CHAPTER 5

TRANSPORTATION ELEMENT

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INTRODUCTION

To achieve Fircrest's vision and goals, the Transportation Element is designed to guide development of the City's transportation system to serve the community as envisioned in this Plan. The transportation policies in this Element are designed to guide the actions of the City, public agencies and private decision-makers related to individual developments.

In accordance with the Comprehensive Plan, a limited amount of new residential and commercial mixed use development, with associated population and employment growth, is forecasted. Fircrest's 2030 growth targets and 20-year projections through 2035 are contained in Table LU-2 in the Land Use Element. Land uses surrounding the city are assumed to develop in a pattern consistent with the regional strategies, including *VISION 2040* and *Transportation 2040*. Land use and transportation forecasts for surrounding areas are integrated into the assumptions underlying the transportation improvement identified in this Element.

In developing a transportation system that serves current and future needs, the policies in this Element support programs, projects and services with long term benefits to the community that address economic, social and environmental needs. Fircrest's transportation policies promote long term community benefits by:

- Developing a transportation system that supports a mix of uses, from low- to moderate-density single-family neighborhoods, to multifamily, neighborhood-serving commercial uses, a moderately intense mix of commercial and residential uses along the Mildred and 19th Street corridors, park and recreation facilities, schools, and public uses; and
- Offering multimodal travel choices and achieving *complete streets* that support safe and convenient access for all users.

In promoting such benefits, the City seeks to address the need for a better transportation system -- one that is accessible with connections between places, helps improve air quality through the use of alternative fuels that reduce greenhouse gas emissions, and is designed to encourage healthier lifestyles and independent living, particularly for vulnerable populations.

The overarching goals of the Element are to:

- Ensure that the transportation system, including all programs, projects and services, whether funded, built or operated privately or by a public sector agency, serve to achieve the preferred land use pattern contained in the Land Use Element.

- Ensure that the transportation system provides for the mobility and access needs of those who live, shop, visit, work and recreate in Fircrest; and
- Ensure the safe and environmentally sound use of the transportation system, and limit the loss of life due to fatality accidents.

ORGANIZATION OF THE TRANSPORTATION ELEMENT

This element contains the following sections:

- Introduction
- State planning context
- Regional planning context
- Local planning context
- Goals and policies
- Land use assumptions
- Inventory of facilities and services
- Levels of service
- Arterial and transit adequacy
- Recommended transportation improvements
- Transportation demand management
- Transportation systems management
- Funding capability and resources

The transportation improvement program is described in the Capital Facilities Element.

STATE PLANNING CONTEXT

GROWTH MANAGEMENT ACT

The Washington State Growth Management Act (RCW 36.70A) requires the City to include a Transportation Element within its Comprehensive Plan. The Act identifies transportation facilities planning and, specifically, encouraging efficient multimodal transportation systems based on regional priorities coordinated with local comprehensive plans, as a planning goal to guide the development and adoption of comprehensive plans and development regulations. The Transportation Element must include: (a) land use assumptions used in estimating travel; (b) facilities and services needs; (c) finance; (d) intergovernmental coordination efforts, including an assessment of the impacts of the transportation plan and land use assumptions on the transportation systems of adjacent jurisdictions; and (e) demand management strategies.

COMMUTE REDUCTION EFFICIENCY ACT

The Commute Reduction Efficiency Act of 2006 (RCW 70.94.521-531) goal is to reduce congestion on the roadway network and help address the air pollution issues within the urban areas. This act requires local governments to work with their larger employers to develop and implement strategies for reducing their single occupant auto trips. Jurisdictions affected by the commute trip reduction (CTR) law are required to develop local CTR plans that include the documenting of local transportation settings of the

affected work sites and the strategies by which the rate of single occupant vehicle use may be reduced.

REGIONAL PLANNING CONTEXT

VISION 2040 MULTICOUNTY PLANNING POLICIES (MPPs)

Puget Sound Regional Council's (PSRC) *VISION 2040* offers an integrated approach to addressing land use and transportation, along with the environment and economic development. It calls for a clean, sustainable transportation future that supports the regional growth strategy. Sustainable transportation involves the efficient and environmentally sensitive movement of people, information, goods and services – with attention to safety and health. Sustainable transportation minimizes the impacts of transportation activities on our air, water, and climate. It includes the design of walkable cities and bikeable neighborhoods, as well as using alternatives to driving alone. It relies on cleaner, renewable resources for energy.

The transportation-related multicounty planning policies in *VISION 2040* are presented in three groups. The first group of policies calls for maintaining, preserving, and operating the existing transportation system in a safer and more efficient way. They advance transportation that is less polluting. The second group of policies calls for developing the system to support regional growth centers, particularly travel within and between centers. Investments are to be prioritized to support pedestrian-oriented, mixed use development. The policies address *complete streets* to serve all users, green streets that are better for the environment, and context sensitive design that guides the development of transportation facilities to better fit within the context of the communities in which they are located. Policies address nonmotorized transportation as well as freight. The final group of policies addresses greater transportation options, including alternatives to driving alone, mobility choices for people with special needs, and avoiding construction of new roads or capacity expansion in rural areas.

PIERCE COUNTY COUNTYWIDE PLANNING POLICIES (CPPs)

The GMA's transportation planning requirements and VISION 2040 transportation planning policy directives are expounded upon in greater detail in Pierce County's Countywide Planning Policy on "*Transportation Facilities and Strategies".* This policy directs Fircrest, to the extent practicable, to:

- Promote a sustainable transportation system that assures the ability of future generations to provide transportation infrastructure and services in an effective, efficient, clean, and cost effective manner. (CPP Tr-1)
- Improve safety in the transportation system by working toward the state's "zero death and disabling injury" target. (CPP Tr-2)
- Deem the following transportation services Countywide in nature (for the purpose of this Policy):

- state and federal highways;
- major arterials;
- transit facilities and services;
- waterborne transportation (ferries, shipping);
- airports (passenger or freight);
- rail facilities (passenger or freight);
- nonmotorized facilities. (CPP Tr-3)

- Include the following facilities and system components in the multi-modal network:

  - roads, including major highways, arterials and collectors;
  - public transit, including bus, rail, vanpool, paratransit, and park and ride lots and other emerging concepts;
  - nonmotorized facilities;
  - ferries;
  - airports;
  - parking facilities;
  - facilities related to transportation demand management. (CPP Tr-4)

- Consider the impacts of its planning activities on neighboring jurisdictional (inclusive of WSDOT) roadway facilities when developing and administering its level of service standards.

  - Designate or adopt multimodal levels of service (LOS) per RCW 36.70A.108 such as:

    - for roadways and intersection; and
    - transit levels of service (e.g., hours of service, headways, pedestrian environment, accessibility, safety, rider comfort, reliability, transfer necessity, cost, and travel time).

  - Enter into interlocal agreements, where necessary, to establish uniform, coordinated service levels between jurisdictions for countywide facilities. (CPP Tr-5)

- Establish an adopted LOS that may be:

  - set below existing levels (thereby allowing reserve capacity for growth and minimizing the need for new capital investment;
  - set above existing levels (thereby increasing comfort and convenience of travel, enhancing economic development and minimizing some environmental impacts;
  - set at existing levels (thereby allowing new development to mitigate full marginal impacts;
  - set at different levels of service in different zones;

- set at different levels of service based on facility classifications;
- set for multi-modal facilities;
- taken directly from standards developed by the Washington State Department of Transportation for Highways of Statewide Significance and directly from standards developed by the Puget Sound Regional Council for regionally significant state highways. (CPP Tr-6)

- Determine the adequacy of transportation facilities, including transit infrastructure, taking into account existing development, approved but unbuilt development, current and future roadway conditions, and multiple modes of transportation through utilization of

  - capacity-to-demand levels of service (LOS);
  - availability of capacity based on current and future demand including phased capacity;
  - appropriate standards of design across jurisdictional lines. (CPP Tr-7):

- Address substandard LOS for existing facilities by:

  - designating funding mechanisms;
  - prioritizing facility needs in capital improvement and transportation improvement programs to correct existing deficiencies;
  - using transportation demand management;
  - using transportation systems management to promote cost effective methods of moving people and goods;
  - promoting nonmotorized travel. (CPP Tr-8)

- In cooperation with the transit and transportation agencies, establish:

  - policies and/or regulations for park and ride facilities;
  - parking requirements for public facilities so as to encourage public transit use. (CPP Tr-9)

- Address concurrency through the following methods:

  - providing transportation facilities needed to accommodate new development within six years of development approval;
  - limiting new development to a level that can be accommodated by existing facilities and facilities planned for completion over the next six years;
  - encouraging new and existing development to implement measures to decrease congestion and enhance mobility through transportation demand and congestion management. (CPP Tr-10)

- Address compatibility between land use and transportation facilities by:

    - Requiring new transportation facilities and services in areas in which new growth is appropriate or desirable to be phased within a twenty-year time frame consistent with six year capital improvement programs;
    - Discouraging the extension of new transportation facilities into areas not planned for growth (e.g., outside urban growth areas) and avoiding planning of major roads and capacity expansion in rural and resource areas;
    - Using development regulations to ensure that development does not create demands exceeding the capacity of the transportation system, including transit alternatives.
    - Using land use regulations to increase the modal split between automobiles and other forms of travel:

        - Designating high densities in transit and transportation corridors and designated Transit Oriented Development (TOD) sites;
        - Dedications and impact fees to provide public transit facilities;
        - Requiring pedestrian-oriented design;
        - Encouraging or requiring mixed use development and TOD;
        - Facilitating ease of access for physically challenged individuals.

