I) NONMOTORIZED PLANNING EFFORTS IN PIERCE COUNTY

Nonmotorized Planning Requirements

In 1990, the Growth Management Act (GMA) became law and identified the specific requirements that must be included in the transportation element of a city’s or county’s comprehensive plan (RCW 36.70A.070). Although the GMA did not initially impose requirements related to nonmotorized travel, the related state planning guidelines (WAC 365-195-325) included a recommendation that goals and policies for nonmotorized (pedestrian and bicycle) travel be included in the transportation element. For further guidance, the Washington State Department of Community Trade and Economic Development (CTED) has developed a Comprehensive Plan Checklist to assist jurisdictions in updating their comprehensive plans. Among other things, this checklist also indicates that the transportation element should include goals and policies for bicycle and pedestrian travel.

In 1991, the GMA was amended to require that the affected counties adopt countywide planning policies (CWPPs) in cooperation with the cities in order to ensure that city and county comprehensive plans are consistent. In accordance with Pierce County’s Countywide Planning Policies for transportation facilities and strategies, the County and cities must provide facilities, including non-recreational bicycle and pedestrian facilities, to encourage alternatives to automobile travel and to reduce the number of vehicles traveled.

Under the GMA, the Puget Sound Regional Council (PSRC) is required to review and certify the transportation elements in comprehensive plans to ensure that they conform with GMA transportation planning requirements and are consistent with PSRC’s regional transportation plans (Vision 2040 and Destination 2030, which will be updated and renamed as “Transportation 2040”). Among other things, the PSRC Local Comprehensive Plan Checklist requires that a transportation element include an inventory of existing nonmotorized facilities and a description of nonmotorized policies and strategies to improve walking and bicycling. PSRC is planning to amend its Local Comprehensive Plan Checklist later this year to address Vision 2040 and recent GMA amendments.

In 2005, the GMA was amended with the passage of Engrossed Substitute Senate Bill 5186 (ESSB 5186), which requires the transportation element of a comprehensive plan to include a “pedestrian and bicycle component to include collaborative efforts to identify and designate planned improvements for pedestrian and bicycle facilities and corridors that address and encourage enhanced community access and promote healthy lifestyles.” However, the CTED in cooperation with the Washington State Department of Health and the Washington State Department of Transportation (WSDOT) has prepared a guidance paper to help jurisdictions understand and comply with ESSB 5186 requirements. Other organizations such as the Washington Coalition for Promoting Physical Activity (WCPPA) have also developed recommendations concerning policies and procedures for implementation of ESSB 5186.
The above nonmotorized requirements generally pertain to pedestrian and bicycle travel. Yet, the term “nonmotorized” has sometimes been expanded to include modes of travel by foot (walking or running), by riding a bicycle or other device not powered by a motor, or by riding a horse (horseback). However, since nonmotorized transportation in unincorporated Pierce County generally refers to facilities that are constructed within the roadway right-of-way and are designed primarily for the use of pedestrians and bicyclists, the focus of this white paper will be on pedestrian and bicycle travel.

**Previous Nonmotorized Planning Efforts**

The identification of roadways of particular importance to pedestrians and bicyclists dates back to the Pierce County Transportation Plan (PCTP) adopted in 1992. In addition to nonmotorized policy language, the PCTP included a list of priority projects consisting mostly of pedestrian facilities and also included a supplemental bicycle classification system consisting of “key bicycle roads” and “shared roads” recommended or planned for bicycle travel throughout Pierce County. The transportation policies and project recommendations in the PCTP were subsequently incorporated into the County’s first Transportation Element in 1994.

A major implementation strategy of the PCTP called for Pierce County to develop a nonmotorized transportation plan to identify a more comprehensive list of on-road and off-road facility needs to ensure a complete regional system for nonmotorized travel. The Pierce County Nonmotorized Transportation Plan (NMTP) was adopted in 1997 to identify pedestrian, bicycle, and equestrian needs throughout the entire county. The NMTP included over 500 specific nonmotorized recommendations (e.g. paved shoulders, wide curb lanes, sidewalks, trails, paths) for numerous roadway segments and roadways corridors (totaling about 1,200 miles) within the incorporated and unincorporated areas of Pierce County. The transportation policies and project recommendations in the NMTP were later incorporated into the Transportation Element.

Subsequent to the adoption of the NMTP, Pierce County has adopted several Community Plans for different unincorporated areas of the county. These Community Plans have included nonmotorized project recommendations which have essentially updated or replaced the nonmotorized project recommendations in the NMTP. While some Community Plans have included recommendations for specific pedestrian or bicycle improvements (e.g. “sidewalks”, “paved shoulders”, etc.) along certain roadways, other Community Plans have only included generalized recommendations (e.g. “pedestrian facilities” or “bicycle facilities”) for some roadways with the understanding that specific improvements would be identified as part of future outreach efforts.

It should be emphasized that a common element in the development of the PCTP, NMTP, and the Community Plans was extensive community involvement. All of these planning documents were prepared with the assistance of advisory committees or boards made up of local residents and other key stakeholders in the community. Additional community input was received at numerous public meetings and hearings. Another common element of these plans was that they were not financially constrained plans. For example, the NMTP identified nonmotorized projects for the unincorporated areas with an estimated total cost of about $227.6 million (based on 1996 dollars) but only identified $61.6 million in forecasted nonmotorized revenues over
20 years to fund these projects (resulting in a shortfall of $166 million or 73% of the total nonmotorized costs). Unfortunately, the inclusion of a large number of “unfundable” nonmotorized projects in these plans has contributed to a misconception among the general public that these projects will be implemented.

**Other Nonmotorized Planning Efforts**

There are other nonmotorized planning efforts that are either underway or being considered that should be taken into consideration when developing the nonmotorized transportation system in Pierce County. As part of the May 2008 update to the Pierce County Bike Map, the Public Works and Utilities (PWU) Department collected data from the cities, adjacent counties, and the public (via an on-line survey) about existing bikeways and preferred bicycle destinations. The County Parks and Recreation Department updated its Park, Recreation and Open Space Plan (PROS Plan) in July 2008 and has now initiated the preparation of a Regional Trails Plan. The ForeverGreen Council is a non-profit organization that is currently leading an effort to plan, connect, and implement a countywide trail system in Pierce County. Other local agencies such as the City of Lakewood and the Peninsula Metropolitan Park District (PenMet Parks) are preparing their own nonmotorized transportation plans. Local bicycle and trail advocacy groups such as the Tacoma Wheelmen Bicycle Club and the Foothills Rails-To-Trails Coalition have been actively involved with bicycle issues throughout Pierce County.

At the regional level, PSRC’s Vision 2040 and Destination 2030 call for the development of a transportation system that creates more travel choices and recognize biking and walking as a key component of the region’s overall transportation system. The Regional Bicycle and Pedestrian Implementation Strategy, developed under the guidance of the PSRC Bicycle/Pedestrian Advisory Committee and endorsed by the PSRC Regional Council, outlines a series of objectives and potential actions that the region should take to implement the regional bicycle and pedestrian system envisioned in Destination 2030. The Strategy is also intended to serve as a guide for local agencies and organizations to consider when developing their own bicycle and pedestrian systems. It should also be noted that the Seattle-based Cascade Bicycle Club has developed a Regional Bicycle Network Study for the Puget Sound region.

Vision 2040 was adopted on April 24, 2008. The regional growth strategy in Vision 2040 proposes that designated Metropolitan Cities (e.g. Tacoma), Core Cities (e.g. Lakewood, Puyallup), and Larger Cities (e.g. University Place) should play an increased role in accommodating population and employment growth in the Puget Sound region while the Unincorporated Urban Growth Areas should have a decreased role in accommodating growth. Vision 2040 includes a multi-county planning policy (MPP-T-16) to “promote and incorporate bicycle and pedestrian travel as important modes of transportation by providing facilities and reliable connections.” Proposed actions identified in Vision 2040 include the development of guidelines for local jurisdictions in developing bicycle and pedestrian components of comprehensive plans, updating the Regional Bicycle and Pedestrian Implementation Strategy, and the development of a regional bicycle network signage program.

At the state level, WSDOT has recently updated its State Bicycle Facilities and Pedestrian Walkways Plan, which is an element of the Washington Transportation Plan (WTP). This plan includes strategies for improving connections, increasing coordination, and reducing traffic
congestion. This plan satisfies the state and federal requirements for a long-range bicycle and pedestrian plan. The WSDOT Design Manual also serves as a good reference document for pedestrian and bicycle facilities.

At the national level, there are numerous reference documents on pedestrian and bicycle facilities. Among the most prominent are the publications from the American Association of State Highway and Transportation Officials (AASHTO), which includes the Guide for the Planning, Design, and Operation of Pedestrian Facilities (referred to hereafter as the "AASHTO Pedestrian Guide") and the Guide for the Development of Bicycle Facilities (referred to hereafter as the "AASHTO Bike Guide"). An update to the AASHTO Bike Guide is currently underway and is expected to be completed by Spring 2010. It is a state law requirement that signs, signals, and pavement markings for pedestrian and bicycle facilities shall be installed and maintained in accordance with the Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).

Benefits of Nonmotorized Travel

The preceding nonmotorized planning efforts all have emphasized the benefits of bicycling and walking. There has been an increasing amount of research on the multiple benefits of bicycling and walking. According to the Pedestrian and Bicycle Information Center, there is a wide range of benefits that can be attributed to bicycling and walking, including:

Transportation Benefits - Bicycling and walking can have the potential to reduce roadway congestion and its adverse impacts (wasted time and energy, driver frustration, etc.). According to the 1990 Census, about one-third of all Americans cannot or do not drive and therefore must rely on alternative modes of travel such as biking and walking for transportation purposes. Roadway improvements (e.g. adding paved shoulders) to accommodate pedestrians and bicyclists can also enhance safety for motorists.

