second pedestrian and bicycle trail is located on NE 195th Street between Meridian Avenue N and 1st Avenue NE. Completed in 2010, this 12-foot wide asphalt trail was constructed in previously undeveloped right-of-way. A pedestrian bridge crosses I-5 at NE 195th Street.



Good Pedestrian Connections and Challenges to Connectivity

Pedestrian Travel Routes

Pedestrians have a network of arterial and non-arterial streets to utilize, as well as the Interurban Trail. Many arterials and some non-arterial streets have sidewalks, especially those around schools. Because sidewalks in Shoreline are discontinuous and vary in width, pedestrians must often walk on the shoulder of the road, if one exists.

The primary destinations for pedestrians in Shoreline are schools, Shoreline Community College, parks, the Interurban Trail, libraries, post offices, bus stops, the Shoreline Center and the City's commercial areas. Many of these destinations are served by sidewalks, although not all routes to each destination have sidewalks. Upon completion of improvements to Aurora Avenue N, the entire corridor will have continuous sidewalks along its three-mile length.



Connections to Transit Facilities

Transit routes cover the majority of Shoreline and include peak-only and all-day routes. Many bus stops are served by sidewalks or wide shoulders. The travel paths to some stops are partially or fully inaccessible. One quarter of the transit stops in the City have limited accessibility, and one-tenth are fully inaccessible to persons with disabilities.

Physical Challenges

Pedestrian mobility in Shoreline can be a challenge due to the City's physical geography. North-south travel can be appealing and a viable option for many pedestrians, as the terrain is relatively flat. However, the ridges and valleys that cross the City can make travel in the east-west direction difficult for some pedestrians.

Similarly, east-west pedestrian travel can be hindered by the built environment. Many streets are blocked by I-5, which runs north-south through the City. The freeway interchanges at NE 145th

Street, NE 175th Street and NE 205th Street are heavy with automobile traffic, have limited pedestrian crossings and do not create a pedestrian-friendly environment. The crossings at NE 155th Street, NE 185th Street and NE 195th Street have lower traffic volumes than the interchanges, creating a more comfortable environment for pedestrians.

The natural and built environments can also limit expansion of or improvements to existing pedestrian facilities and construction of new ones. Limited right-of-way, presence of structures, topography and environmentally sensitive areas can influence, restrict or prohibit construction.

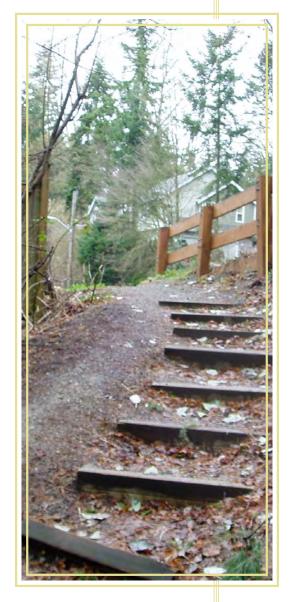
Curb Ramp, Gutter and Sidewalk Program

The City's Curb Ramp, Gutter and Sidewalk Program includes the design and construction of curb ramps and sidewalk repairs. The ramps are designed and constructed to meet the standards of the Americans with Disabilities Act (ADA). Other work performed includes repairing and replacing existing concrete gutters and sidewalks damaged by tree roots, cracking or settlement and constructing new sidewalk panel sections to fill existing gaps in the pedestrian walkway. Through this program, the City installs or replaces 14-20 curb ramps and repairs approximately 400 linear feet of sidewalk per year. The program can also fund wheelchair detection loops and audible pedestrian signals.

The Curb Ramp, Gutter and Sidewalk Program addresses locations throughout the City where improvements are needed to increase user safety of the sidewalk system. Means of improving safety include removing barriers, increasing and enhancing accessibility to the system throughout the community, eliminating damaged sections and completing missing links in the existing system.