    - Developing plans or planning provisions, where appropriate, to protect the continued operation of general aviation airports by using adopted land compatibility standards such as those published by the Federal Aviation Administration (FAA) and the Washington State Department of Transportation (WSDOT) to discourage incompatible land uses and development on adjacent land. (CPP Tr-11)

- Plan and implement programs, as appropriate, for designing, constructing and operating transportation facilities for all users, including motorists, pedestrians, bicyclists, and transit users. (CPP Tr-12)

- Address environmental impacts of the transportation policies through:

    - programming capital improvements and transportation facilities designed to alleviate and mitigate impacts on land use, air quality and energy consumption such as high-occupancy vehicle lanes, public transit infrastructure, or bicycle/pedestrian facilities designed for home-to-work travel;
    - locating and constructing transportation improvements so as to discourage adverse impacts on water quality and other environmental resources. (CPP Tr-13)

- Use low-impact development practices or environmentally appropriate approaches for the design, construction and operation of transportation facilities

to reduce and mitigate environmental impacts, including, but not limited to, storm water runoff from streets and roadways. (CPP Tr-14)

- In cooperation with transit agencies, promote the facilities and services to encourage alternatives to automobile travel and/or to reduce the number of vehicle miles traveled (modal split, trip generation and trip length) including:

    - structural alternatives (public transit [such as grade separated guideways, for bus and rail applications]; construction of new high-occupant vehicle lanes; limitations on highway/roadway construction; carpool/vanpool facilities; non- recreational bicycle/pedestrian facilities);
    - non-structural/regulatory alternatives (growth management [concurrency; urban growth areas]; road/congestion pricing; auto-restricted zones; parking management; site design; ridesharing incentives, and transportation systems and demand management). (CPP Tr-15)

- Work with transit agencies to identify and preserve existing rights-of-way in order to preserve options for future transit alignments. (CPP Tr-16)
- Work in cooperation with WSDOT and Port authorities to plan and implement projects and programs to meet freight mobility and access needs, including the establishment of programs designed to maintain, preserve and expand freight rail capacity including planning for needed capital improvements. (CPP Tr-17)
- Consider a number of financing measures, including but not limited to:

    - general revenues;
    - fuel taxes;
    - toll roads and other user fees;
    - bonding;
    - congestion pricing;
    - public/private partnerships, and public/public partnerships;
    - assessment and improvement districts, facility benefit assessments, impact fees, dedication of right-of-way and voluntary funding agreements;
    - grants;
    - others, as may be appropriate. (CPP Tr-18)

- Protect the transportation investments and preservation of assets through the proper operations and maintenance. (CPP Tr-19)
- Protect the transportation system against disaster, develop prevention and recovery strategies, and plan for coordinated responses by using transportation-related preparedness, prevention, mitigation, response, and recovery strategies and procedures adopted in the emergency management plans and hazard mitigation plans of the County and cities, as well as the Washington State Comprehensive Emergency Management Plan. (CPP Tr-20)

LOCAL PLANNING CONTEXT

TRANSPORTATION VISION

Looking ahead 20 years…

In the 2030s, Fircrest's transportation system offers people a variety of real choices for how they travel between where they live, work, shop and play.

Each year, more people walk, bicycle, carpool or use transit to travel within the city and to access the regional bus and light rail system. Land uses that reflect a vibrant community character have created a strong market demand for these options.

The City's transportation infrastructure reflects this by prioritizing more people-oriented travel that supports the community's land uses, manages its limited roadways most efficiently, provides a transportation system that embodies the City's long term mobility goals, and achieves Fircrest's preferred land use pattern and vision.

The City has invested strategically and leveraged regional funds to ensure a safe, well-maintained system and improve transportation choices and mobility. Neighborhoods have increased access to commercial mixed use areas located along Mildred and 19th Streets, neighboring cities and the region. Significant investments in SR16, I-5, and regional and local transit routes have improved mobility for people and goods. In Fircrest roadway projects have been built where needed to improve safety and operating efficiency or to create more accessible connections. The City continues to maintain an effective system of access and circulation for delivery and freight. Streetscapes include lighting, are attractive and well designed, and enhance environmental quality for various travel modes.

In responding to significant energy costs and new vehicles' fuel options and technologies, the City has developed alliances with other agencies and the private sector to create new opportunities and efficiencies. In turn, these alliances support easy access to electric vehicle charging stations and other alternative fueling infrastructures, as well as access to information about travel conditions, incidents, and transit arrival and departure times.

GOALS AND POLICIES

This Element contains the transportation goals and policies for the City of Fircrest. The following goals establish broad direction for transportation planning while the policies provide strategies for achieving the intent of each goal. Goals are preceded by an initial background statement that provides an intent or purpose for each goal.

A MULTIMODAL TRANSPORTATION NETWORK

The automobile is expected to remain the dominant mode of transportation for the foreseeable future. However, there appears to be increasing demand for, or desire to

use, other forms of transportation. Mass transit, ride-sharing, biking, walking, as well as driving personal vehicles, are increasingly in the mix of choices being considered and used. In today's society, expanding the use of modes of transportation other than the privately-owned automobile will be important in reducing congestion on roadways, emissions, and fuel consumption. Improving circulation in the City for all modes of transportation will help promote the safe, convenient and reliable movement of people, goods and services.

A well-integrated multimodal transportation network will help support the City's other growth management goals and policies including those addressing economic vitality and livability. It will improve accessibility for all regardless of socioeconomic status or individual ability. It can be designed in such a way that it enhances the community around it and be compatible with natural systems. And, it can enhance Fircrest's role in the regional economy by supporting economic development within the City's center of local importance.

GOAL T1
Develop, maintain and operate a multimodal transportation system that provides for the safe, efficient and reliable movement of people, goods and services.

Policy T1.1
Create a transportation network that includes vehicle, pedestrian, bicycle and transit components located throughout the City -- and connecting to adjacent communities -- to provide for the safe, efficient, convenient and reliable movement of people, goods and services.

Policy T1.2
Develop and implement *complete street* design standards to provide safe and convenient access for all modes of transportation, which will support pedestrians, bicyclists, transit users and motorists, thereby increasing capacity, increasing safety, and improving street aesthetics and walkability. Include amenities in street designs, including trees and other landscaping, street lights, benches and waste receptacles to add to the pedestrian experience and further calm traffic.

Policy T1.3
Employ Context-Sensitive Design techniques in transportation projects that take into consideration aesthetics, historical and cultural elements, the environment, and other aspects of community character, while ensuring safety and accessibility.

Policy T1.4
Classify streets and arterials to reflect their desired use and function consistent with state and regional classifications. Classification should be based on present and future traffic volumes and the type of land uses along the streets.

ACCESSIBILITY TO TRANSPORTATION

Approximately one-third of the region's population does not drive or have access to an automobile. This group includes people who choose not to drive, people without licenses or with disabilities, people who are not able to afford a car, and young people under the driving age. These people rely on others to provide them private automobile mobility, public transit, walking and cycling. Providing facilities for all modes of transportation will help enable these individuals to meet their transportation needs and more fully participate in society.

GOAL T2

Transportation improvements within the City should ensure alternative transportation choices are available to underserved areas and provide mobility choices for people with special needs including persons with disabilities, the elderly, young and low-income populations.

Policy T2.1

Ensure compliance with Americans with Disabilities Act (ADA) requirements by making all street sidewalk and curb ramp areas accessible to all pedestrians, including those with disabilities, by constructing new pedestrian facilities in compliance with the ADA (at a minimum), and upgrading existing facilities to remove barriers and improve accessibility. Improvements should include appropriate pavement markings and signalization and facilitate the use of transit.

Policy T2.2

Design and build *complete streets* with facilities for all modes of transportation. Connect residential neighborhoods to commercial mixed use areas and public transit with sidewalks, paths and bike lanes to provide greater access to transportation choices for those who do not drive and those who have limited mobility resources.

TRANSPORTATION SAFETY

Transportation safety is affected by how the transportation system is designed, constructed, operated and maintained. Traffic conditions on residential streets can greatly affect neighborhood livability and environment. When streets are safe and pleasant, the quality of life is enhanced. When high vehicle speeds or excessive volumes of through-traffic become a daily occurrence, residents' sense of community and personal well-being are threatened. These in turn can lead to related problems, such as collisions, conflicts with driveway access, and unreasonable safety risks for pedestrians and bicyclists. Generally, higher rates of speed equate to much higher fatality rates when vehicle-pedestrian accidents occur.

GOAL T3

Improve the safety of the transportation system, reduce speeds and protect the quality of life in residential neighborhoods.

Policy T3.1
Establish speed limits that reflect street function, adjacent land uses, and physical condition of the roadway. Promote travel at a lower rate of speed, where appropriate, to improve safety, help achieve the State's goal of zero deaths and disabling injuries, and create a more comfortable environment for pedestrians and cyclists. Achieve lower vehicular travel speeds through traffic calming and effective enforcement of appropriate speed limits.

Policy T3.2
Protect the quality of life in residential neighborhoods by monitoring traffic volumes and developing comprehensive, integrated and cost-effective traffic, bicycle and pedestrian safety improvements in residential areas. Such improvements may include sidewalks and pathways to connect to schools, parks, and transit stops. Additional improvements may include signage, bicycle facility and street improvements that include traffic calming design elements.

Policy T3.3
Establish and assign truck routes to the City's major delivery destinations along major arterials to avoid impacts on secondary arterials, collectors, and neighborhood streets. Heavy truck use of these streets, which are not designed to accommodate significant amounts of truck traffic, may increase maintenance and decrease safety.

Policy T3.4
Require shared access driveways and cross-access between developments when planning for public rights-of-way improvements and private development in order to reduce turning movement conflicts and enhance pedestrian and vehicular traffic safety. When street improvements are implemented, consolidate private driveway access to properties along major, secondary, and collector arterials in order to reduce safety hazards and increase street capacity.

Policy T3.5
Encourage the use of existing major arterials for the movement of through-traffic and freight in order to reduce the need for new capital projects and support the reliable movement of people, goods and services. Employ traffic calming measures on residential streets to discourage or slow neighborhood through-traffic.

Policy T3.6
Use traffic circles, landscaped medians, pedestrian bump-outs and other traffic calming measures to reduce speeds and increase safety. Where appropriate, design these facilities to provide pedestrian refuge areas that reduce pedestrian crossing distances, reduce conflict points and enhance streetscape landscaping. Use other traffic calming measures that offer pedestrian protection such as on-street parking, or increase driver awareness of pedestrians through the use of textured pavement and signage.

Policy T3.7
Avoid the creation of excessively large blocks and long local access streets that are uninterrupted by intersections, mid-block neck-downs, or other traffic calming

elements in order to discourage higher motor vehicle speeds that reduce pedestrian and bicyclist safety.

Policy T3.8
Avoid the construction of sidewalks next to street curbs and provide physical separation between traffic lanes and sidewalks to enhance pedestrian safety, add to sidewalk users' comfort, and encourage higher pedestrian usage. Wherever possible, separate pedestrians from traffic lanes by installing landscaped planter strips that include street trees.

VEHICULAR AND PEDESTRIAN CIRCULATION

Roadway, sidewalks, trails, designated bicycle areas, and other areas of public circulation should be designed to provide the highest level of safety for the protection of human life and to ensure that there are transportation choices for people of all ages and abilities. Pedestrian facilities must meet ADA accessibility requirements. Safe, convenient and interconnected transportation networks should be provided for all major modes of transportation. An integrated, safety-oriented pedestrian and bicycle system increases mobility choices, reduces reliance on single-occupant vehicles, provides convenient access to schools, commercial mixed use centers, transit systems, parks and other recreation areas throughout the city, and encourages regular physical activity to enhance health and wellness.