Environmental Benefits - Bicycling and walking can reduce air pollution and fuel consumption from motor vehicles. Motor vehicle emissions account for 31% of total carbon dioxide, 81% of carbon monoxide and 49% of nitrogen oxide emissions in the U.S. In addition, vehicle exhaust contributes to fine particulate pollution during the summer months. It should be noted that the Puget Sound region was recently found to be in violation of the federal air quality standards for ozone and fine particulate matter (PM 2.5). Cars and trucks also burn millions of barrels of oil, a non-renewable energy source, on a daily basis.

Economic Benefits - Bicycling and walking are affordable forms of transportation. Automobile ownership can be expensive. It has been estimated that the typical U.S. household spends 13% of its income on owning and operating an automobile. The presence of pedestrian and bicycle improvements in an area can increase its tourism and can also serve to attract new businesses and workers, thereby increasing the number and range of job opportunities. Nonmotorized facilities can also potentially increase property values.

Quality of Life Benefits - In addition to providing recreational opportunities, pedestrian and bicycle improvements are indicators of a community’s livability. In areas where people can regularly be seen bicycling and walking, there is a sense that these communities are safe and
friendly places to live and visit. Nonmotorized facilities can foster social intersection, and preserve an area’s heritage and character.

Health Benefits (Physical Activity/Active Living) - There is a good deal of research that indicates that regular physical activity, such as biking and walking, reduces the risk of developing heart disease, diabetes, high blood pressure, and colon cancer. Physical activity helps maintain healthy bones, muscles, and joints. It also reduces feelings of depression and anxiety and promotes psychological well-being.

It is currently recommended that people of all ages should engage in up to 30 minutes of moderate activity (brisk walking) or up to 20 minutes of vigorous activity (jogging) per day for at least 5 days per week. Yet, according to the Surgeon General, more than 60% of U.S. adults do not achieve this recommended amount of physical activity. Current transportation trends (e.g. longer commutes, lack of a grid or well-connected roadway system) and land use patterns (e.g. urban sprawl, low density development, auto-oriented building and site designs) have increased automobile dependency and discouraged physical activity such as walking and biking. Fewer students may be allowed to walk or bike to schools due to school district concerns about walking and bicycling conditions along existing roadways. Furthermore, school districts receive State funding for transportation services based on the number of students bused to school.

Physical inactivity has contributed to more cases of obesity and other health problems. The Center for Disease Control (CDC) has indicated that the obesity rate among Washington adults increased by 127% between 1990 and 2002 and that nearly 3 in 5 state residents are overweight or obese. According to a study commissioned by the Washington State Department of Health and the WCPPA in 2000, the annual cost of physical inactivity in Washington will increase to nearly $9 billion by 2007, based on current trends in medical and labor costs, inflation, and the state’s aging population.

There is a growing number of resources, websites, and publications on how communities can become more “walkable” or “bikeable” in order to promote healthy lifestyles or “active living”, which is a relatively new term to describe a way of life that integrates physical activity into our daily routine. With the passage of ESSB 5186, it is expected that there will be an increasing emphasis on promoting biking and walking as healthy modes of transportation.

II) THE EXISTING NONMOTORIZED TRANSPORTATION SYSTEM

Pedestrian Travel

Walking is a basic form of transportation for people of all ages. Children, the elderly, minorities, people with low income, and people with impairments or disabilities traditionally walk more than other segments of the population. For these groups, walking is often the only transportation choice that is available to them. However, according to year 2001 data from the Nationwide Personal Transportation Survey (NPTS), trips made by walking declined by 40% for both children and adults between 1977 and 1995. According to year 2000 data from the U.S. Census, 25% of all trips made are within a walkable distance of 1 mile or less, yet three-fourths of these short trips are made by car. According to year 2005 data from the Bureau of Transportation
Statistics (BTS), walking accounts for just 2.5% of commute trips nationwide and only 2.9% of commute trips in the State of Washington.

**Types of Walkways**

For purposes of this white paper, “walkway” will be used as generic term to describe a facility or improvement which in some manner accommodates pedestrian travel. Although their descriptions vary somewhat, the AASHTO Pedestrian Guide and the WSDOT Design Manual identify the following types of walkways along roadways: sidewalks; shoulders; off-road paths; and shared-use paths.

Sidewalks - refer to paved walkways that are provided on one or both sides of a roadway and are intended primarily for use by pedestrians. The County’s current design requirements call for sidewalks made of cement concrete on both sides of the roadway with a standard width of 6 feet (without a buffer) or 5 feet (with a buffer).

Shoulders - refer to the paved or unpaved (e.g. gravel) portions of a roadway contiguous with the travel way which are open for use of pedestrians, bicyclists, and motor vehicles. The County’s current design requirements call for shoulders to be provided on both sides of the roadway. The type of surface (paved or unpaved) and the width of the shoulders depends upon the type of roadway (arterial or local road) and its location (urban or rural area).

Off-Road Paths - refer to paved or unpaved walkways that are generally set back from the roadway, separated by a buffer, and intended primarily for use by pedestrians. Also referred to as “walking trails”, off-road paths that generally follow a roadway alignment are also known as “side paths” or “roadside paths”. It should be noted that the NMTP defined a “path” as a walkway consisting of gravel or a natural surface on one side of a roadway only. However, the County’s current design documents refer to off-road paths as “walkways” that are paved (made of asphalt) on both sides of the roadway and have a standard width of 6 feet (without a buffer) or 5 feet (with a buffer).

Shared-Use Paths - refer to off-road paths that are developed for the shared use of pedestrians, bicyclists, and other users. Also commonly referred to as “multi-use trails”, the County’s current design documents refer to shared-use paths as “pedestrian/bicycle trails” that are paved (made of asphalt) on one side of the roadway only with 2-foot-wide graded areas on both sides.

It should be emphasized that pedestrian facilities must meet accessibility laws, regulations, and standards, including compliance with Americans with Disabilities Act (ADA) requirements.

**Characteristics of a Pedestrian-Friendly (“Walkable”) Community**

According to the AASHTO Pedestrian Guide, communities with high levels of walking are characterized by a good mix of land uses, continuous and connected pedestrian facilities that are adequately separated from fast-moving vehicular traffic, safe and convenient street crossings, pedestrian lighting, and a pleasant visual environment. Likewise, a community is also considered “walkable” if it incorporates the following elements: safety (e.g. well-lit, narrower streets); high density development; connections among transportation options (e.g. sidewalks,
bicycle lanes, trails, and transit); convenience (e.g. small block size and a well-connected roadway network); and attractiveness (e.g. street trees, clean surroundings). In addition, a pedestrian-friendly jurisdiction will typically have an adopted pedestrian plan or nonmotorized plan, a full-time pedestrian coordinator, and a pedestrian advisory committee.

**Description of Existing Pedestrian Policies and Practices**

The County’s policies and practices for the provision of pedestrian facilities is dependent upon the project proponent (e.g. public projects sponsored by Pierce County, other agencies, or utility companies or private projects sponsored by developers or landowners), the roadway type (e.g. public or private roads, County-classified arterials or local roads), and the project location (e.g. within or outside of the County-designated urban growth area, within a Community Plan area).

For public projects, the County usually provides pedestrian facilities as part of any newly constructed or reconstructed arterial project. In urban growth areas, sidewalks are typically provided on both sides of the arterial. In rural areas, a paved or gravel shoulder is typically provided on both sides of the arterial. It should be noted that a number of County arterial improvements are funded with federal and state grant programs, which may require that pedestrian facilities be included as part of any project proposal. In a few cases, the County has provided sidewalks in areas outside of the urban growth area since a project (e.g. 112th Street East in the Mid-County area) was located within a federal-aid urbanized area. In other cases, funding agencies such as the Transportation Improvement Board will allow agencies to construct a sidewalk or a shared-use path on only one side of the roadway (e.g. Lake Tapps Parkway East) instead of sidewalks on both sides of the roadway.

For private projects, sidewalks are required on both sides of any newly constructed road in all new developments located in the urban growth areas, pursuant to the Pierce County Code (Section 17B.30.040). In some cases, the County has allowed off-road paths or shared-use paths to be constructed in lieu of sidewalks within development sites. It should be clarified that this requirement applies to internal roads within a development site but does not apply to roadways along the frontage of the development property. However, a development may be required to provide pedestrian improvements along the frontage of an existing County roadway if such frontage improvements are required by the Community Plan development regulations for that area. Frontage improvements may also be required as a condition of approval by the Hearing Examiner or as a mitigation measure through the State Environmental Policy Act (SEPA) process.

**Description of the Existing Pedestrian System**

General speaking, the County’s pedestrian system consists predominantly of some sidewalks in the urban growth areas (e.g. Parkland-Spanaway-Midland, Frederickson, and South Hill) and shoulders on some arterials in the rural areas (e.g. Key Peninsula, Gig Harbor Peninsula, Mid-County, Graham, Alderton-McMillin, Upper Nisqually Valley, and other parts of southern and eastern Pierce County). Pedestrian improvements are more common along new or recently reconstructed arterials and in newer development areas. Due to the lack of uniform countywide pedestrian policies, limited funding, and right-of-way constraints, the pedestrian networks in some unincorporated areas are fragmented and disconnected. The results of recent public
surveys conducted for the Transportation Plan Update indicate that a majority of survey participants rated walking conditions in the unincorporated areas of Pierce County as “poor” or “fair”. Based upon community feedback received through the County’s outreach efforts, its website, and other channels, there have been increasing demands from the general public who desire more pedestrian improvements.

**Bicycle Travel**

Like walking, bicycling is done by people of all ages. The AASHTO Bike Guide identifies three type categories of bicycle user groups - Advanced, Basic, and Children (also referred to as A, B, and C bicyclists respectively). Advanced or experienced riders are described as bicyclists who typically more comfortable with motor vehicle traffic and often travel along the traffic lanes or shoulders. Good examples of advanced bicyclists are the active or long-time members of the Tacoma Wheelmen Bicycle Club (TWBC) or the Foothills Rails-To-Trails Coalition. Basic or less confident riders are described as bicyclists who prefer to avoid roadways with busy motor vehicle traffic and prefer to travel on neighborhood streets, sidewalks, shared-use paths, or designated bicycle facilities such as bicycle lanes. Like basic riders, children are described as bicyclists who tend to ride on residential streets and usually avoid busy arterials. Although basic riders and children are far more numerous than advance riders, advanced riders tend to be more active in participating in bicycle planning efforts and advocating for bicycle improvements.