Project Funding

Transportation projects in Shoreline are funded by the motor vehicle fuel tax, right-of-way permit fees and the general fund, as well as local, state and federal grants. Funds for pedestrian projects are limited, and construction of these facilities often compete with other City priorities. Grant funding for pedestrian projects is extremely limited, difficult to obtain, and often requires a local match.



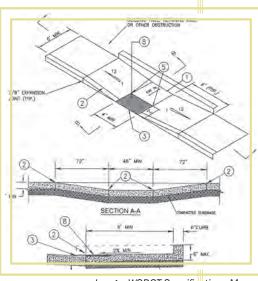


Image: WSDOT Specifications Manual

Pedestrian Improvements

The citizens of Shoreline continue to emphasize the importance of sidewalks for safety, enhanced mobility, convenience, and recreation. Shoreline has great potential to be a "walkable community" with many activities and resources within walking distance of neighborhoods. The roadway grid system in Shoreline provides multiple east-west and north-south connections, and the City offers a number of public spaces, including parks, shopping centers and community centers that can accommodate pedestrian facilities. One challenge for Shoreline is knowing where to start. The City must determine where to best spend limited resources to best serve the community.

Figure L, Pedestrian System Plan, identifies key pedestrian corridors in Shoreline that result in a complete pedestrian network throughout the City. Sidewalks are important as both transportation and recreational facilities. Therefore, the City's pedestrian network connects neighborhoods, schools, parks, commercial areas and transit facilities. Recently installed sidewalks along Aurora Avenue N and in North City, as well as the Interurban Trail, serve the City's primary commercial areas and significant transit corridors. If a street is not included on the Pedestrian System Plan, that should not be interpreted to mean that the street should not have sidewalks.

Figure M, Unimproved City Right-of-Way, identifies small sections of unused right-of-way that provide pedestrian connections between neighborhoods. These connections are not always part of the Pedestrian System Plan but are important, as they provide links throughout the City that can greatly shorten pedestrian trips. Other sections of unused right-of-way that are not identified on this map exist throughout Shoreline and may also serve to provide pedestrian connections and create public spaces such as parks or trails. Any requests for vacation of public right-of-way should be evaluated to ensure it cannot serve as a pedestrian connection.

Figure N, Pedestrian Projects Plan, identifies the type and location of all projects needed to fully implement the Pedestrian System Plan. The City developed a ranking system and criteria to prioritize design and construction of pedestrian projects. A description of the prioritization process is included in Chapter 9.

Creating a Pedestrian System in Shoreline

Developing and Implementing the System

- Goal T IX: Provide a pedestrian system that is safe, connects to destinations, accesses transit and is accessible by all.
- Policy T17: Implement the Pedestrian System Plan through a combination of public and private investments.

Implementation Strategies

- **17.1.** Develop a wayfinding signage and mapping system for pedestrian facilities that directs and guides users to public facilities, parks, schools, significant transit stops and transportation facilities and commercial areas.
- Policy T18: When identifying transportation improvements, prioritize construction of sidewalks, walkways and trails. Pedestrian facilities should connect to destinations, access transit and be accessible by all.

Implementation Strategies

- **18.1.** Develop and regularly update a prioritization and funding strategy to implement the City's Pedestrian System Plan.
- **18.2.** Include pedestrian facilities identified in the City's Pedestrian System Plan as part of the City's six-year Capital Improvement Plan and TIP.
- **18.3.** Through the City's Complete Streets policies, continue to accommodate pedestrians in future roadway or intersection improvement projects with facilities or technologies that make walking safer and more convenient for pedestrians.
- **18.4.** Utilize existing undeveloped right-of-way to create pedestrian paths and connections.
- **18.5.** Require that all projects resulting in an increase in the number of vehicular trips, such as commercial, non-residential, multi-family and residential short-plat and long-plat developments, provide for sidewalks or separated all-weather trails.

Discussion: Through the Master Street Plan, the City has identified the cross-section and design of arterials and determined appropriate improvements for local streets. Frontage improvements should be consistent with the Master Street Plan.