GOAL T4
Improve vehicular and pedestrian traffic circulation within the City to enhance the quality of life.

Policy T4.1
Ensure that streets and sidewalks provide access between residential neighborhoods and areas that are common destinations, including commercial mixed use areas, schools, and parks. Maintain and enhance continuity of the street and sidewalk pattern by avoiding dead-end and half-streets not having turnaround provisions and by requiring through-connections in new developments.

Policy T4.2
Seek opportunities to obtain private easements or use existing public rights-of-way or public easements to develop alternative routes or improved linkages between residential areas or from residential to parks and commercial mixed use areas. Work with property owners to create well-lighted pedestrian paths in established areas with poor connections. New pathways should tie into a network of walking trails and help improve pedestrian facility connectivity, thereby encouraging physical activity and overall health and well-being.

Policy T4.3
Design and improve residential collector arterials to reduce speeds and accommodate neighborhood concerns about safety, aesthetics and noise.

TRANSIT

Transit is a key element of Fircrest's multimodal infrastructure and plays an important role in providing connections, mobility and access both locally and regionally. PSRC's *VISION 2040* and *Transportation 2040* plans contain the regional growth and transportation strategies for the central Puget Sound region. These plans call for channeling future growth into regional growth centers and other centers of local importance – and linking these centers with transit. The Pierce Transit Tacoma Community College (TCC) Transit Center is located directly across 19th Street from the northwest corner of Fircrest. Investments that improve access to this center and support more frequent service will benefit the community by providing enhanced local and regional connections.

GOAL T5

Encourage use of public transportation to accommodate a larger proportion of the traveling public.

Policy T5.1

Use transit as a way to provide for access, circulation and mobility needs in Fircrest. Work with Pierce Transit to support the provision of local transit service on Major, Secondary, and Collector Arterials providing feeder service to residential areas and connections to adjacent jurisdictions. Local transit service should be expanded to serve the entire community including underserved neighborhoods and those individuals with special needs.

Policy T5.2

Coordinate with Pierce Transit and the Tacoma and University Place school districts to develop bus stops and shelters with seating to provide greater comfort for riders and encourage higher ridership.

Policy T5.3

Participate in Sound Transit's system planning process to help identify and evaluate potential options for system expansion. Work with Sound Transit and the community to determine long-term high capacity and express transit needs for the City and regional transportation partners. Consider Sound Transit's long-range plans to provide regional express bus service to the Tacoma Community College Transit Center during planning for the Mildred and 19th Street corridors. Work with citizens and other stakeholders to determine what regional high capacity transit modes and routes would best serve the community.

SIDEWALKS AND BICYCLE LANES

The needs of bicyclists, pedestrians and transit users must be integrated in all roadway projects. Sidewalk networks should be well connected with opportunities for regular safe street crossings. The availability of bicycle facilities can encourage people to bike rather than drive for short- and moderate-distance trips. If a roadway is designed to discourage vehicular speeding, it can be comfortably used by pedestrians and bicyclists alike. Transit-friendly design should support a high level of transit activity and include

provisions for pedestrians safely crossing the street on their return trip. Walking and bicycling provide numerous individual and community benefits related to health, safety, the environment, transportation and quality of life. People who cannot or prefer not to drive should have safe and efficient transportation choices.

GOAL T6
Develop facilities for pedestrians and bicyclists to achieve a walkable community to support active and independent living, health, environmental quality and cost savings for travel.

Policy T6.1
Require sidewalk facilities on all new and substantially redeveloped public streets to enhance public safety. Ensure the provision of sidewalks in close proximity to schools to offer protection for children who walk to and from school. Assign high priority to projects that provide linkages to transit or complete planned pedestrian facilities or trails. Provide pedestrian facilities on non-arterial streets to supplement principal pedestrian facilities located on arterials. Ensure that crosswalks, signing, and pedestrian-activated signals conform to the *Manual on Uniform Traffic Control Devices (MUTCD).*

Policy T6.2
Develop a system of bicycle routes that connects neighborhoods and is coordinated with surrounding jurisdictions to allow people to conveniently travel between and within neighborhoods and local parks, commercial mixed use areas and regional facilities. Consider the recommendations of the *Town of Fircrest Comprehensive Bikeway Plan* when updating bicycle route system facilities. Coordinate the planning, design, and construction of these facilities with adjacent jurisdictions to ensure consistency with regional plans. Base the design and type of bicycle facilities on the design standards for the functional classification of the roadway.

Policy T6.3
Require that during the project review process for new development or redevelopment:

- Projects are consistent with applicable pedestrian and bicycle plans, master plans and development standards;
- Planned facilities include required frontage and crossing improvements consistent with applicable pedestrian and bicycle plans;
- On-site bicycle trails and pedestrian facilities have formal, direct and safe connections between buildings and subdivisions and the general circulation system;
- New subdivisions and short plats include, consistent with state law, the required pedestrian facilities (frontage and off-site improvements) that assure safe walking conditions for students who walk to and from school;

- Construction and implementation of other multi-use trails and trail crossings, as described in the Park, Recreation and Open Space Plan, are coordinated with project review; and
- Safety and security considerations for pedestrians and bicyclists are factored into the review of development proposals.

CONCURRENCY

Transportation concurrency and level of service (LOS) standards are key requirements of the GMA. By policy and regulation, the City of Fircrest is required to ensure that transportation programs, projects and services needed to serve growth are in place either when growth occurs or within six years. Regulations implementing concurrency and LOS standards are contained in FMC Chapter 22.12 Concurrency Management.

GOAL T7

Maintain a consistent level of service on the arterial system that mitigates impacts of new growth and is adequate to serve adjoining land uses.

Policy T7.1
Except as otherwise designated, establish a capacity LOS standard D for intersections and roadways on major arterials, secondary arterials, and collector arterials and minor streets where they intersect with a major or secondary arterial street.

Policy T7.2
Ensure transportation facilities and services are in place concurrent with or within a reasonable time period to support growth as it occurs consistent with the Growth Management Act, as restated in *VISION 2040* and the Pierce County Countywide Planning Policies. Make sure facilities and services do not drop below the adopted level of service and thereby cause negative impacts such as congestion, diminished safety, environmental and health impacts. Ensure concurrency by requiring payment of traffic impact fees to be used for capacity improvements, using SEPA to mitigate development-related impacts, or requiring developers to pay a proportionate share of traffic mitigation measures to maintain the adopted level of service.

Policy T7.3
Ensure that Fircrest's transportation concurrency management responses to growth have the effect of expanding travel choices and achieve a multimodal travel environment. Programs, projects and services in response to existing and growth-related travel include those that improve access and connections, including motor vehicle operations, public transit service levels, the walking and bicycling environment, and transportation demand management.

TRANSPORTATION REVENUE AND FUNDING

The Capital Facilities Element's Six-Year Capital Improvements Plan for transportation facilities contains details of transportation revenue sources that the City can reasonably expect to receive during the life of the transportation facilities plan. Revenue sources vary widely in terms of the amounts available and the types of projects for which they may be used. In most cases, individual transportation projects are funded by a combination of funding sources, reflecting the fact that transportation projects have multiple purposes and serve multiple beneficiaries.

GOAL T8

Develop an adequate and equitable funding program to make transportation improvements in a timely manner, as mandated by the Growth Management Act.

Policy T8.1
Use regional, state, and federal funding sources for arterial street and other major improvements serving the City of Fircrest to ensure implementation of the City's transportation plan in an efficient, timely manner, concurrent with development. Ensure that the funding program recognizes and accommodates not only existing and future development in the City, but also regional traffic.

Policy T8.2
Supplement public funding sources with new revenue sources including, where appropriate, Local Improvement Districts (LIDs), traffic impact fees, a Transportation Benefit District and other funding sources. Ensure these new revenue sources are equitable and consistent with the benefits derived from improvements. Ensure that funding programs allow implementation of transportation improvements concurrently with development. Require new development to pay a fair share of the cost to serve it.

Policy T8.3
Secure grants available for sidewalk and bicycle lane improvements to implement alternative transportation action strategies and meet multimodal and *complete street* goals and objectives.

STREET MAINTENANCE AND MANAGEMENT

The quality of life for many people is significantly affected by how well streets function for pedestrians, bicyclists, transit riders and motorists. To serve Fircrest well, streets require cost effective maintenance, safety and efficiency improvements.

GOAL T9

Maintain the public street system to promote safety, comfort of travel, and cost-effective use of public funds.

Policy T9.1
Administer a Pavement Management System (PMS) and comprehensive signage and markings program to address improvements for motorized and nonmotorized travel and the impacts of present and projected land uses. Implement the PMS in a manner that can reduce the need to build higher cost capital improvements by extending the useful life of existing facilities. The maintenance program should include provisions for vegetation removal to improve sight distances, installing adequate crosswalk markings and signage, and repairing sidewalks as needed.

Policy T9.2
Protect the public investment in the existing transportation system by administering an effective maintenance and preservation program that lowers the overall life cycle costs of the transportation infrastructure and reduces the need for new capital facility improvements.

Policy T9.3
Utilize Transportation System Management (TSM) strategies to make the existing roadways more efficient. Maximize the efficiency of the existing roadway system to reduce or delay the need for system improvements. Use a variety of methods, including: coordinating traffic signal timing; implementing a signal retiming and coordination program to reduce delay and congestion at the City's signalized intersections as major improvements are implemented; making intersection improvements to facilitate turning movements; and restricting access along principal roadways.

DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) encompasses the range of actions and strategies that offer alternatives to single-occupant vehicle (SOV) travel and help to more efficiently use the transportation system. TDM focuses on more effectively using existing and planned transportation capacity, ensures the compatible use of the transportation system consistent with planned uses, helps accommodate growth consistent with community character and land use objectives, and serves to mitigate impacts and to better meet mobility needs.

GOAL T10

Implement TDM strategies to achieve efficient use of transportation infrastructure, increase the person-carrying capacity, accommodate and facilitate future growth, and achieve Fircrest's land use objectives.

Policy T10.1
Utilize TDM strategies to reduce congestion, emissions, fuel consumption and the need for new transportation facilities – especially new roads and capacity improvements. Coordinate with Pierce Transit on service levels, frequency and route location, and actively pursue street improvements that include bike lanes, sidewalks and pedestrian crossings that provide a safe, convenient alternative to the use of the automobile. Consider developing vanpool and ride match programs in conjunction with Pierce

Transit, advancing other private and public rideshare programs and systems, and actively promoting commute trip reduction practices, including complying with the requirements of the State Commute Trip Reduction (CTR) Act, if applicable.