According to year 2001 NPTS Survey data, more than 60% of all trips made are within a bikeable distance of 5 miles or less, but fewer than 1% of these trips are actually made by bicycle. According to the 2005 American Community Survey (ACS) data from the U.S. Census Bureau, travel by bicycle accounts for just 0.4% of the total transportation trips to work. It should be noted that PSRC’s 2006 Household Activity Survey data indicates that bicycling only accounts for about 1% of total transportation trips in the Puget Sound region.

**Types of Bikeways**

For purposes of this white paper, “bikeway” will be used as generic term to describe any road, street, path, or way which in some manner is designated for bicycle travel. Since references to "bicycle routes", "bicycle lanes", and other bicycle terms are sometimes used interchangeably by the public, it is important to define the different types of bikeways. The most commonly used definitions can be found in the AASHTO Bike Guide, the MUTCD, and the WSDOT Design Manual. Although their definitions for the different bikeways vary to a certain degree, these documents generally identify four types of bikeways:

Shared Roadways - refer to roadways or portions of a roadway which are open to both bicycle, motor vehicle, and other users. Common examples of this type of bikeway are roadways with wide curb lanes (also referred to as “outside lanes”) and paved shoulders with *striping* (typically denoted with 4-inch-wide solid white edge lines or “fog lines” on the extreme right side or outer edge of the traffic lane).

Bicycle Routes (Signed Shared Roadways) - refer to roadways or portions of a roadway which have been designated by *signing* as a preferred route for bicycle use. Bicycle routes should be continuous and may consist of a combination of any and all types of bikeways. For example,
C Street South between Military Road South and 122nd Street South in the Spanaway area includes striped paved shoulders and should be considered a designated bicycle route since it includes green “bike route” guide signs on both sides of the roadway. Currently, this is the only designated bicycle route in unincorporated Pierce County.

Bicycle Lanes - refer to the portions of a roadway that have been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicyclists. As part of a pilot program, Pierce County recently completed designated bicycle lanes on Canyon Road East between 152nd Street East and 112th Street East in the Mid-County area. Bicycle lanes can also be found on State Route 7 (Pacific Avenue South) in the unincorporated Parkland/Spanaway area and in the cities of Dupont, Fife, Gig Harbor, Lakewood, Sumner, Tacoma, and University Place.

Shared-Use Paths - refer to bikeways that are physically separated from motorized vehicular traffic by an open space or barrier and may be either within the roadway right-of-way or within an independent right-of-way. Also commonly referred to as “multi-use trails”, shared-use paths may also be used by pedestrians, skaters, joggers, equestrians, and other users. The Cushman Trail and the Foothills Trail are examples of shared-use paths. It should be noted that the Pierce County Parks and Recreation Department has historically taken a leading role in developing shared-use paths and other off-road trails while the Public Works and Utilities Department has been responsible for on-road pedestrian and bicycle projects within the right-of-way of the County’s roadway system.

According to the AASHTO Bike Guide, sidewalks are generally not acceptable for bicycle travel since they are typically not wide enough to accommodate both pedestrians and bicyclists. However, it is widely recognized that the use of sidewalks by bicyclists, especially children, is very common.

### Characteristics of a Bicycle-Friendly (“Bikeable”) Community

According to the Pedestrian and Bicycle Information Center, communities that are considered bicycle-friendly are those that have implemented a wide range of measures (engineering, education, and enforcement) to make bicycling more safe, convenient, and comfortable. The cities of Portland, Oregon and Seattle, Washington are widely regarded as two of the best bicycle-friendly communities in the nation. Bicycle-friendly communities typically have significant regional shared-use paths (trails) linked to a network of major roadways with striped bicycle lanes and signed bicycle routes that are well maintained to provide a safe and smooth bike rides. Some have redesigned intersections to give priority to bicyclists, experimented with colored bicycle lanes, or adopted regulations that require developers to install bicycle amenities (e.g. racks, lockers, showers, etc.) in new buildings. “Bikeable” communities also publish a bike map, promote bicycling through events, teach bicycle safety in schools, integrate bicycles into the transit system, and enforce traffic laws that enhance bicyclist safety. In addition, a bicycle-friendly jurisdiction will typically have an adopted bicycle plan or nonmotorized plan, a full-time bicycle coordinator, and a bicycle advisory committee.
Description of Existing Bicycle Policies and Practices

The Public Works and Utilities Department strives to include wide curb lanes or striped paved shoulders as part of most new or reconstructed Major and Secondary Arterial projects, whenever feasible. While the County has performed minor shoulder widening as part of its roadway maintenance and preservation projects, it should be emphasized that this work is done primarily to provide structural support for the roadway pavement and often involves the application of chip seal surface, which is not considered a desirable riding surface by some bicyclists.

The County’s standard width for wide curb lanes, when required, is 15 feet for two- and three-lane roadways and 14 feet for multi-lane roadways. When striped paved shoulders are provided on arterials in the urban areas, the County’s current practice is to provide a shoulder width of 4 feet when measured from the edge line to the front edge of the gutter. The current widening projects along Canyon Road East and 176th Street East are examples of arterials that will include 4-foot-wide striped shoulders. When striped paved shoulders are provided on arterials in the rural areas, the County’s current practice is to provide a shoulder width of 6 feet when measured from the edge line to the outside edge of the pavement.

At this time, the County does not have any adopted criteria or policies for bicycle routes. However, the County is currently updating its design standards to allow for 5-foot-wide bicycle lanes on arterials, as measured from the edge line to either the outside edge of the pavement or the face of the curb.

Based upon consultations with staff from the Planning and Land Services (PALS) Department and the PWU Traffic Division, Pierce County does not typically require developers to provide bicycle facilities along internal roads or arterials as part of development proposals. In some cases, wide curb lanes have been provided by developers along arterials in urban areas where they have been required to make other roadway improvements such as turn lanes.

Description of the Existing Bicycle System

General speaking, the County’s bicycle network consists predominantly of wide curb lanes and striped paved shoulders along new or recently reconstructed arterials in the urban growth areas and a limited number of striped paved shoulders in the rural areas. Continuous bicycle improvements have been phased along some County arterial corridors (e.g. 112th Street East, Canyon Road East, and 176th Street East) in the urban growth areas. However, most of the corridors in the unincorporated areas lack continuous bicycle facilities. Due to the absence of proactive bicycle policies, limited funding, the lack of a grid roadway network, and right-of-way constraints, the bicycle networks in many unincorporated areas are incomplete and indirect. The results of recent public surveys conducted for the Transportation Plan Update indicate that a majority of survey participants rated bicycling conditions in the unincorporated areas of Pierce County as “poor” or “fair”. Based upon community feedback received through the County’s outreach efforts, its website, and other channels, there is growing support for an interconnected network of bicycle facilities.
Equestrian Travel

Although many local jurisdictions typically address horse riding as part of recreational plans, equestrian travel has been previously addressed by a form of nonmotorized travel in the County’s transportation documents. The PCTP included a supplemental equestrian classification system, which identified “key equestrian roads”, “equestrian movement discouraged roads” and “major equestrian centers” throughout Pierce County. The NMTP included policy language that calls for the County to identify and ensure the maintenance of shoulders and paths (trails) that serve equestrian travel to public stables, trailheads, and other activity centers, provided that the equestrian use of these facilities does not limit or interfere with other transportation modes. This policy language has been subsequently carried forward into the Transportation Element and some Community Plans.

The County should strive to accommodate equestrian travel in the design of shoulders and paths, where appropriate. In particular, equestrian use of paved shoulders occurs in rural areas of Pierce County (e.g. Gig Harbor Peninsula, Key Peninsula, Mid-County, Graham). Wider shoulders or gravel paths adjacent to the shoulder or roadside ditch may be appropriate for those areas with well-documented equestrian travel. It should be noted that the County has included or will include horse paths adjacent to some sections of the Foothills Trail and the Cushman Trail in order to facilitate horse riding.

III) THE FUTURE NONMOTORIZED TRANSPORTATION SYSTEM

Emerging Issues and Trends

Striping and Signing of Bikeways

In May 2007, in response to Ordinance 2006-115s, the PWU Department submitted a report to the County Council related to the striping and signing of bikeways within the unincorporated areas of Pierce County. In this report, County staff recommended that the striping and signing of bikeways should be addressed in more detail as part of this Plan Update so that County staff could receive additional public and agency input and so that the Council could weigh the importance and costs of striping and signing of bikeways relative to other County transportation needs. The County has initiated a pilot program to implement dedicated bicycle-only lanes on a County roadway and to evaluate the costs and other factors that should be considered for continuing this program in future years. The County’s first signed and marked bicycle lanes have been constructed on Canyon Road East between 152nd Street East and 112th Street East. Nevertheless, the PWU Department is currently updating its Manual on Design Guidelines and Specifications for Road and Bridge Construction to identify design standards for bicycle lanes.