- **18.6.** Continue to implement the City's curb ramp program to install wheelchair ramps and other ADA requirements at all curbed intersections.
- **18.7.** Include construction of pedestrian facilities identified in the City's Pedestrian System Plan as projects that qualify for "credits" through the City's concurrency program.
- **18.8.** Look for opportunities to leverage public or private investments to implement the pedestrian system. Pursue funding opportunities through grants and private foundations.
- **18.9.** Require and identify pedestrian detour routes in construction areas.
- Policy T19: Design crossings that are appropriately located and provide safety and convenience for pedestrians.

Implementation Strategies

19.1. Develop a policy and procedure for the location, design and approval of crosswalk markings.

Discussion: The surrounding development should be a key factor when determining location and design for crosswalks. Issues to consider include, but are not limited to, density, land use, demographics and accident history. The roadway cross-section and traffic volumes and speeds should be considered when determining the need for design features such as bulb-outs or pedestrian refuge islands.

19.2. Consider midblock crossings if safety warrants can be met.

Discussion: The installation of midblock crossings should take into account land uses on both sides of the street and frequency of use. Additionally, traffic must be considered to ensure crossings do not interfere with the flow of vehicles.

19.3. Improve pedestrian safety at freeway interchanges and highway intersections.

Discussion: Consider over and undercrossings where feasible and convenient for users and other changes that make roadway crossings at freeway entrances more accessible to pedestrians. Example locations for improvements include: I-5 crossings at NE 145th Street, NE 155th Street, NE 175th Street, NE 185th Street, NE 195th Street and Ballinger Way NE. A pedestrian crossing over Aurora Avenue N at N 192nd Street may be constructed as part of a privately funded redevelopment of the Shoreline Park & Ride as a transit oriented development. This overcrossing could consist of an enclosed skybridge, connecting transit uses with retail, office and residential facilities located on both sides of Aurora Avenue N.

19.4. Utilize technology and driver notification to enhance pedestrian safety and convenience.



Discussion: Pedestrian safety can be improved by modifying traffic signals. Options include pedestrian queue jumps (clearing pedestrians ahead of traffic), pedestrian signals with countdown timers, pedestrian-only cycles or right-turn queue jumps that clear right-turning vehicles before pedestrians begin crossing. The latter would be coupled with the elimination of free right turns. Extension of the "walk" phase in areas with populations requiring additional time to cross the street, such as children or senior citizens, provides an extra measure of safety.

Discussion: Convenience for pedestrians can be improved through technology as well. Signals that are timed to speed up pedestrian prompt response, provide an automatic "walk" when the signal turns green or visual and audio indicators that push buttons have been activated are all measures that give priority or information to pedestrians.

There are pros and cons when utilizing technology to enhance pedestrian convenience. The City must balance this desire with the need to maintain signal progression and traffic flow.

Consideration for individual circumstances and various City needs should be given when designing and implementing changes to traffic signals.

- **19.5.** Continue to evaluate and field test installation of devices that increase safety of pedestrian crossings such as flags, in-pavement lights, pedestrian signals and raised, colored and/or textured crosswalks.
- Policy T20: Develop flexible sidewalk standards to fit a range of locations, needs and costs.

Implementation Strategies

- **20.1.** Sidewalk standards should generally be based upon adjacent land use or zoning, rather than street classification.
- **20.2.** Develop a program for retrofitting existing sidewalks that do not meet the City's current sidewalk standards.

Discussion: Property developers must reconstruct existing substandard sidewalks to comply with the established standards when a project triggers frontage improvements. The City should identify circumstances and criteria under which the City will retrofit sidewalks in conjunction with capital projects.

20.3. Establish criteria that identify when construction of a sidewalk on only one side of a street is appropriate.

Discussion: It is assumed that all streets will have sidewalks on both sides unless there is a wider trail/walkway system that accomplishes the goal of pedestrian movement and safety with traffic calming, such as green streets, or if findings can be established that support construction on one side only, such as topography, environment or costs. Short, dead-end streets with limited pedestrian activity would also be likely candidates for roadways with sidewalks on one side only.