Policy T10.2
Require large employers to implement a CTR Program for employees, as mandated by the State Commute Trip Reduction Act.

Policy T10.3
Implement TDM strategies that emphasize incentives rather than disincentives and avoiding the imposition of disincentives to single-occupant vehicle travel when the City determines that there is an absence of reasonable transportation alternatives.

Policy T10.4
Provide physical features supportive of the use of alternative modes of travel and develop and maintain a list of acceptable TDM techniques and physical features.

Policy T10.5
Encourage large employers to participate in Transportation Management Associations to support trip reduction activities.

Policy T10.6
Support the development and implementation of TDM programs for both commute/ employer based, and non-commute/non-employer based sites including schools.

CONSISTENCY WITH PLANS AND POLICIES

One of the most important planning tenets expressed in the Growth Management Act is the *consistency* requirement. With respect to transportation planning, Fircrest must ensure its Transportation Element is consistent with the Land Use Element. This Element must be consistent with the City's Six-Year Capital Improvement Program. There must be consistency between the City's Comprehensive Plan, the Pierce County Comprehensive Plan, and the comprehensive plans of all municipalities within the County in accordance with the Pierce County Countywide Planning Policies. And, there must be consistency with the PSRC Multicounty Planning Policies.

GOAL T11

Integrate land use and transportation planning to support active communities through the provision of a variety of travel choices, improve accessibility and mobility.

Policy T11.1
Make transportation choices based on projected population and employment growth that support the distribution and intensity of land uses identified in the Land Use Element. Plan transportation facilities and services including roads, transit, pedestrian and bicycle keeping in mind the type and intensity of land uses -- including the location of high and low density housing, jobs, shopping, schools and parks.

Policy T11.2
Use mechanisms that encourage transit use including limiting off-street parking spaces, establishing maximum parking requirements, offering commute trip reduction programs, and implementing other TDM measures. Locate higher densities and intensities of use close to transit stops to create a core area to support transit and high occupancy vehicle use. Support development of transit centers, bus pullouts, and other transit facilities. Establish incentives for developers to provide transit and TDM-supportive amenities to further encourage transit use. Design and construct *complete streets,* bicycle-friendly facilities including bike-activated signals and secure bicycle racks or lockers, and pedestrian pathways.

Policy T11.3
Ensure comprehensive plan consistency with the Regional Transportation Plan, *Transportation 2040,* by supporting the development of a safe and efficient transportation network that supports a healthy environment and strong economy, encouraging increased utilization of clean and renewable energy and a reduction in greenhouse gas emissions, and promoting sustainable funding programs.

Policy T11.4
Coordinate with state, regional and local transportation efforts to develop a highly efficient multimodal system that supports the *VISION 2040* Regional Growth Strategy. Coordinate with the State Department of Transportation, PSRC, Sound Transit, the Pierce County Regional Council, Pierce Transit, BNSF, Pierce County and surrounding cities and towns to integrate transportation systems for easy and efficient mobility of people, freight and services.

ENVIRONMENTAL HEALTH

The transportation system within Fircrest represents major public facilities whose quality of design, sensitivity to human needs, and integration with their surroundings can enhance an urban environment or erode it. The transportation system needs to be designed in a manner that contributes to the long-term benefit of the community and supports Fircrest's environmental health policies.

GOAL T12
Reduce environmental impacts associated with transportation infrastructure and operations.

Policy T12.1
Enhance strategies that improve air quality and reduce greenhouse gas emissions. The City should build *complete streets* with sidewalks and bike lanes, coordinate with transit agencies, and build green streets to improve air and water quality. The City should support the development of infrastructure to encourage the use of electric and low emission vehicles by including electric vehicle charging stations in new and substantially redeveloped public facilities. As electric and low emission vehicle technology advances, the City should revise its regulations to encourage use of this technology.

Policy T12.2
Adopt design standards to improve water quality and create more appealing streetscapes. Emphasize the use of landscaping elements in street improvement projects that help curb stormwater runoff – bioswales, planters, rain gardens, and street trees – and that are mutually beneficial for mobility and ecology. Design these green elements to be deterrents of crashes and injuries and contribute to a more comfortable and visually interesting environment for all users. When designing *complete streets*, include trees and other plants to clean runoff and manage stormwater at the site. Use traffic-calming elements like traffic circles, chicanes, islands, and curb extensions to provide site opportunities for bioswales, street trees, and rain gardens.

Policy T12.3
Develop strategies to reduce solid waste including the use of recycled materials in street paving and other maintenance projects in order to lower costs and reduce landfill use, provided the strategies and materials meet cost and durability objectives.

GOAL T13
Consider benefits and impacts to health in the design of transportation infrastructure by providing opportunities for exercise, and reducing exposure to air, water and noise pollution.

Policy T13.1
Identify gaps in bike lanes and sidewalks and opportunities for pathway and trail connections between neighborhoods and to parks and schools to encourage greater pedestrian facility use and reduce reliance on automobiles. Support the construction of improvements to trail systems to provide connections between parks and neighborhoods for walkers and cyclists.

Policy T13.2
Design, build and maintain bike lanes, sidewalks, paths and trails to expand opportunities for walking and biking to improve individual and community health. Provide transportation facilities that are walkable and bicycle friendly to improve economic and living conditions so that businesses and skilled workers are attracted to the community.

Policy T13.3
Concentrate population and employment growth along the Mildred and 19th Street corridors and other areas served by transit routes to reduce environmental impacts associated with growth and the construction of additional infrastructure. Integrate transportation and land use planning to meet environmental goals by reducing the impacts of the transportation system such as contaminated storm water run-off, greenhouse gas emissions, noise pollution and energy consumption.

DISASTER PLANNING

Safety planning and mitigation, including strategies for protecting the transportation system from disasters, are multidisciplinary efforts that can significantly improve the livability of the community. Many opportunities exist to implement relatively low-cost but effective safety measures at the local level. The City is committed to protecting its transportation system and making it safe for users of all modes of travel.

GOAL T14
Protect the City's transportation system against disaster, and develop prevention and recovery strategies and coordinated responses.

Policy T14.1
Work with partner organizations including the Department of Homeland Security's Federal Emergency Management Agency (FEMA) and Pierce County Emergency Management to prepare for disasters by developing prevention and recovery strategies. Participate in emergency management preparedness training opportunities for transportation facilities.

CITIZEN INVOLVEMENT

Transportation improvements may strongly influence community design and function and have direct impacts on residents, business owners and other stakeholders within a community. The designs for such improvements may benefit greatly from input received during public outreach in the early stages of project formulation and for some projects during the final stages of design work.

Goal T15
Facilitate the involvement of interested citizens in planning transportation system improvements.

Policy T15.1
Where major improvements are planned, solicit input from interested citizens concerning the improvements early in the design process. Use some or all of the following techniques to encourage participation: may be used: citizen advisory committees, design charrettes, public open houses, workshops and hearings, and informational outreach through *Town Topics,* the city's website, social media, and other effective means. Where minor improvements will affect a specific neighborhood, provide neighborhood residents with an opportunity to provide their input and comment on designs. Review work done by citizens in the past such as the *Town of Fircrest Comprehensive Bikeway Plan,* and incorporate elements into future transportation improvement plans, as appropriate.

Policy T15.2
After a major transportation system improvement is approved by Council, initiate changes, including those to landscaping, lighting, and to utility locations and configurations, through a formal engineering change request and review procedure that ensures that potential impacts of the change are considered by all departments

that participated in developing the approved design. Disallow changes that negatively impact the proposed design's safety or level of service. Approve changes that do not significantly alter any element of the design at the staff level. Require Council approval for proposed design changes that significantly alter design elements.

LAND USE ASSUMPTIONS

The land use assumptions used while developing this Transportation Element are summarized in **Table T-1** and described in detail in the documents listed.