Other agencies and organizations are implementing or studying the striping and signing of bikeways. King County, Snohomish County, and Thurston County already have road standards for bicycle lanes. As part of the development of Transportation 2040, PSRC is currently considering the development of a regional bicycle wayfinding signage system. The National Committee on Uniform Traffic Control Devices (NCUTCD) has recommended that shared lane markings (aka sharrows) be included as an option in the next update to the MUTCD.
Roadside Shared-Use Paths

There appears to be growing community support for shared-use paths along County roadways. The NMTP and the Community Plans have included numerous recommendations for shared-use paths. While our current design standards allow for a "Pedestrian/Bicycle Trail", it is silent on the issue regarding the locations or conditions under which a roadside trail should be considered. Many of our better known shared-use paths (e.g. Foothills Trail, Cushman Trail) are currently located in the rural or less urbanized areas of the county. With the exception of trail crossings at intersections and mid-block locations, these trails have been mostly located outside of the roadway right-of-way. However, individual members of the Community Planning Boards and local bicycle/trail advocacy groups (Tacoma Wheelmen's Bicycle Club, Foothills Rails-To-Trails Coalition) have suggested that the County consider the expanded use of shared-use paths within the roadway right-of-way as a safer alternative to wide curb lanes or striped shoulders. Shared-use paths provide a physical and visual separation between vehicular traffic and nonmotorized users. There is a growing concern that younger and less experienced bicyclists may not feel comfortable "sharing the road" on urban arterials, where traffic volumes are heavy and traveling at higher speeds. This wariness leads to increased bicycle use on sidewalks, which are primarily intended for pedestrian use and, according to the AASHTO Bike Guide, are not acceptable for bicycling. The SR-16 Scott Pierson Trail along SR-16 is an example of a shared use path located within the State’s right-of-way. Portions of the proposed Cross County Commuter Connector (also known as the “4C Trail”) are expected to be located within the right-of-way of certain County roadways (e.g. along 144th Street East from 86th Avenue East to SR-161 and along Stewart Road from State Route 167 to Lake Taps Parkway East).

However, it should be pointed out that shared-use paths on one side of the roadway do present operational and safety concerns with every side street crossing. To reduce the potential for conflicts between nonmotorized users and motorized vehicles, signs and other safety improvements (e.g. bollards) may be necessary at locations where the path crosses a roadway. Since shared-use paths are designed for two-way travel, they create a situation where bicyclists are riding against motor vehicle traffic, which is contrary to normal rules of the road. As a result, motorists turning to exit a cross street may not notice a bicyclist riding against traffic. Shared-use paths also have the potential to create conflicts between pedestrians traveling at low speeds and bicyclists traveling at high speeds.

From a funding perspective, the provision of a bidirectional shared-use path on one side of the roadway may be less costly than paved shoulders on both sides of the roadway. A shared use path would also eliminate the cost for a sidewalk on the path side of the roadway. TIB staff has indicated that deviations to allow a shared use path are routinely approved for funding and sometimes even preferred depending upon particular characteristics of the roadway (e.g. land uses on only one side of the roadway), subject to the approval of a deviation. While shared-use paths have previously been regarded as "non-road" or "recreational" projects, they should also be regarded as transportation facilities, especially if they serve as connections to employment centers and other key destinations. With the growing emphasis on promoting physical activity pursuant to ESSB 5186 requirements, the identification of a regional interconnected trail network by the ForeverGreen Council, and the upcoming preparation of the Regional Trails Plan by the County Parks and Recreation Department, the possibility of more shared use paths within the County’s roadway right-of-way seems imminent.
The Cities of Everett, Redmond, and Seattle have identified roadside shared use paths (referred to as “backbone trails” and “urban trails”) and the roadways leading to them as key components of their nonmotorized systems. As part of this update, a policy should be included that calls for the Public Works and Utilities Department to work with the County Parks and Recreation Department to identify roadway segments where roadside shared-use paths may be appropriate and to identify nonmotorized improvements leading to key park facilities and trails.

Wide Curb Lanes vs. Bicycle Lanes/Paved Shoulders

As previously noted, wide curb lanes, bicycle lanes, and paved shoulders have been identified as suitable bikeways, with advanced bicyclists typically more comfortable with riding on wide curb lanes or striped paved shoulders while basic or children bicyclists preferring to ride on designated bicycle lanes or shared-use paths. The USDOT issued a report in 1999 that presented the operational and safety finding from a comparative analysis of wide curb lanes and bicycle lanes. Although this report focused specifically on designated bicycle lanes, many of its findings about bicycle lanes may also be applicable to striped paved shoulders. While the overall conclusion of the report was that both wide curb lanes and bicycle lanes can and should be used to improve riding conditions for bicyclists, some of the specific findings are worthy to point out. The report found that wrong-way riding and sidewalk riding were much more prevalent on roadways with wide curb lanes. Also, the report found that significantly more vehicles passing bicyclists on the left encroached into the adjacent traffic lane on roadways with wide curb lanes. The report concluded that, given the stated preferences of bicyclists for bicycle lanes in previous studies, roadways with bicycle lanes (or striped paved shoulders) are more likely to increase the amount of bicycling than wide curb lanes.

The WSDOT Design Manual (Chapter 1020) recommends striped paved shoulders on rural and suburban highways with speeds above 25 mph and average daily traffic (ADT) volumes above 2,000 while bicycle lanes are recommended on major arterials. The WSDOT Design Manual suggests that bicycle lanes should be utilized along streets in corridors where there is current or anticipated bicycle demand and where it would be unsafe for bicyclists to ride in the traffic lane. The City of Redmond’s Transportation Master Plan recommends additional operating space for bicyclists (i.e. bicycle lanes or a parallel trail) on roadways with high travel speeds.

Like bicycle lanes, striped paved shoulders improve the safety and comfort levels of both bicyclists and motorists by delineating the portion of the roadway assigned to them. As an alternative to designated bicycle lanes, striped paved shoulders should also be considered on arterials with high traffic speeds and heavy traffic volumes.

Pavement Surfaces for Bicycling

Another bicycle safety-related issue concerns the type of roadway surface. Some bicyclists have expressed concerns over the County’s use of chip seal surfaces, which are generally rougher than asphalt pavement. Chip seals also increase tire rolling resistance and produce loose rock. Bicyclists typically prefer hot mix asphalt (HMA) overlays, which provide a much smoother riding surface for bicyclists than the chip seal surfaces. However, the cost per lane mile for HMA overlays can be up to ten times higher than the cost per lane mile for chip seals. A potential cost effective alternative to HMA overlays would be the use of rubberized chip seals,
which are more expensive than the standard chip seal surface yet significantly cheaper than HMA overlays. In addition to curing quicker and providing a more aesthetically pleasing darker color, the rubberized chip seal surface produces less loose rock and therefore requires less roadway sweeping. However, given the County’s financial limitations and its significant miles of roadways, the application of rubberized chip seal surfaces is generally limited to arterials with high traffic volumes and heavy truck usage.

Performance Measures and Benchmarks

The County does not currently have any levels of service (LOS) targets or performance measures for nonmotorized improvements. Likewise, the County also does not have any formal benchmarks or “yardsticks” to monitor or evaluate its progress in implementing the nonmotorized system identified in the Transportation Element.

The 1997 NMTP included a policy that the County should pursue a 15% funding goal for nonmotorized transportation from the County’s road construction fund. This proposed funding target was based upon the estimated level of funding for nonmotorized projects from the Pierce County 1996 road construction fund and was also based upon a goal set in the 1994 National Bicycle and Walking Study (NBWS), which included an overall goal that 15.8% of all trips should be made by bicycling and walking. This proposed funding target was later incorporated into the Transportation Element. However, the County does not actively track nonmotorized spending levels since nonmotorized improvements are typically constructed as part of larger motorized projects. Since the cost of the nonmotorized components are not separated out from the total cost of the motorized project, the total spending level for nonmotorized improvements is unknown, and therefore it can not be determined if this funding target is being met.

A few local jurisdictions have included nonmotorized LOS standards or targets in their transportation elements or nonmotorized plans. The City of Kirkland Transportation Element includes a twenty-year LOS standard of 1.5 miles/1,000 persons for bicycle routes and 3.2 miles/1,000 persons for sidewalks. The City of Redmond Transportation Element identifies mode split targets (% of daily trips by modes other than single occupant vehicles) for different areas of the city. In addition, the City of Redmond Transportation Master Plan includes multi-modal LOS measures for bicycle system implementation (e.g. full completion of all high-priority bicycle corridors by the year 2022) and pedestrian environment adequacy. Both the Cities of Kirkland and Redmond include “completion status” maps in their respective plans to track their progress in attaining their respective nonmotorized LOS measures. The Seattle Bicycle Master Plan includes a number of performance targets and measures, including number of bicyclists observed, number of reported bicycle crashes, percentage of bicycle network completed, and number of bicycle project grant applications applied for and obtained.

As part of the upcoming Transportation Plan Update (TPU), the County may want to consider setting a benchmark (e.g. “miles of projects completed”) in order to monitor nonmotorized project implementation.
Education, Encouragement, and Enforcement

Pierce County performs a number of functions to educate and encourage the public about the various benefits of nonmotorized travel. The PWU Department has developed a countywide Bike Map to identify bikeways to major centers, tourist attractions, and other key destinations within Pierce County. The Pierce County Bike Map also includes information on bicycling laws and safety tips. The PWU Department also maintains a Nonmotorized Transportation web page to disseminate information about new nonmotorized projects and to provide an opportunity for the public to request information or leave feedback about nonmotorized needs. As part of the CTR program, the PWU Department works with private employers to promote nonmotorized travel as an alternative to single-occupant vehicle (SOV) travel. The PWU Department also participates in the TPCHD’s Healthy Eating and Physical Activity Coalition to share and receive nonmotorized information from other agencies and public health organizations. In addition, the PWU Department coordinates with the PALS Department to provide nonmotorized information to the Community Planning Boards and the general public as part of the development of the Community Plans. The PWU Department works with local school districts to monitor speed zones at school sites and to identify any necessary traffic signs and pavements markings (crosswalks) to support safe walking routes for students. The PWU Department coordinates with the Sheriff Department to monitor the enforcement of any new signs or crosswalks in school areas. While the Sheriff Department provides contract services to some school districts as part of its School Resource Officer (SRO) Program, this outreach effort does not address pedestrian and bicycle safety issues due to limited funding and manpower.

House Bill 2564 (HB 2564) was signed into law on March 25, 2008 and would require that the State add information about the importance of safely sharing the road with bicyclists and pedestrians to the curriculums for driver training schools and traffic safety education classes. As part of the development of Transportation 2040, PSRC is currently considering the development of regional bicycle education and encouragement programs and a regionally coordinated annual pedestrian and bicycle safety public awareness campaign. In addition, PSRC is considering the development of a regional bike map and an online bicycle route planner. It should be noted that the City of Bellevue has developed a “Trips to School” Pilot Program to encourage elementary students, among other things, to walk or bike to school and to educate them about safe pedestrian and bicyclist skills. The ability of Pierce County to implement a similar program on a countywide basis may likely require additional funding and staffing levels.