20.4. Concrete or porous concrete sidewalks should be installed whenever possible. Examine options for construction of pedestrian facilities utilizing a variety of materials as alternatives to standard concrete sidewalks.

Discussion: Concrete is the most durable and easily maintained material for sidewalks. However, there are circumstances where concrete is not appropriate or needed. For example, asphalt may be an appropriate material for separated trails and walkways with minimal driveway crossings and limited potential for intrusion by tree roots. Porous concrete may be used in some circumstances, such





as in curbside applications with no amenity zone, when soil conditions support it and maintenance requirements have been considered.

- **20.5.** Ensure that walkways have a clear, defined area for walking surfaces and a distinct area for fixed objects, such as signs, fire hydrants, bicycle racks, utility poles, above-ground utility cabinets, benches and public art. The City should work with utility providers to eliminate obstructions in walkways.
- **20.6.** Ensure pedestrian facilities support and are appropriate for existing and new land uses, allowing for a variety of treatments. These may include sidewalks, walkways, shared bicycle and pedestrian facilities, trails or widened shoulders.
- **20.7.** Where appropriate, provide sidewalks, walkways, and trails with lighting, seating, landscaping, street trees, public art, covered bicycle racks, railings, etc. These improvements should be compatible with safe pedestrian circulation.
- **20.8.** Implement the pedestrian design standards identified in the Master Street Plan, including flexibility in walkway design.

Discussion: Street cross-section design should reflect the traffic and pedestrian needs of a given street. For example, streets that serve as transit corridors may include bus pull-outs at stop locations. This allows for easier boarding from the sidewalk and does not result in a bus blocking through traffic. Another possible design feature, curb bulb-outs, reduce the crossing distance for pedestrians, identify pedestrian crossings to drivers and act as traffic calming devices.

Discussion: Amenity zone width should be wide enough to provide space for healthy tree growth. The standard for amenity zone width should be flexible so that it may be widened in some locations to accomplish other City goals, such as natural stormwater treatment.

- **20.9.** Encourage private development projects to integrate public space with sidewalks.
- **20.10.** Develop standards for walkway design that meet Surface Water regulations by integrating sustainability or LID practices, such as porous concrete, bioswales, rain gardens or other natural stormwater drainage systems.
- **20.11.** Coordinate sidewalk design and construction with adjacent jurisdictions where sidewalks cross the City boundaries.



Policy T21: Develop a public outreach program to inform residents of the options for walking in the City and educate residents about pedestrian safety and the health benefits of walking. This program should include coordination or partnering with outside agencies.

Implementation Strategies

21.1. Prepare maps that include pedestrian facilities, schools, parks, civic buildings and other destinations in the City. The City should develop educational materials for residents that emphasize the importance of pedestrian safety and explain the health benefits of walking.

Discussion: The maps should identify pedestrian facilities and treatments throughout the City and inform residents of the methods available to report problems with pedestrian facilities to the City. Educational materials should provide resources and information that can be easily accessed. Residents should be made aware of these maps and materials through the City's website, newsletter, wayfinding kiosks and public access television channel. The City should have materials available for distribution at City buildings, public and community events and on the City website as well as coordinating with the school district and transit providers for distribution.

- **21.2.** Work with the school district to integrate pedestrian health and safety as part of the educational curriculum.
- **21.3.** Pursue grant funding from public and private foundations to implement education and outreach programs.

Discussion: Private foundations that emphasize health and safety can provide financial assistance to the City in its education efforts. The City can promote private maintenance of public pedestrian facilities through programs such as Adopt-a-Trail, Adopt-a-Street or Adopt-a-Raingarden.

21.4. Enforce requirements that are designed to keep vehicles from parking in pedestrian facilities.

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