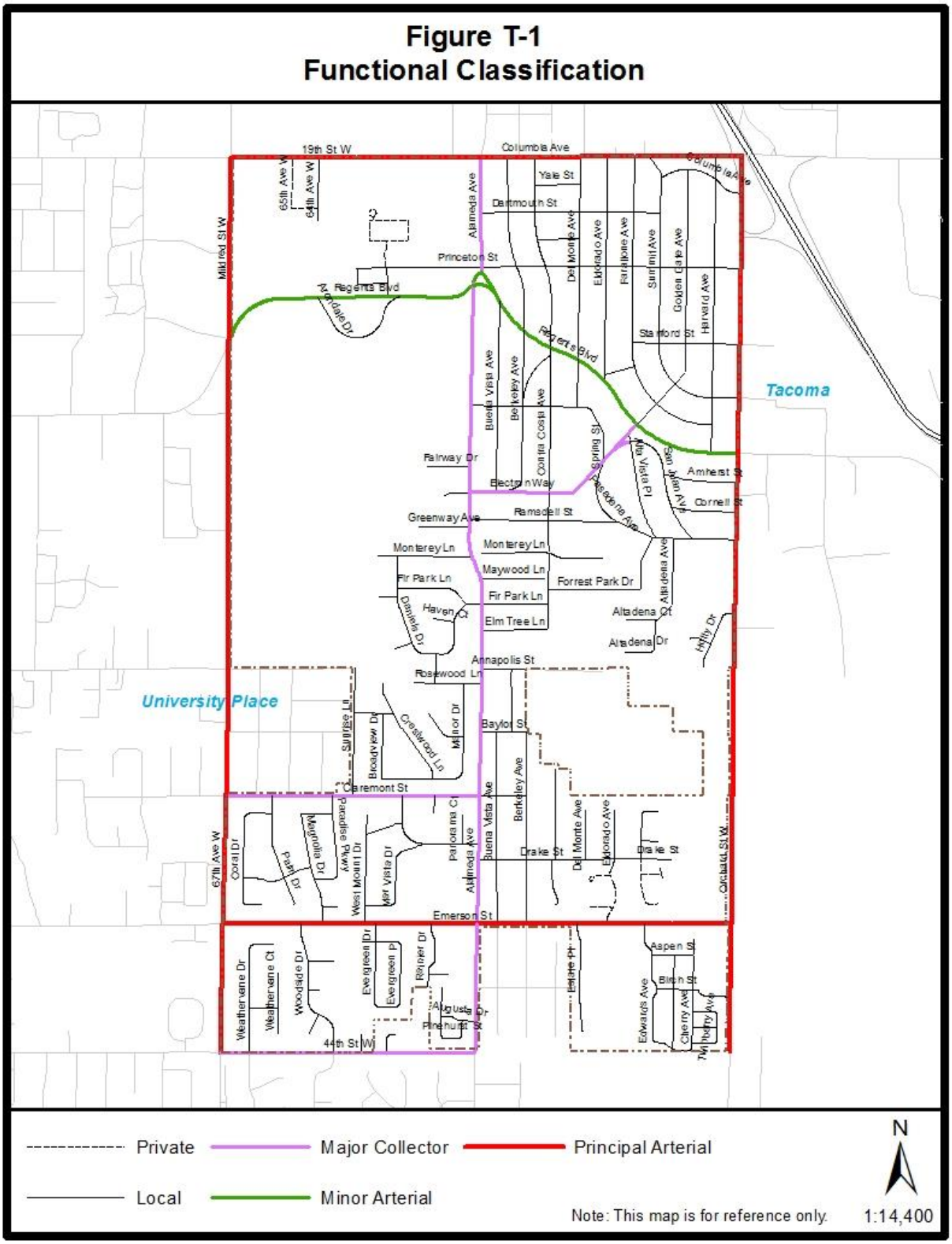
Table T-1

Area	Document
Within Fircrest	Future land use in low to moderate density residential neighborhoods will remain essentially unchanged except for the conversion of some undeveloped land in the southeast corner of the City to residential uses. Properties located along the Mildred and 19th Street corridors will redevelop to include a more intensive mix of uses including retail, office, service and multifamily residential components. The Fircrest Golf Club property will remain largely devoted to the golf course and supportive uses. The Land Use Element provides details.
North and east of Fircrest	Future land use in areas adjacent to Fircrest is specified in the *City of Tacoma Land Use Management Plan*. Future land uses specified are essentially the same as those existing at the time this plan was updated.
South and west of Fircrest	The *Comprehensive Plan for Pierce County, Washington* and the *City of University Place Comprehensive Plan* specify that most land uses in developed areas adjacent to Fircrest will remain generally unchanged. Several tracts of vacant land west and south of Fircrest will be developed for low to moderate density residential use. A portion of the *University Place Regional Growth Center* (RGC), provisionally designated by PSRC in December 2014, is located adjacent to the western border of Fircrest west of Mildred Street and south of 19th Street West. The RGC will accommodate mixed use development that is comparable in intensity and allowed uses to the Fircrest Commercial Mixed Use designation on the east side of Mildred and south side of 19th Street.

INVENTORY OF FACILITIES AND SERVICES

Because Fircrest is a geographically small, land-locked city with limited internal commercial activity, Fircrest does not contain many of the typical components of a multimodal transportation network. Fircrest has no water, air, or rail facilities. The city's transportation facilities are limited to streets and those transportation modes and services that use streets.

Figure T-1
Functional Classification



STREETS

Improved streets and their classifications are illustrated in **Figure T-1**. Fircrest has two distinctly different street networks, one in the northern area of the city and one in the central and southern area of the city. The two networks are linked by Alameda Ave., which runs north-south through the approximate center of the city. The differences between these street networks can be traced to their surroundings when they were developed and the development standards that were used.

The most common paved width of local streets is 28 to 30 feet. A few streets in the older part of the city are 24 to 26 feet wide. Paved width is usually between 40 and 80 feet in streets that have been recognized in the past as collectors and arterials. Most streets provide automobile parking parallel to the curb.

A primary determinant of the functional classification is the present and anticipated traffic volumes to be carried by a street. Within a given classification the number of lanes can be varied to accommodate the anticipated volume. Roadway functional classifications are summarized below.

- *Local Streets*
  Local streets are typically low volume roadways that provide access to individual lots adjacent to them. A number of factors including multiple driveways accessing the roadway, on-street parking, and the potential presence of children playing and riding bicycles suggest that the design and width of local streets should encourage slower traffic speeds (i.e., 25 mph or less). An interconnected network of local streets disperses traffic and allows multiple access routes for emergency service vehicles.

- *Collector Streets*
  Collector streets gather traffic from local streets and direct it to arterial routes. Collectors provide both land access and traffic circulation within residential neighborhoods and commercial and industrial areas. Roadways should be of sufficient width to allow for on-street parking and yet facilitate efficient traffic flow at moderate speeds (i.e., 25 to 35 mph). It is desirable to have collector streets spaced at 1/4 to 1/2 mile intervals. With this frequency, access from neighborhoods can be achieved without circuitous, time consuming travel and without overburdening residential streets with through traffic.

  Minor Arterial Streets
  Minor arterial streets interconnect with and augment arterial streets as the principle circulation routes within the community. Ease of traffic mobility and the length of trips may be somewhat less along minor arterials than principle arterials. Intercommunity travel is typically facilitated by minor arterials. In fully developed areas minor arterials are normally not more than one mile apart.

- *Principal Arterial Streets*
  Principal Arterial Streets serve as the primary routes within and through the community. They may serve as the principle routes to and from freeway access points and other intercommunity connections. Frequently, intercity bus routes are located along principal arterials. Efficient traffic movement is of prime concern. Roadway width and intersection design should accommodate concentrated traffic volumes at moderate speeds (30 to 40 mph). Urban principal arterials may be as closely spaced as one mile apart in highly developed central business districts.

NONMOTORIZED FACILITIES

Figure T-2 illustrates the distribution and type of nonmotorized facilities in Fircrest. Sidewalks are almost always present along streets originally developed prior to 1940 in the northern part of the City. These sidewalks are generally separated from automobile travel lanes by curb and gutter and often include a narrow planting strip between the sidewalk and the curb. Sidewalks are present along most of Alameda Avenue. Fircrest has a limited number of off-street pedestrian facilities, including paved pathways in newer planned developments and a few short, unmaintained footpaths through vacant properties, school grounds, and open space.

PUBLIC TRANSIT

Pierce Transit

Public transportation service in the area is provided by the Pierce County Transportation Benefit Authority (or PTBA, commonly known as Pierce Transit). Pierce Transit is a municipal corporation formed under the authority of RCW Chapter 36.57 and is governed by a ten-member Board of Commissioners comprised of elected officials representing thirteen jurisdictions, unincorporated Pierce County, and one non-voting union representative within the benefit area.

Pierce Transit covers 292 square miles of Pierce County containing roughly 70% of the county population. It provides three types of service: fixed route, SHUTTLE (paratransit), and vanpools that help get passengers to jobs, schools and personal appointments.

Pierce Transit operates four fixed bus routes (2, 51, 52, and 53) that serve or stop in the City of Fircrest. These routes are shown in **Figure T-3**.

- Route 2 connects the community with the Tacoma Community College (TCC) Transit Center and the Lakewood Transit Center via South 19th Street and Bridgeport Way West.