As part of the TPU, it is recommended that policies be included to continue these work efforts and to seek out other opportunities and new partnerships (e.g. school districts, TPCHD) to promote safe pedestrian and bicycle travel.

Developer Requirements for Bicycle Improvements

As previously mentioned, developers are not currently required by the County to provide bicycle facilities (paved shoulders or wide curb lanes) along internal roads or arterials along their property frontage. Other local jurisdictions have imposed bicycle requirements upon developers. The City of Dupont’s Comprehensive Plan includes policies in its Land Use, Transportation, and Capital Facilities Elements to require that developers provide bicycle improvements and amenities. According to City staff, most of the sidewalks, street trees and landscaping, and its
citywide pedestrian trail system have been wholly funded and constructed by private developers. The City of University Place’s Transportation Element identifies “bike lanes and other improvements” as potential transportation mitigation associated with new development. In accordance with the Chapter 13.20 of its Municipal Code, the City of University Place requires developers to install paved shoulders/bicycle lanes on any classified arterials or other designated bicycle routes as part of any required frontage improvements. As part of this Plan Update, consideration should be given to a policy that would require that private developers be held to the same bicycle level of service standards or targets that will apply to County-sponsored road or bridge projects.

**Funding**

Estimated Cost of Nonmotorized Needs

As previously noted, the NMTP identified an estimated total cost of about $227.6 million (based on year 1996 dollars) in nonmotorized needs for the unincorporated areas. It should be noted that this estimate included costs for off-road paths and shared-use paths that may be funded and implemented by the Pierce County Parks and Recreation Department or other park districts. However, this total cost estimate may be significantly higher due to inflated cost for right-of-way acquisition due to rising property values in Pierce County. In addition, construction costs have increased dramatically over the last few years due to large increases in diesel and asphalt prices. It should also be pointed out that this amount does not take into account the cost of the nonmotorized improvements completed over the last ten years and does not include the cost of any additional nonmotorized projects that may have been identified in the Community Plans.

Revenue Sources for Nonmotorized Projects

The County uses a wide variety of local, state, and federal funding sources to finance nonmotorized projects. Since nonmotorized improvements are typically constructed by the County as part of motorized projects, funding for these projects has come primarily from the County Road Fund (consisting mostly of revenue derived from the property tax and the State gas tax) and the Second Real Estate Excise Tax (REET). Additional funding comes from the recently adopted Traffic Impact Fee (TIF) program, which went into effect on January 1, 2007. In addition to funding from other jurisdictions, agencies, and developers, the County has received funding for nonmotorized improvements from federal and state grant programs, which may award additional points to transportation projects with pedestrian and bicycle components. These federal grants include the Surface Transportation Program (STP) grants administered by PSRC. The state grants include the Urban Arterial Program (UAP) and Urban Corridor Program (UCP) grants administered by the Transportation Improvement Board (TIB) and the Rural Arterial Program (RAP) grants administered by the County Road Administration Board (CRAB).

There are other federal and state grant programs that have been created to provide funding for “stand-alone” nonmotorized projects (i.e. pedestrian or bicycle improvements that are not implemented as part of a roadway capacity project), including:

Congestion Mitigation and Air Quality (CMAQ) Program - This federal grant is administered by PSRC and provides funding to projects and programs that reduce transportation related emissions
in regions classified as air quality nonattainment or maintenance areas. Except for the Commute Trip Reduction (CTR) program, the County has not received funding from this grant program for any “stand-alone” nonmotorized projects in the past ten years.

Transportation Enhancements (TE) Program - This federal grant is administered by PSRC and provides funding to transportation-related activities that strengthen or “enhance” the cultural, aesthetic, or environmental aspects of the transportation system. In the past ten years, the County has been awarded only $199,000 from this grant program for three “stand-alone” nonmotorized projects.

Urban Sidewalk Program (UR-SP) - This state grant is administered by TIB and provides funding to transportation projects that improve pedestrian safety, access, connectivity, and system continuity. This program has essentially replaced the Pedestrian Safety and Mobility Program (PSMP). In the past ten years, the County has been awarded only $150,000 from this grant program for two “stand-alone” nonmotorized projects.

Pedestrian and Bicycle Safety Program - This state grant is administered by WSDOT and provides funding to projects that improve pedestrian and bicycle safety through engineering, education, and enforcement. In the past ten years, the County has not received funding from this grant program for any “stand-alone” nonmotorized projects.

Safe Routes to School Program - This grant is supported by both federal and state funds and is administered by WSDOT. It provides funding to engineering improvements, education projects, and enforcement efforts within two miles of primary and middle schools (K-8). This program has essentially replaced the Traffic Safety Near Schools Program. In the past ten years, the County has been awarded only $181,000 from this grant program for two “stand-alone” nonmotorized projects.

It is difficult to forecast the projected revenue levels for nonmotorized projects since transportation funding levels can be affected by a wide variety of factors that are external or internal to a local jurisdiction. As previously noted, the NMTP identified $61.6 million in forecasted nonmotorized revenues over 20 years. However, this revenue forecast incorrectly assumed that 15% of the County’s construction road funds was set aside for nonmotorized projects. Furthermore, the County has had limited success in securing grant funding for “stand-alone” nonmotorized projects. It is unlikely that the County would receive a substantial amount of the CMAQ or TE funds available from PSRC for “stand-alone” nonmotorized projects since these federal grant programs give priority in scoring to the PSRC-designated “centers”, which are predominantly located outside of unincorporated Pierce County. Also, the County does not have a full-time position assigned to nonmotorized grant applications. In the absence of funding dedicated or earmarked towards nonmotorized projects, it is likely that future nonmotorized improvements will continue to be implemented as part of larger motorized projects.

For purposes of this white paper, it could be assumed that Pierce County is currently facing a significant funding shortfall for nonmotorized needs in the unincorporated areas. To be consistent with the major goal of the upcoming TPU to develop a financially constrained plan, it is necessary for Pierce County to develop an implementation strategy for prioritizing its nonmotorized needs based on this significant funding limitation.
Potential Implementation Strategies

In order to develop a range of potential nonmotorized implementation strategies, County staff examined the nonmotorized sections in the transportation elements for some of the adjacent counties (King County, Kitsap County, and Thurston County). In addition, CTED and PSRC staffs were contacted to find out if they could recommend other local jurisdictions with exceptional or outstanding nonmotorized plans or components. The following cities (in alphabetical order) were highly recommended: Bellevue; Everett; Kirkland; Redmond; Seattle; Tacoma; and University Place. The nonmotorized implementation strategies in these agency plans are summarized in the following paragraphs.

“Complete Streets”

The Cities of Kirkland and Seattle have adopted “Complete Streets” policies in their respective transportation elements. The City of University Place has elements of such a policy that has been in place since 1997. The City of Tacoma is currently developing Complete Streets Design Guidelines for designated Mixed-Use Centers throughout the city. Based upon a U.S. Department of Transportation (USDOT) Design Guidance for integrating bicycling and walking into the transportation system, “Complete Streets” is a policy statement that bicycling and walking facilities shall be incorporated into all transportation projects unless “exceptional circumstances” exist. Specifically, the USDOT Design Guidance recommends that bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas [emphasis added], unless one or more of three conditions are met: 1) bicyclists and pedestrian are prohibited by law from using the roadway; 2) the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use; and 3) sparsity of population or other factors indicate an absence of need. The overriding principle of “Complete Streets” is that roadways should be designed and operated for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. The National Complete Streets Coalition describes a good “Complete Streets” policy as one that aims to create a comprehensive and connected network but also recognizes the need for flexibility (i.e. that all streets are different and that user needs must be balanced).

There are a number of arguments for and against “Complete Street” policies. Supporters claim that “Complete Streets” policies promote travel choices and can therefore reduce traffic congestion and increase the overall capacity of the transportation network. Other proponents emphasize that including bicycle and pedestrian improvements at the beginning of roadway projects will save jurisdictions from the higher costs of adding these improvements at a later time. Other potential benefits cited by “Complete Streets” supporters are improved safety for all users, the promotion of healthy and active lifestyles, and the reduction in greenhouse gas emissions (i.e. climate change). Critics counter that “Complete Streets” policies do not recognize the right-of-way and funding constraints facing local jurisdictions and do not take into account expected levels of use or the perceived lack of demand for nonmotorized improvements in some areas. While “Complete Streets” policies may be appropriate for urbanized areas, their implementation in rural areas may not be applicable. They have also been criticized for diverting funds away from congestion relief projects that would benefit more users of the transportation system. While the implementation of “Complete Streets” policies may be more successful at the city level, its application at the county level may be more difficult to achieve since counties are...
generally larger in geographical size and have more roadway miles. For example, unincorporated Pierce County has over 1,500 total road miles while the City of University Place only has about 115 total road miles. Furthermore, since many counties are characterized by discontinuous land areas, it would be difficult for these counties to implement “Complete Streets” policies on a corridor-wide basis without the assistance of neighboring jurisdictions.

On August 26, 2008, the Pierce County Council adopted Resolution No. R2008-89s to request that a “Complete Streets” policy be included within the Transportation Plan Update (Attachment 1). Earlier on March 5, 2008, the Tacoma-Pierce County Board of Health approved a resolution endorsing the adoption and implementation of “Complete Streets” policies by municipalities in Pierce County. It should be noted that federal legislation (H.R. 5951 and S. 2686) has also been introduced in the U.S. Congress that would direct State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) to adopt “Complete Street” policies and apply them to upcoming federally-funded transportation projects.

“Multi-Modal Corridors”

As part of their transportation elements, the Cities of Everett and Redmond have established “multi-modal corridor” designations for arterials and local streets of high significance to transit operations and bicycle/pedestrian circulation. These “multi-modal corridors” are defined as major transportation facilities that provide a variety of travel alternatives and include transit components (e.g. frequent bus service, numerous bus stops) supplemented with pedestrian and bicycle improvements (e.g. sidewalks and bicycle lanes) that allow for enhanced modal integration. These agency plans indicate that future transportation spending in these jurisdictions should be focused on these designated “multi-modal corridors”.

High-Priority Corridors

A common element found in most of the agency plans mentioned above is their emphasis on prioritizing improvements for pedestrian and bicycle corridors leading to designated activity and employment centers. Kitsap County and the City of Redmond have given additional emphasis to bicycle travel as a transportation option by identifying high-priority bicycle corridors in their transportation elements or plans. Kitsap County has classified its bicycle facilities into three types (regional, sub-regional, and local) with highest priority given to the “regional facilities”. The City of Redmond gives highest priority to those roadways designated as “primary bicycling corridors”, which allow bicyclists to travel distances of 2 miles or more to major destinations and surrounding jurisdictions. Likewise, the City of Tacoma Transportation Element assigns high priority to pedestrian and bicycle projects on “connecting corridors” leading to the city’s manufacturing/industrial centers and mixed use centers. The Thurston County Transportation Element includes a policy to ensure that continuous or direct bicycle lanes are provided between all jurisdictions and major activity centers.

Interconnected Networks/System Connectivity

In addition to safety, another common element found in most of the nonmotorized plans mentioned above is their emphasis on developing an interconnected network. Like the arterial road system, “connectivity” is an important element of any nonmotorized system in order to
promote continuous and convenient travel. The City of Tacoma Transportation Element gives priority to sidewalks that complete missing links and to bikeway projects that are located either along its designated bicycle routes or along regional routes that connect to other jurisdictions’ bicycle corridors. The City of Kirkland Transportation Element includes a policy that the location of new pedestrian and bicycle facilities should be based upon the following factors: completion of the interconnected network established in its nonmotorized transportation plan; safe school routes; and connections to public facilities, commercial centers, and regional pedestrian and bicycle routes. As part of its draft 2007 Pedestrian and Bicycle Transportation Plan, the City of Bellevue is proposing to give priority to projects that promote connectivity to other existing sidewalk and bikeway facilities and that provide access to schools, parks, community centers, retail services, employment centers, and transit. Similarly, the Thurston County Transportation Element includes a policy to strive for a safe system of pedestrian and bicycle ways tying schools, recreation areas, business areas, and activity centers.

Safe Routes to Schools

The Kitsap County Transportation Element includes a policy to establish a “safe routes to schools” program with local school districts. Likewise, the City of Redmond Transportation Master Plan includes a policy to identify and map “safe routes to schools”. It should be noted that King County previously dedicated funding to a School Pathways Program for paved pathways, crosswalks, and signs near schools to increase student pedestrian safety. Although this program was subsequently incorporated into a larger Non-Motorized Improvements program, King County continues to solicit “safe routes to schools” candidate projects from the school districts in unincorporated King County on an annual basis.

As part of Ordinance 2006-25s, the County has agreed to utilize a portion of the proceeds from the sale of the 9th Street Pit property sale to establish an account to support the construction of safe walking routes to public schools. As part of this TPU, the County may want to include policies to coordinate with school districts in identifying and prioritizing “safe routes to schools” projects on a countywide basis.

Dedicated Funding for Nonmotorized Improvements

In order to achieve implementation of its nonmotorized strategies, the City of Redmond dedicates $1,000,000 annually towards a Sidewalk Improvement Program and $450,000 annually towards a Bicycle Facilities Improvement Program. Over recent years, King County has allocated a minimum of $1,000,000 to its Non-Motorized Improvement Program. However, given the County’s limited financial resources, the Council will likely need to make decisions about any dedicated funding for nonmotorized improvements on a year-by-year basis.

Recommended Option

It is noteworthy to point out that the designated high-priority or multi-modal corridors identified in the agency plans above generally consisted of the longer arterials that run throughout these jurisdictions. It is presumed that these arterials are functionally classified as either Major Arterials or Secondary Arterials, which are also commonly referred to in some jurisdictions as Primary or Minor Arterials. Given the County’s expansive roadway system and its limited
funding resources, it may be prudent for Pierce County to adopt an implementation strategy that focuses future nonmotorized investments on County arterials that are functionally classified as Major Arterials and Secondary Arterials.

There are a number of reasons that can be given to support the prioritization of nonmotorized spending on Major Arterials and Secondary Arterials. These arterials are appealing to both pedestrians and bicyclists because they offer continuity for long trips, typically extend into other jurisdictions, and are generally interconnected. Major and Secondary Arterials tend to provide access to major commercial and employment centers, school sites, and recreational opportunities. Furthermore, bus routes, transit centers, and other multimodal facilities are usually located on Major and Secondary Arterials. Because the minimum right-of-way widths for Major and Secondary Arterials (80 feet and 70 feet respectively) are wider than other County roadways, there is a greater likelihood that nonmotorized improvements could be implemented within their existing right-of-ways, thereby reducing or eliminating the possible need for the acquisition or dedication of private property. Since Major Arterials are often times paved with HMA overlays and Secondary Arterials are many times surfaced with either HMA overlays or rubberized chip seals, they could provide a much smoother riding surface for bicyclists. Because a majority of the projects in the Traffic Impact Fee (TIF) program consist of Major and Secondary Arterials, a funding mechanism is already in place to ensure that nonmotorized improvements will be implemented as part of future roadway projects.

Since Major Arterials tend to be heavy-volume, higher-speed roadways with larger numbers of trucks, it is recommended that both sidewalks and striped paved shoulders be included on these arterials within the County-designated Urban Growth Area (UGA) to further enhance pedestrian and bicycle safety. The County is already implementing this “sidewalks and paved shoulders” strategy on Major Arterials such as Canyon Road East and 176th Street East. The provision of wide curb lanes (instead of paved shoulders) may be more appropriate for Secondary Arterials given their lower traffic volumes and vehicle speeds. It would also seem more appropriate to provide paved shoulders (instead of sidewalks) in the areas outside of the UGA boundary given their lower population densities and fewer pedestrian-generating land uses. This strategy would be consistent with the USDOT Bicycle and Pedestrian Design Guidance, which indicates that, in rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways with more than 1,000 vehicles per day.

Since the functional classification system is already used as a basis to help determine the need for other roadway elements such as speed limits, signage, speed bumps, pavement striping, and street lighting, it seems reasonable to also use it as a means of identifying the appropriate pedestrian and bicycle facilities for a given arterial. By linking the recommended nonmotorized improvements for a roadway to its functional classification and its location (within or outside of the UGA boundary), this would essentially eliminate the need to review the Transportation Element, the NMTP, and Community Plans for guidance. While the County could still implement pedestrian and bicycle projects on roadways classified as Collector Arterials and Local Roads, such projects would likely not be a part of any proposed interconnected network and would therefore have more limited benefits. Nonmotorized projects on Collector Arterials or Local Roads could also be considered based on safety concerns and the destinations that they serve (e.g. centers, transit facilities, schools, recreational facilities, etc.).
Field trips were performed to identify the number of miles of existing nonmotorized improvements (sidewalks, paved shoulders, and wide curb lanes on both, one, or no sides of the roadway) on the Major Arterials and Secondary Arterials within and outside the UGA boundaries. An inventory table of nonmotorized facilities is attached at the end of this white paper (Attachment 2) along with maps of the proposed pedestrian and bicycle network (Attachment 4 and Attachment 5 respectively).

Since it is presumed that many of these Major Arterials and Secondary Arterials are included in the Traffic Impact Fee (TIF) program and will therefore be upgraded with nonmotorized improvements as part of the future construction of TIF projects, the miles of Major Arterials and Secondary Arterials not included in the TIF program was calculated to identify the miles of “missing gaps” of Major Arterials and Secondary Arterials with uncommitted funding sources. These miles of “missing gaps” can then be used to quantify the estimated total cost of nonmotorized needs that will not be funded as part of the TIF program. As shown in the inventory table (refer to the numbers highlighted in color), the “missing gaps” of unfunded improvements on Major Arterials and Secondary Arterials would include 91.8 miles of sidewalks (on one or both sides of the arterial), 245.6 miles of paved shoulders (on one or both sides of the arterial), and 74.8 miles of wide curb lanes (on one or both sides of the arterial). Using unit cost estimates developed by the PWU Transportation Programming Section for sidewalks on both sides ($520 per linear foot), paved shoulders on both sides ($302 per linear foot), and wide curb lanes on both sides ($248 per linear foot), the estimated total cost of nonmotorized needs that would not be funded as part of the TIF program would be approximately $730 million (in 2008 dollars) over the next twenty years.

Note: The recommended implementation strategy and the estimated total cost of nonmotorized needs are subject to change depending on the results of the TPU funding analysis. If a significant funding shortfall is identified, then consideration should be given to changes to this recommended implementation strategy. For example, the elimination of recommended paved shoulders on non-TIF Major Arterials and Secondary Arterials outside of the UGA would potentially decrease the estimated total costs of nonmotorized needs by approximately $127 million and $235 million respectively. Like the City of Tacoma, the County could also choose a strategy to focus future nonmotorized improvements in mixed-use or high-density development centers instead of implementing a jurisdiction-wide strategy.

Overall Goal and Supporting Policies

To complement the County’s goal of developing a multi-modal transportation plan, the following overall goal for nonmotorized travel is proposed:

Develop an interconnected nonmotorized network that enhances safety and convenience, emphasizes linkages to existing nonmotorized facilities and other transportation modes, facilitates access to local and regional centers, and promotes physical activity.
To achieve this overall goal and to support the development of a “Complete Streets” network in compliance with Pierce County Council Resolution No. R2008-89s, the following “core policies” are proposed:

1) **Pedestrian Level of Service (LOS) Target:** Sidewalks shall be provided on both sides of all new and reconstructed Major Arterials and Secondary Arterials in the County-designated Urban Growth Area (UGA). Paved shoulders shall be provided on both sides of all new and reconstructed Major Arterials and Secondary Arterials outside the UGA. (This LOS policy is graphically depicted in Attachment 6.)