Figure T-2
Nonmotorized Facilities

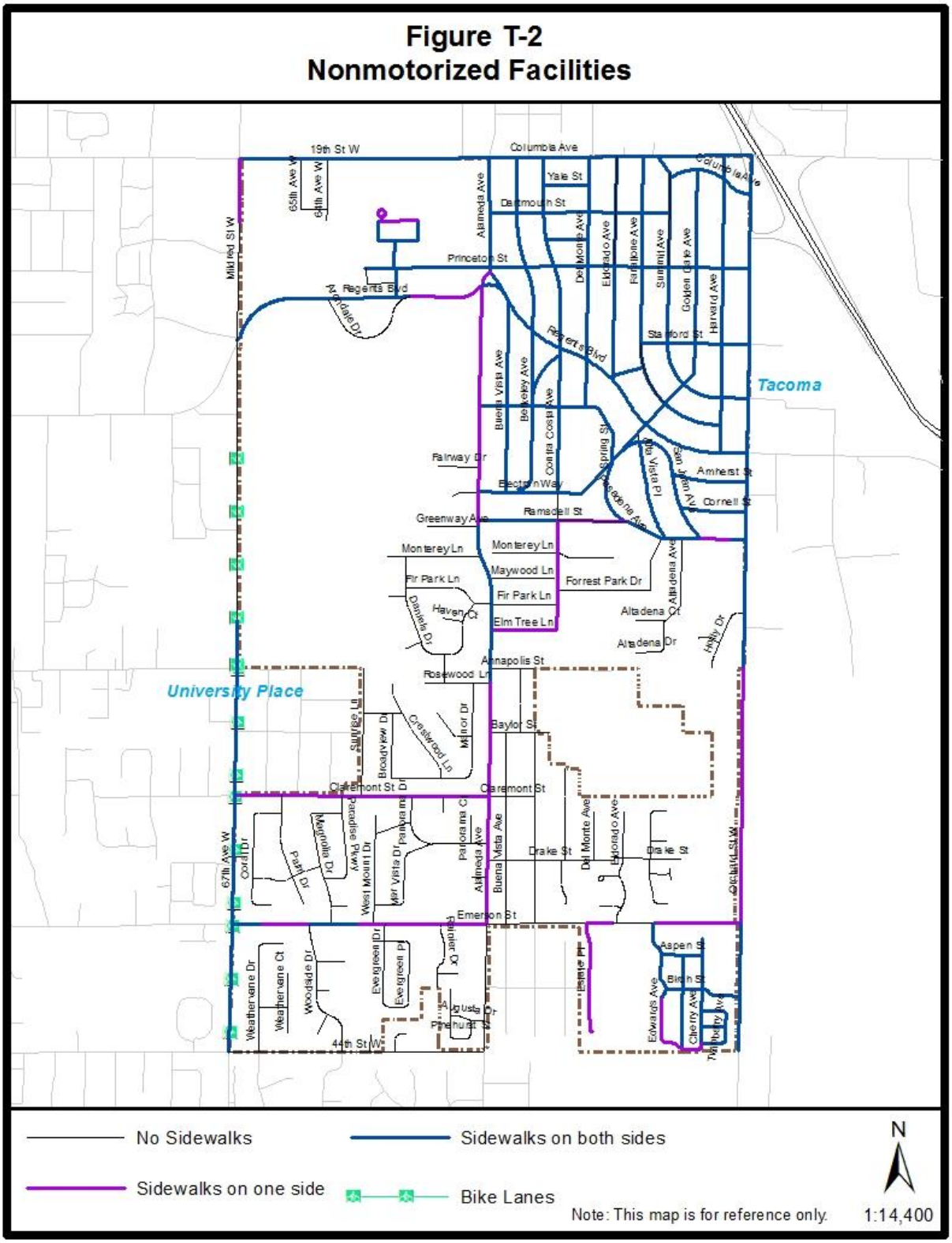
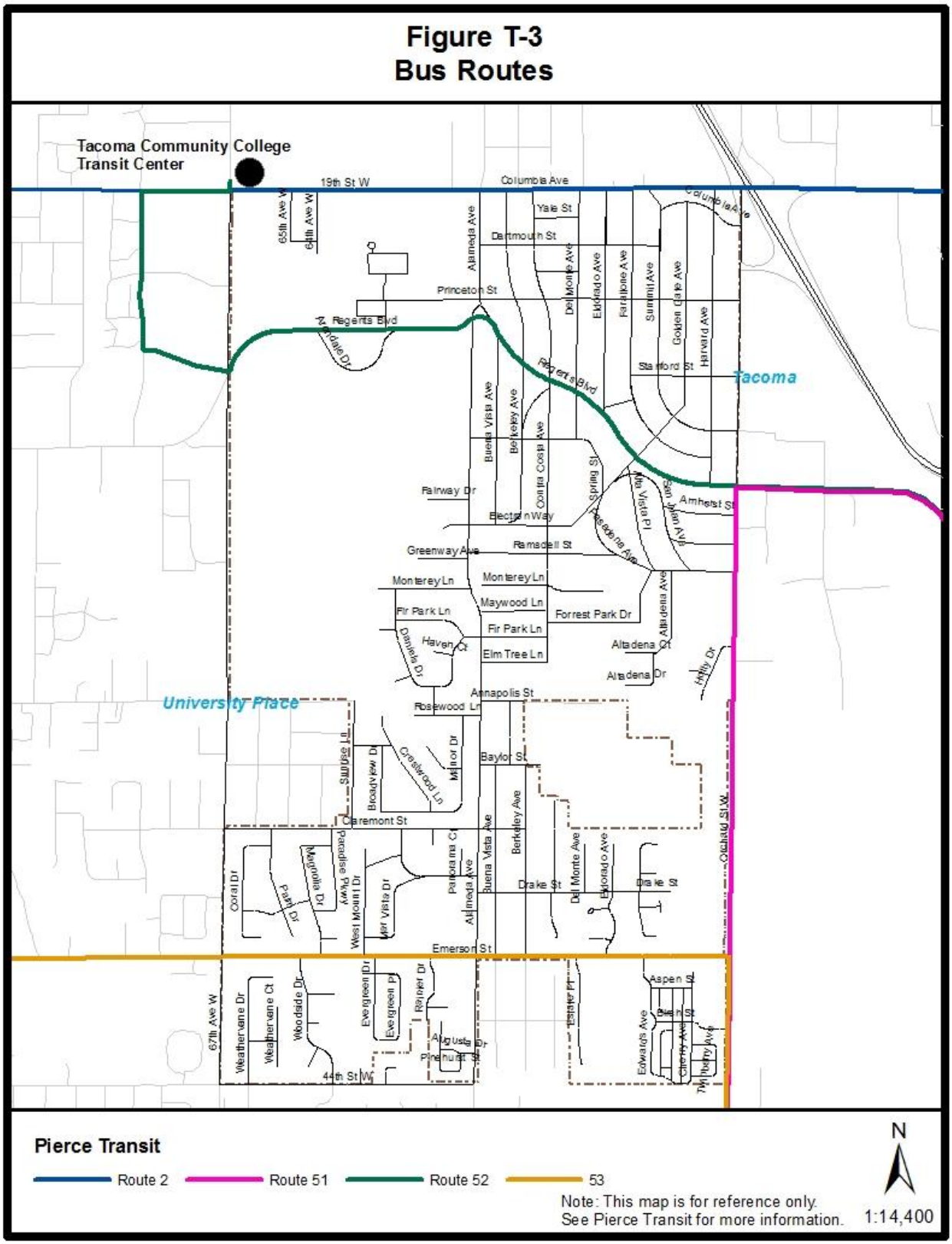


Figure T-3
Bus Routes



- Route 51 connects Fircrest to Tacoma's Proctor District and the Lakewood Sounder commuter rail station via South Orchard Street.

  Route 52 links the community with the TCC Transit Center via Regents Boulevard and the Narrows Plaza neighborhood. Route 52 also links the Tacoma Mall Transit Center via Regents Boulevard and various arterials in Tacoma.

  Route 53 provides access for the southern part of Fircrest to the TCC Transit Center via Emerson Street and various arterials in University Place. Route 53 also provides access to the vicinity of the South Tacoma Sounder commuter rail station via South Orchard Street and South 66th Street, although the bus route alignment is three blocks south of the station. Route 53 continues on to the Tacoma Mall Transit Center, eventually terminating in downtown Tacoma. The buses serving these routes accommodate both riders with bicycles and wheelchairs.

SHUTTLE (paratransit) service is provided by Pierce Transit for persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA). Pierce Transit's SHUTTLE provides transportation for individuals who are unable to access or use fixed route bus services due to a disability. SHUTTLE eligibility standards and service characteristics are designed to meet the complementary paratransit requirements of the ADA. Using lift-equipped vans, SHUTTLE provides door-to-door service, or in some cases access to fixed route service. SHUTTLE provides service that is comparable to fixed route service in a geographic area and hours of service within each area. SHUTTLE is provided directly by Pierce Transit and through contracted services with First Transit. The area served by SHUTTLE is generally defined by the area that is within three-quarters of a mile of a fixed route.

Pierce Transit also offers vanpool, special use van, and rideshare programs. Pierce Transit vanpools typically serve a group of 5 to 15 people sharing the ride in a 12- or 15-passenger van. These vanpools commonly serve groups traveling to and from work, whose trip origin or destination is within Pierce Transit's service area. This highly successful program complements Pierce Transit's network of local and express services, providing commute alternatives to many destinations that cannot be effectively served by local fixed route services.

Sound Transit

Regional transit service is provided by the Central Puget Sound Regional Transit Authority, commonly known as Sound Transit. Sound Transit plans, builds and operates express bus, light rail and commuter train services in the urban areas of King, Pierce and Snohomish counties. These services are intended to complement other transit services including those operated by Pierce Transit.

Sound Transit's Regional Transit Long-Range Plan establishes goals, policies, and strategies to guide the long-term development of the region's high capacity transportation (HCT) system. It is based on years of intensive planning, environmental

analysis, and public outreach. It is intended to guide how the Sound Transit system can best address the region's mobility needs and support growth management objectives. The long-range plan will be implemented in a series of phases and will be updated over time.

This long-range plan updates and modifies earlier adopted plans. In 1996, Sound Transit adopted *The Regional Transit Long-Range Vision* and Sound Move, -- Sound Transit's initial phase of regional HCT investments. In 2005 the Long-Range Plan was updated and Sound Transit 2 (ST2) was the second phase of regional HCT investments. Where the long-range plan represents a broad regional framework for long-term investments, Sound Move and ST2 represent more detailed sets of projects for which voters approved funding. Most Sound Move and ST2 projects and services are being implemented and are successfully addressing many regional mobility needs. Sound Transit will use this updated long-range plan as the basis for developing the next phase of investments – Sound Transit's next system plan. As with Sound Move and, ST2, the next phase of system planning will encompass a specific set of projects and services designed to build upon the first two phases and to further expand mobility options for the citizens of the central Puget Sound region.

Sound Transit in Pierce County consists of three distinct lines of business:

1) Regional Express (bus);
2) Sounder (commuter rail); and
3) Link (light rail).

Sound Transit improvements in the general area include express bus service from the TCC Transit Center, the Lakewood Towne Center Transit Center, and the Tacoma Dome Station. Sounder operates commuter rail service from the Lakewood, South Tacoma and Tacoma Dome Stations north to Seattle via Puyallup, Sumner, Auburn, Kent and Tukwila. Sounder service is available to Everett on the Seattle-Everett segment. In Pierce County, Sound Transit operates a light rail segment between downtown Tacoma and the Tacoma Dome station. Additional light rail service is planned for Tacoma.

AIR, WATER, AND RAIL TRANSPORTATION

Fircrest does not have an airport within its planning area. Sea-Tac International Airport, located approximately 28 miles north of the City, is the largest airport in Washington State. Regional, national, and international connections can be made through this airport. Shuttle services such as Shuttle Express provide door-to-door service between Sea-Tac and Fircrest residences and businesses. Sound Transit express buses provide service between the airport and the Tacoma Dome Station and other Tacoma-area locations.

Tacoma Narrows Airport is located on the west side of the Tacoma Narrows, south of the Tacoma Narrows Bridge. This general aviation airport provides a limited number of regional commuter flights, but does not offer national or international service.

The Washington State Ferry System operates the Point Defiance-Tahlequah route connecting the south end of Vashon Island with the Tacoma area. The Point Defiance dock is located approximately five miles north of the City.

An Amtrak station is located in the City of Tacoma at 1101 Puyallup Avenue. Service is provided from Tacoma to the north to Tukwila, Seattle, Edmonds, Everett, Mount Vernon, Bellingham, and Vancouver, British Columbia, and to the south to Olympia-Lacey, Centralia, Kelso-Longview, Vancouver, Portland, Oregon, and destinations further south. Amtrak service from Tacoma is also provided on the east-west corridor to Seattle, Wenatchee, Moses Lake, Ritzville and Spokane. There are no passenger rail stops within City limits.

LEVELS OF SERVICE

Level of service (LOS) standards are measures describing both the operational conditions within a traffic stream and the perception of these conditions by motorists and/or passengers. Each LOS describes traffic conditions in objective terms such as speed, travel time, or vehicle density (i.e. number of vehicles per mile). The conditions are also qualitatively described in terms of a driver's ability to change lanes, to safely make turns at intersections, and to choose their own travel speed.

The LOS grading ranges are from A to F. LOS A describes conditions when no delays are present and low volumes are experienced. LOS E, on the other hand, represents an "at capacity" condition under which no more vehicles could be added to the intersection or road segment without a breakdown in traffic flow. LOS F indicates long delays and/or forced traffic flow. In most jurisdictions in the Puget Sound region, LOS D or better is defined as acceptable, LOS E as tolerable in certain areas, and LOS F as unacceptable.

The following summarizes level of service (LOS) characteristics for signalized intersections and unsignalized intersections.

SIGNALIZED INTERSECTION LOS CHARACTERISTICS

LOS A Traffic is light. Most vehicles arrive when the light is green and do not stop at all. Vehicle Delay Range is 0.0 to 10 seconds.

LOS B Conditions are similar to LOS A, but more vehicles are forced to slow or stop at the light. Vehicle Delay Range is >10 to 20 seconds.