   [Note: To ensure implementation of this policy, consideration should be given to the following actions: A) amend the Manual Design Guidelines and Specifications for Road and Bridge Construction in Pierce County (and the Standard Drawings, if necessary) to require that all road and bridge projects (by public and private sponsors) include the above improvements; and B) amend Chapter 17B.30 of the Pierce County Code to require that private development proposals include the above requirements.]

2) **Bicycle Level of Service (LOS) Target:** Paved shoulders shall be provided on both sides of all new and reconstructed Major Arterials. Wide lanes shall be provided on both sides of all new and reconstructed Secondary Arterials in the County-designated Urban Growth Area (UGA). Paved shoulders shall be provided on both sides of all new and reconstructed Secondary Arterials outside the UGA. (This LOS policy is graphically depicted in Attachment 6.)

   [Note: To ensure implementation of this policy, consideration should be given to the following actions: A) amend the Manual Design Guidelines and Specifications for Road and Bridge Construction in Pierce County (and the Standard Drawings, if necessary) to require that all road and bridge projects (by public and private sponsors) include the above improvements; and B) amend Chapter 17B.30 of the Pierce County Code to require that private development proposals include the above requirements.]

3) **The prioritization of nonmotorized improvements on Major Arterials and Secondary Arterials** shall consider the following criteria: A) improves safety; B) provides access to major commercial and employment centers, with special emphasis given to designated regional centers; C) provides access to transit centers, bus stops, park-and-ride lots, ferry landings, and train stations; D) provides access to public schools; and E) provides access to parks, athletic fields, recreation centers, and shared-use paths with special emphasis given to regional paved trails. Nonmotorized improvements on Collector Arterials and Local Roads may also be considered provided that they meet more than one of these criterions.

4) **Bus stops, shelters, and other amenities** shall be provided on both sides of all new and reconstructed Major Arterials and Secondary Arterials where determined necessary by Pierce Transit or the appropriate school district.

   [Note: To ensure implementation of this policy, consideration should be given to the following actions: A) amend the Manual Design Guidelines and Specifications for Road and Bridge Construction in Pierce County (and the Standard Drawings, if necessary) to require
that all road and bridge projects (by public and private sponsors) include the above improvements; and B) amend Chapter 17B.30 of the Pierce County Code to require that private development proposals include the above requirements.]

In light of these proposed “core policies”, this Plan Update should reevaluate the existing nonmotorized policies in the current Transportation Element as enumerated in Section 19A.80.070 of the Pierce County Code. Other nonmotorized policies also appear in the Community Plans. A list of the nonmotorized policies commonly used in the Community Plans is attached for possible incorporation into the Transportation Plan Update (Attachment 3). Since another goal of this Plan Update is to reconcile and consolidate the County’s nonmotorized policies, the nonmotorized policies in the Community Plans should be also reevaluated for consistency with the proposed overall goal and “core policies”.

Attachments:  1. Pierce County Council Resolution on “Complete Streets”
                      2. Inventory Table of Nonmotorized Facilities
                      3. List of Common Community Plan Nonmotorized Policies
                      4. Map of Proposed Pedestrian Network
                      5. Map of Proposed Bicycle Network
                      6. Matrix of Proposed Nonmotorized LOS Policies
RESOLUTION NO. R2008-89s

A Resolution of the Pierce County Council Expressing Support for the Complete Streets Concept and Requesting that a Complete Streets Policy be Included as a Component of the Transportation Plan Update.

Whereas, the "Complete Streets" concept promotes streets that are safe and convenient for all users, including pedestrians, bicyclists, transit riders, and motor vehicle drivers of all ages and abilities; and

Whereas, streets constitute a large portion of the public space and should be corridors for all modes of transportation, including pedestrians, bicyclists, and transit; and

Whereas, streets that support and invite multiple uses, including safe, active, and ample space for pedestrians, bicycles, and transit, are more conducive to the public life and efficient movement of people than streets designed primarily to move automobiles and trucks; and

Whereas, Pierce County currently has a number of land use and transportation policies, plans and regulatory requirements that focus on various components of the transportation system including congestion management, multimodal coordination, non-motorized improvements, access control, street trees, street lighting, traffic calming, and transit services; and

Whereas, trends in energy and transportation costs, air quality, climate change and public health necessitate a more comprehensive approach to mobility within communities that offers a greater variety of mobility choices and which is not strictly automobile based; and

Whereas, many of the existing roadways where Pierce County residents walk and bicycle are incomplete and lack sidewalks or crosswalks, have lanes too narrow to share with bicyclists, and make no accommodation for transit riders or for people with disabilities; and

Whereas, recent trends indicate that Pierce County will experience increased traffic congestion and travel times as the population increases and the number of commuters to employment centers within the County increases; and
Whereas, there are practical limits to the expansion of roadways in response to traffic congestion; and

Whereas, promoting pedestrian, bicycle and transit travel as an alternative to the automobile reduces negative environmental impacts, promotes healthy living and is less costly to the commuter; and

Whereas, the development of a more complete transportation network or "Complete Streets" can improve pedestrian safety, increase the capacity of the transportation network, reduce the effects of climate change, and promote improvements in public health; and

Whereas, the Federal Highway Administration has confirmed that designing the street with pedestrians in mind significantly reduces pedestrian risk. About one-third of Americans do not drive, including low-income Americans who cannot afford cars and an increasing number of older adults. Whether they walk or bicycle directly to their destinations, or to public transportation, these individuals require safe access to get to work, school, shops and medical visits, and to take part in social, civic and volunteer activities. In 2006, nearly one quarter of pedestrian fatalities were children (8 percent) and older adults (15 percent); and

Whereas, studies have found that providing more travel options, including public transportation, bicycling and walking facilities, is an important element in reducing congestion. Many studies show that when roads are better designed for bicycling, walking, and taking transit, more people do so; and

Whereas, the construction of "Complete Streets" can be an essential component in reducing automobile trips as evidenced by the 2001 National Household Transportation Survey which revealed that 50 percent of all trips in metropolitan areas are three miles or less and 28 percent are one mile or less – distances easily traversed by foot or bicycle. Yet, 65 percent of trips under one mile are now made by automobile, in part because of incomplete streets that make it dangerous or unpleasant to walk, bicycle, or take transit; and

Whereas, a 2007 Washington State Department of Transportation survey found that a lack of pedestrian and bicycle infrastructure, such as sidewalks and bicycle lanes, is a primary reason why Washington residents do not walk or bicycle more frequently; and

Whereas, the United States Congress, National Association of Local Boards of Health, and the Washington Climate Advisory Team specifically recommend Complete Streets policies as a strategy to increase pedestrian and bicycle travel modes and to reduce the negative impacts associated with climate change; and
Whereas, other jurisdictions and agencies nationwide have adopted Complete Streets legislation, including the United States Department of Transportation, numerous state transportation agencies, and cities such as San Francisco, Sacramento, San Diego, Boulder, Chicago, Seattle, Kirkland, Redmond, and Portland; and

Whereas, the "Complete Streets" concept is supported by the Institute of Traffic Engineers, American Planning Association, and many other transportation, planning, and public health professionals; Now Therefore,

BE IT RESOLVED by the Council of Pierce County:

Section 1. The Pierce County Council requests that the Transportation Plan Update include an assessment of the plan's support of the "Complete Streets" concept, identification of relevant policies within the plan that support the creation of "Complete Streets", and an identification of barriers to, and opportunities for, the development of "Complete Streets" throughout Pierce County. The Council further requests that a specific "Complete Streets" policy be included within the Transportation Plan Update.

ADOPTED this 26th day of August, 2008.

ATTEST:

PIERCCE COUNTY COUNCIL
Pierce County, Washington

Denise D. Johnson
Clerk of the Council

Terry Lee
Council Chair
## INVENTORY OF NONMOTORIZED FACILITIES

### Roadway Miles with Non-Motorized Elements by Urban Growth Area, by County Functional Class, and by Traffic Impact Fee (TIF) Projects

<table>
<thead>
<tr>
<th>Facilities Type</th>
<th>Urban¹</th>
<th>Rural²</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Major Arterial</td>
<td>Secondary Arterial</td>
<td>Major Arterial</td>
</tr>
<tr>
<td></td>
<td>TIF Non TIF Sum</td>
<td>TIF Non TIF Sum</td>
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</tr>
<tr>
<td>S0: Without sidewalks on both sides</td>
<td>10.2</td>
<td>17.5</td>
<td>27.7</td>
</tr>
<tr>
<td>S1: With sidewalks on one side only</td>
<td>3.0</td>
<td>2.8</td>
<td>5.9</td>
</tr>
<tr>
<td>S2: With sidewalks on both sides</td>
<td>6.0</td>
<td>8.0</td>
<td>14.0</td>
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</table>

**Sidewalks Subtotal**

<table>
<thead>
<tr>
<th></th>
<th>TIF</th>
<th>Non TIF Sum</th>
<th>TIF</th>
<th>Non TIF Sum</th>
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<th>TIF</th>
<th>Non TIF Sum</th>
<th>TIF</th>
<th>Non TIF Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>47.5</td>
<td>87.2</td>
<td>118.1</td>
<td>175.3</td>
<td>165.6</td>
<td>262.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| P0: Without paved shoulders on both sides | 7.5 | 16.9 | 24.4 | 6.3 | 48.5 | 54.8 | 1.7 | 79.2 | 80.9 | 0.3 | 147.4 | 147.7 | 9.2 | 96.1 | 105.3 | 6.6 | 195.9 | 202.4 |
| P1: With paved shoulders on one side only | 0.2 | 0.8 | 1.0 | 0.0 | 1.3 | 1.3 | 0.7 | 0.9 | 1.6 | 0.0 | 0.4 | 0.4 | 0.9 | 1.6 | 2.6 | 0.0 | 1.7 | 1.7 |
| P2: With paved shoulders on both sides | 11.5 | 10.6 | 22.2 | 2.6 | 28.5 | 31.1 | 8.9 | 26.8 | 35.7 | 0.0 | 27.2 | 27.2 | 20.4 | 37.4 | 57.8 | 2.6 | 55.7 | 58.3 |

**Paved Shoulders Subtotal**

<table>
<thead>
<tr>
<th></th>
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<td>87.2</td>
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<td>165.6</td>
<td>262.5</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

| W0: Without wide curb lanes on both sides | 18.9 | 23.8 | 42.7 | 8.9 | 74.8 | 83.7 | 11.3 | 106.6 | 117.9 | 0.3 | 175.0 | 175.3 | 30.1 | 130.5 | 160.6 | 9.2 | 249.6 | 259.0 |
| W2: With wide curb lanes on both sides | 0.4 | 4.4 | 4.8 | 0.0 | 3.5 | 3.5 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.4 | 4.7 | 5.1 | 0.0 | 3.5 | 3.5 |

**Wide Curb Lanes Subtotal**

<table>
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<td>175.3</td>
<td>165.6</td>
<td>262.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

1. "Urban" refers to areas within the County-designated Urban Growth Area (UGA) boundaries
2. "Rural" refers to areas outside of the County-designated Urban Growth Area (UGA) boundaries

**Colored Numbers Legend:**

- xxx - The 20-year sidewalk needs assumes construction of sidewalks on non-TIF Major and Secondary Arterials within the UGA only (84.7 miles of sidewalks on both sides and 7.1 miles of sidewalks on one side)
- xxx - The 20-year paved shoulder needs assumes construction of paved shoulders on all non-TIF Major Arterials and on non-TIF Secondary Arterials within the UGA (243.5 miles on both sides and 2.1 miles on one side)
- xxx - The 20-year wide curb lane needs assumes construction of wide curb lanes on non-TIF Secondary Arterials within the UGA only (74.8 miles)

**Shading Legend:**

- - represents the recommended pedestrian improvements pursuant to the proposed Pedestrian LOS Target Policy in the TPU Nonmotorized White Paper
- - represents the recommended bicycle improvements pursuant to the proposed Bicycle LOS Target Policy in the TPU Nonmotorized White Paper

**Data Source:**

This inventory of roadway segments by nonmotorized facility type is based on 2008 field trips by TTP staff.
Note: Policies are distinguished as Objectives, Principles, and Standards. Objectives are statements of what is desired to be achieved in the future or statements of what conditions should exist in the community. Principles set a particular course of action to accomplish objectives. Standards, quantitative or qualitative, are specific benchmarks or targets to be accomplished in the ongoing development of the County. [PCC 19A.20.080]

COMMON NONMOTORIZED POLICIES FROM COMMUNITY PLANS

Objective X. Create a system of nonmotorized facilities to enhance pedestrian, bicycle, and equestrian movement throughout the plan area.

Principle X.X. Provide a continuous and interconnected network of nonmotorized facilities that link residential areas to community facilities, commercial centers, and other neighborhoods.

Standards

X.X.X Plan and implement a pedestrian and bicycle system to connect with the pedestrian and bicycle systems that exist or are planned in the surrounding communities.

X.X.X Identify and pursue nonmotorized improvements leading to schools, libraries, parks, playfields, bus stops, shopping areas, and neighborhoods.

X.X.X Accommodate nonmotorized travel by providing continuous paved shoulders along _________ and _________. These shoulders should meet the County’s standard for striping and width, if feasible.

X.X.X Provide nonmotorized connections to ferry docks, boat launches, public docks and piers, beaches, wildlife viewing areas, and other shoreline uses.

X.X.X Integrate the nonmotorized improvements with the trail system, where appropriate.

X.X.X Provide facilities to accommodate nonmotorized access to commercial centers and within neighborhoods to preserve community coherence.
X.X.X Update the nonmotorized policies and programs in the Comprehensive Plan to include linkages that connect existing neighborhoods with nonmotorized facilities.

X.X.X Support, prioritize, and fund nonmotorized plans and projects that increase mobility.

X.X.X Accommodate pedestrian and bicycle travel by providing continuous paved shoulders, sidewalks, and/or wide curb lanes along major east-west and north-south roadways through the community.

Principle X.X

Acquire property that will support a community-wide system of trails and sidewalks now and in the future. Whenever possible, unopened rights-of-way and other public lands should be dedicated or donated for pedestrian purposes. Acquiring easements across public lands should be considered when necessary.

Principle X.X

Coordinate with other agencies, utility providers, civic groups, and the public to develop a system of nonmotorized connections within and outside of the plan area.

Standards

X.X.X Work with other adjacent local jurisdictions to provide continuous pedestrian, bicycle, and trail connections between jurisdictions.

X.X.X Work with the school districts to identify, prioritize, and implement nonmotorized improvements near schools and established bus stops.

X.X.X Work with local community groups to identify, prioritize, and implement nonmotorized connections with other existing and proposed trails.

X.X.X Work with utility providers to explore opportunities to locate paths and trails along areas where utility lines will be underground.

X.X.X Conduct or participate in community outreach efforts to gather input on local nonmotorized needs and concerns.

Principle X.X

Improve mobility between residential and commercial developments. Facilitate pedestrian and bicycle access to the commercial centers.
Standards

X.X.X Provide sidewalks or pathways to high density residential areas and commercial developments.

X.X.X Provide pedestrian access to commercial centers either in the form of sidewalks for large centers or trails and paths in smaller centers. Priority should be given to the commercial centers near __________ and __________.

X.X.X Encourage new businesses to provide pedestrian connections to adjacent businesses to encourage walking between businesses.

X.X.X Require pedestrian linkages between adjacent business properties to encourage more pedestrian movement between those properties and reduce unnecessary vehicular movements.

X.X.X Where a use fronts more than one street, pedestrian access should be provided from both streets, if possible and desirable.

X.X.X Provide an internal sidewalk or pathway system connecting individual businesses, office, and residential buildings with the adjacent sidewalk system, parking lots, open spaces, and adjacent properties, where desirable.

Principle X.X. Consider strategies that make pedestrian travel safe, convenient, and efficient.

Standards

X.X.X Provide paved shoulders, sidewalks, or wide curb lanes on arterials to improve safety for pedestrians, bicyclists, and equestrians.

X.X.X Provide paved shoulders, sidewalks, or wide curb lanes on roads leading to all schools to allow children to walk or bike to school.

X.X.X Separate pedestrian walkways from roads with planting strips, where adequate right-of-way exists, in high use areas such as schools, commercial, and recreation areas.

X.X.X Provide shoulders or paths on roadways with ditches to improve pedestrian safety. If the shoulder or path can not be provided alongside the ditch, then it should be located on the opposite side of the roadway where ditches are not located.
X.X.X  Consider the use of wider paved shoulders (more than six feet) on ________ and ________, wherever feasible, to achieve increased safety for pedestrians, bicyclists, and equestrians and to provide sufficient room for temporary or emergency parking.

X.X.X  Enhance safe pedestrian, bicycle, and equestrian travel through the provision of paths which are physically separated from the roadway, wherever feasible.

**Principle X.X.**  Consider the inclusion of nonmotorized facilities in new development approvals.

**Standards**

X.X.X  Require new subdivisions, new multi-family complexes, and new manufactured home parks that are adjacent to a nonmotorized route within the Pierce County Transportation Element provide direct access to the route.

X.X.X  Require developers of residential, commercial, and industrial projects to construct facilities for pedestrians on existing County arterials that abut their property, whenever feasible. In urban areas, a sidewalk, path, or paved shoulder shall be provided on the sides of the arterial where the development is located. In rural areas, a paved or gravel shoulder shall be provided on the sides of the arterial where the development is located. Where adequate right-of-way exists in rural areas, a pedestrian pathway that is separated from the arterial should be considered.

X.X.X  Encourage developers to provide off-site nonmotorized improvements leading to schools, parks, community centers, employment centers, and other nonmotorized routes.

X.X.X  Explore funding options (e.g. tax incentives, land use credits) to encourage property owners to create or extend nonmotorized facilities, including paths and trails.

**Principle X.X.**  Consider the inclusion of nonmotorized facilities in new roadway construction.
Standards

X.X.X  Provide facilities for pedestrians when reconstructing or building new arterials, whenever feasible. In urban areas, sidewalks shall be provided on both sides of the arterial. In rural areas, a paved or gravel shoulder shall be provided on both sides of the arterial. Where adequate right-of-way exists in rural areas, a pedestrian pathway that is separated from the arterial should be considered.

X.X.X  Include facilities to accommodate pedestrians and bicyclists in new and reconstructed arterials when such facilities are identified as a nonmotorized project recommendation in this Community Plan, unless critical areas or other environmental or physical constraints preclude such improvements.
**Proposed Nonmotorized Level of Service (LOS) Policies**

<table>
<thead>
<tr>
<th></th>
<th><strong>URBAN AREA</strong></th>
<th><strong>RURAL AREA</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAJOR ARTERIALS</strong></td>
<td>sidewalks (P)</td>
<td>shoulders (P/B)</td>
</tr>
<tr>
<td></td>
<td>shoulders (B)</td>
<td></td>
</tr>
<tr>
<td><strong>SECONDARY ARTERIALS</strong></td>
<td>sidewalks (P)</td>
<td>shoulders (P/B)</td>
</tr>
<tr>
<td></td>
<td>wide curb lanes (B)</td>
<td></td>
</tr>
</tbody>
</table>

* - "Urban Area" refers to areas within the County-designated Urban Growth Area (UGA) boundaries

** - "Rural Area" refers to areas outside of the County-designated Urban Growth Area (UGA) boundaries

(P) - represents the recommended pedestrian improvement for this arterial classification

(B) - represents the recommended bicycle improvement for this arterial classification

(P/B) - represents the recommended pedestrian/bicycle improvement for this arterial classification