LOS C The number of vehicles stopping is significant and individual cycle failures may begin to appear. Vehicle Delay Range is >20 to 35 seconds.

LOS D Longer delay may result from longer cycle lengths, poor progression, and/or more traffic. Many vehicles stop and cycle failures become noticeable. Vehicle Delay Range is >35 to 55 seconds.

LOS E This is the limit of acceptable delay. Cycle failures become a frequent occurrence. Vehicle Delay Range is > 55 to 80 seconds.

LOS F Delays are considered unacceptable to most drivers. This often occurs when arrival rates exceed the capacity of the intersection. Vehicle Delay Range is more than 80 seconds.

UNSIGNALIZED INTERSECTION LOS CHARACTERISTICS

LOS A Average total delay is less than or equal to 10 seconds per vehicle.

LOS B Average total delay is between 10 and 15 seconds per vehicle.

LOS C Average total delay is between 15 and 25 seconds per vehicle.

LOS D Average total delay is between 25 and 35 seconds per vehicle.

LOS E Average total delay is between 35 and 50 seconds per vehicle.

LOS F Average total delay is greater than 50 seconds per vehicle.

ARTERIAL AND TRANSIT ADEQUACY

INTERSECTION LOS

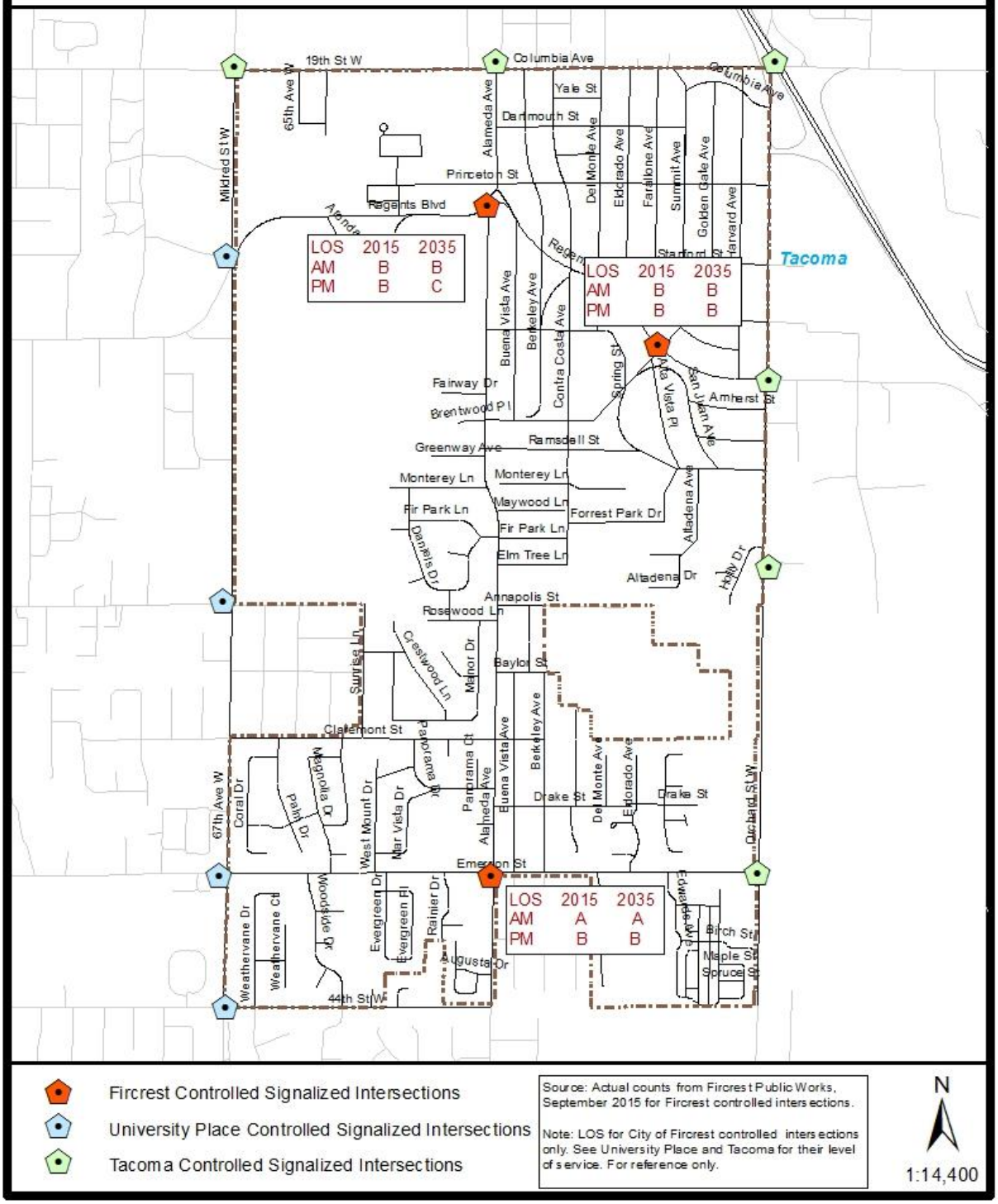
The City performed LOS analyses for existing arterial intersections in 2015. The results of the intersection AM and PM "peak hour" LOS analysis for Fircrest are shown in **Figure T-4.** The intersections shown are under control operation of the City of Fircrest. A number of arterial-arterial intersections surrounding the City such as Center Street/ Regents Boulevard and Orchard Street, and Regents Boulevard and Mildred Street West, are under the control and operation of Tacoma or University Place.

IN 2015, the intersection operation of the key intersections operated at LOS B or better during the AM peak hour and the PM peak hour. The individual directions at each of the intersections shows the 2015 LOS is LOS C or better.

TRAFFIC FORECASTS

Traffic forecasting is a way of estimating future traffic volumes based on expected population and employment growth. For Fircrest, traffic forecasts were prepared using current traffic counts, a travel demand forecasting computer model developed by PSRC and population and employment estimates contained in the Land Use Element. Given the influence of pass-through traffic, growth rates used in neighboring jurisdictions such as Tacoma and University Place, and WSDOT forecasts, were reviewed to best derive the growth rate used.

Figure T-4
Signalized Intersections - Level of Service



Based on this analysis, the traffic growth rate used is forecasted to be 0.5 percent per year as a conservative projection -- with 0.2 to 0.3 percent growth per year more likely. Based on the 0.5 percent growth rate and projected 2035 traffic volumes, the AM peak hour and PM peak hour LOS for signalized intersections were calculated and are shown in **Figure T-4.**

All signalized intersection PM peak hour LOS are expected to decrease moderately between 2015 and 2035. In 2015, there were no signalized intersections operating at either LOS E or F, with the maximum overall LOS expected to be LOS B. By 2035, no signalized intersections will reach LOS E or F (assuming no improvements) with only one intersection, Alameda Avenue and Regents Boulevard, reaching LOS C overall.

ADOPTED ARTERIAL LEVEL OF SERVICE STANDARD

The GMA requires the City of Fircrest to adopt a LOS standard for arterial streets. A LOS standard is a determination of the maximum level of congestion allowed on a roadway before improvements should be made. For example, if the established level of service for a specific roadway is LOS D, improvements should be made to that roadway if its level of service falls below LOS D (more congestion) or if projected growth would cause the road to exceed the LOS D standard.

LOS standards help ensure that the transportation system can adequately serve expected growth and development consistent with local standards. In addition, the service level policy can become the basis for establishing a traffic impact mitigation fee system to provide “fair share” funding of needed transportation improvements. The City of Fircrest has adopted a LOS standard of LOS D for its arterial streets.

CONCURRENCY

Concurrency describes a situation in which adequate facilities are available when the impacts of the development occur, or within a specified time thereafter. Based on the City’s adoption of LOS D for its arterial streets, new development will not be permitted if it causes a particular transportation facility to decline below LOS D unless improvements or strategies to accommodate the development’s impacts are made “concurrent with” the development. For transportation, “concurrent with” means that the improvement must be in place at the time of development or within six years of completion and occupancy of the development that impacts the facility. The City has adopted concurrency management regulations in FMC Chapter 22.12 to implement its concurrency management program.

PUBLIC TRANSIT LEVEL OF SERVICE STANDARD

Pierce Transit is developing a Long Range Plan (LRP) called Destination 2040, which will include performance measures prescribed under MAP-21. In addition, the LRP will include revised and updated service guidelines for 2015 and beyond. It should be noted, however, that the agency does not have Level of Service standards for fixed route services that are designed to align with the roadway network of the municipalities Pierce Transit serves – including Fircrest.

PSRC is working with WSDOT to begin designing multimodal concurrency guidelines "to ensure that transportation infrastructure supports development as it occurs according to local standards." As such, Pierce Transit will await PSRC's and WSDOT's specific guidelines for transit agencies once they are formally adopted. In the interim, more information is available at: wttp://www.psrc.org/assets/11737/Multimodal Concurrency Presentation.pdf.

RECOMMENDED TRANSPORTATION IMPROVEMENTS

Over the next twenty years, increases in population and employment within Fircrest and surrounding communities will increase traffic volumes. To maintain or reduce levels of congestion on roadways and at intersections in Fircrest, certain transportation strategies will be needed. Possible strategies include:

- Making improvements to existing roads and intersections;
- Construction of new roads to improve access and circulation;
- Enhancement of nonmotorized travel facilities to encourage alternate modes of transportation such as walking, bicycling, and eliminating trips altogether through commute trip reduction;
- Supporting a shift in travel mode from private vehicles to transit and carpooling;
- Transportation Demand Management (TDM) strategies. TDM strategies help create or preserve existing capacity of roadways by reducing demand, thereby deferring or reducing the need for capacity improvements; and
- Transportation System Management (TSM) strategies. TSM strategies focus on improving operations of the existing roadway system to reduce or delay the need for system improvements.

These strategies will require close coordination with surrounding jurisdictions (Tacoma and University Place), Pierce Transit, and other agencies. Arterials located on the perimeter of Fircrest – 19th Street West, South Orchard Street, and 67th Avenue West (Mildred Street) -- are partly or entirely under the jurisdiction of either Tacoma or University Place. Arterial intersections may have shared jurisdiction with two or even three cities (e.g., 19th and Mildred Streets) as do numerous arterial/local street intersections.

MOTORIZED IMPROVEMENTS

To meet the adopted LOS standards, future improvements along arterials and at intersections may be necessary to accommodate growth and achieve concurrency. However, projected growth within Fircrest is unlikely to result in insufficient arterial capacity given the condition of current facilities and completion of funded improvements.

By 2016, the City of University Place will have reconstructed Mildred Street (which falls within University Place jurisdiction between 19th Street and Regents Boulevard) as a *complete street* that will have fewer lanes and new curbs, gutters, planter strips with street trees, sidewalks, lighting and transit facilities. The Mildred Street design will

provide sufficient motor vehicle and nonmotorized capacity to accommodate commercial mixed use development likely to occur adjacent to the street within Fircrest.

19th Street and Orchard Street, each shared by Tacoma and Fircrest, will have sufficient overall capacity to accommodate the growth projected to occur within Fircrest. However, non-capacity improvements may be required to improve circulation, improve emergency vehicle response time, enhance pedestrian and vehicular safety, and improve intersection signalization performance.

Planned road improvements that are programmed during the next six-years are included in the City's Six-Year Transportation Improvement Plan (TIP), hereby incorporated by reference. The TIP is updated and adopted annually. The Six-Year Capital Improvement Program (CIP) contained in the Capital Facilities Element also lists planned roadway improvements. Projects listed in the CIP schedule focus on maintenance and repair of existing roadway facilities and construction of new pedestrian facilities. No roadway capacity projects are proposed in the current schedule.

TRANSIT IMPROVEMENTS

Proposed business strategies, capital projects, service changes, and capital facility improvements or investments over the next six years are documented in Pierce Transit's *Transit Development Plan,* which is updated and submitted to WSODT annually. The agency's current TDP does not include any proposals for specific service modifications or facility improvements in Fircrest. However, future capital improvements and route expansion within or adjacent to Fircrest may occur in high need areas and in conjunction with new commercial mixed use and residential development activity. Development proposals that will generate significant new demand for transit services may be required by Pierce Transit to mitigate impacts from increased demand by funding transit shelters and supportive facilities in close proximity to the development.

AIR, WATERBORNE, RAIL IMPROVEMENTS

None of the regional air, marine, or rail facilities has a significant impact on the Fircrest transportation system.

NONMOTORIZED IMPROVEMENTS

Improvements to the nonmotorized transportation system would establish a more complete framework for an inter-connected pedestrian and bicycle circulation system. A complete pedestrian and bicycle network would link neighborhoods with schools, parks, public services, and retail activity, allowing residents and visitors to walk or bicycle to these areas rather than drive. The creation of a city-wide trail network linking all recreation and school facilities is supported by the *City of Fircrest Comprehensive Park, Recreation and Open Space Plan*.

The community's comprehensive bicycle facility improvement plan, *Town of Fircrest Comprehensive Bikeway Plan*, was prepared in 1975. The bikeway plan is based on inputs from a citizen advisory board and a consultant analysis. It addresses bicycle and pedestrian facilities on all streets that the plan identified as bike routes. The emphasis is

on route continuity, access to frequent travel destinations, and the safety of bicyclists and pedestrians along the routes. It provides streetscape design that includes street trees and appropriate separation of pedestrians, bicyclists, and vehicles.

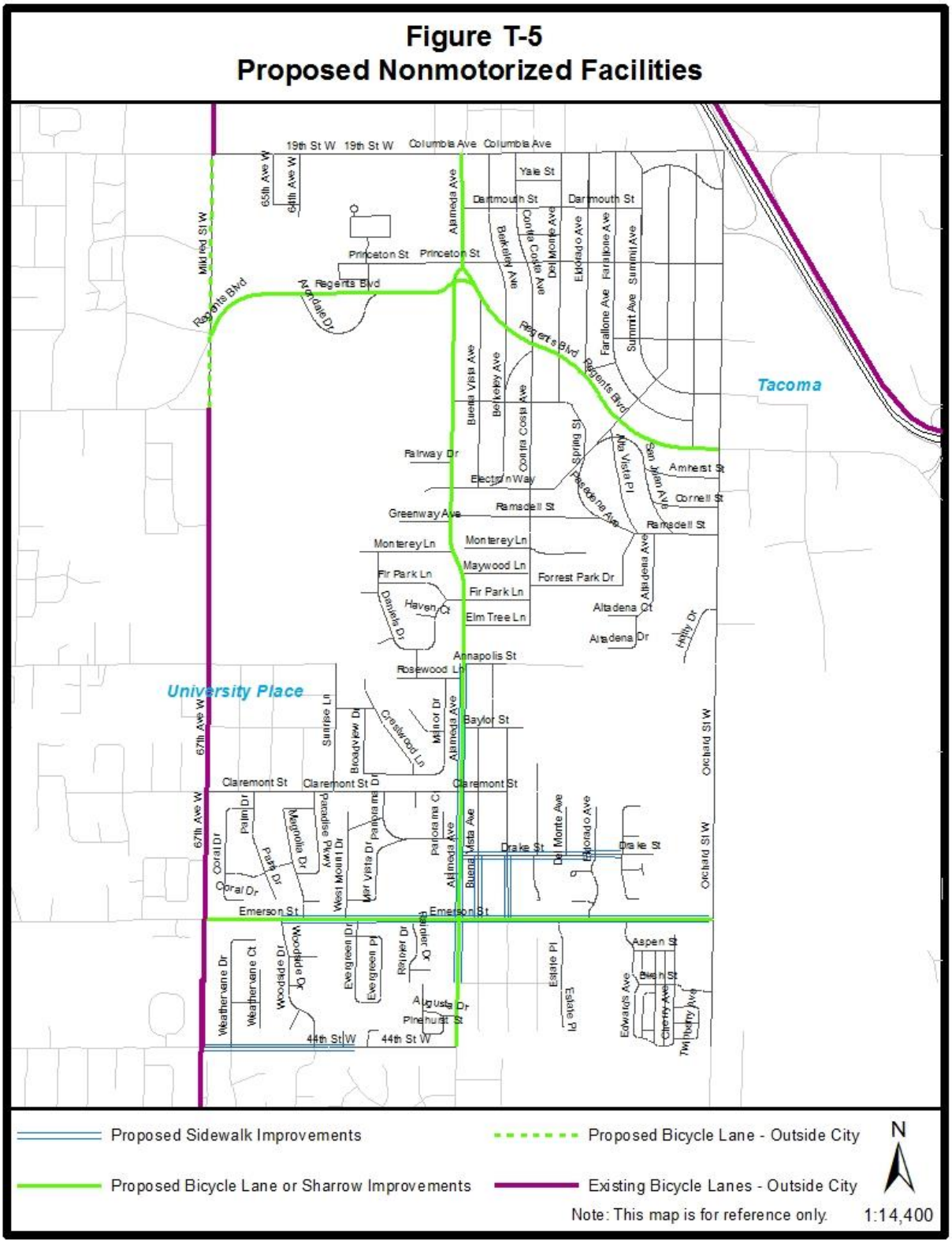
Figure T-5 depicts proposed nonmotorized improvements. Development of an integrated nonmotorized improvements plan, which would build on previous Fircrest planning efforts for sidewalk, trail and bicycle facilities, would support the creation of a continuous pedestrian and bicycle circulation system that achieves Fircrest transportation, land use, community character, and park, recreation and open space goals and objectives.

TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) strategies can help create or preserve existing capacity of roadways by reducing demand, thereby deferring or negating the need for capacity improvements. Examples of TDM strategies include:

- Developing a comprehensive transit information program with Pierce Transit,
- Working with Pierce Transit to develop vanpool and ride match services and increase the availability of transit, including the frequency of service and number of routes serving the city;
- Providing a continuous system of walkways and bikeways servicing the community and connecting it with nearby activity centers;
- Providing facilities and services that make multimodal travel more convenient, e.g., covered transit stops, provisions for bicycles on transit vehicles, and shuttle services to transit centers;
- Actively promoting commute trip reduction practices, including complying with the requirements of the State Commute Trip Reduction (CTR) Act for larger employers and encouraging smaller employers to promote commuter trip reduction practices in the work place through employee incentives for using high occupancy vehicles, preferential parking for high occupancy vehicles, improved access for transit vehicles, compressed work weeks, flexible work hours, and telecommuting; and
- Using traffic calming strategies to reduce vehicular speeds and enhance the safety of pedestrians and bicyclists, thereby maximizing pedestrian and bicycle mobility. Examples of traffic calming strategies include the use of raised crosswalks, roundabouts, traffic circles, medians (especially near intersections), narrow driving lanes, interrupted sight lines, narrow distance between curbing to create "neck-downs" or "chokers" (curb extensions), textured pavement, and neighborhood speed watch programs.

Figure T-5
Proposed Nonmotorized Facilities



TRANSPORTATION SYSTEMS MANAGEMENT

Transportation Systems Management (TSM) strategies focus on improving the operations of the existing roadway system. Maximizing the efficiency of the existing system can reduce or delay the need for system improvements. TSM strategies include:

- Coordination of traffic signal timing;
- Traffic control devices at highly congested intersections;
- Implementing intersection improvements to facilitate turning movements;
- Access restriction along principal roadways; and
- Implementing a signal retiming and coordination project to reduce delay and congestion at the City's signalized intersections as major improvements are implemented;

FUNDING CAPABILITY AND RESOURCES

The Growth Management Act (RCW 36.70A.070(6)) requires local comprehensive plans to include a multi-year transportation financing plan for how the jurisdiction will meet the mobility needs identified for the planning period. This financing plan serves in part as the basis for the City's Six-year Transportation Improvement Program.

GMA requirements regarding the financing and funding of transportation-related improvements are addressed in the Capital Facilities Element and goals and policies of this Comprehensive Plan. The Six-year Transportation Facilities Improvements schedule contained in the Capital Facilities Element extends through 2035, Fircrest's 20-year planning horizon, to provide information for the City's multi-year transportation financing plan. This information includes a list of investments to meet transportation needs over the planning period, estimated costs for those investments, and estimated probable revenues available to Fircrest. Potential funding sources are summarized, below and in the Capital Facilities Element.

FUNDING SOURCES

Transportation funding comes from a variety of local, regional, state, and federal sources. Funding sources can be divided into four primary categories: developer, local, state and federal. Some state and federal funds are allocated to PSRC, the region's Metropolitan Planning Organization, which then disperses the funds through grants and other programs.

Developer Funding

As new development occurs, transportation impacts associated with the development are mitigated by the developer. Transportation mitigation typically includes intersection improvements, road widening, new or extended turn lanes, sidewalks, bike lanes and other improvements. These mitigation measures must be in place or provided concurrent with development to maintain adopted LOS.

Local Funding Sources

Arterial Street Fund

The City receives a proportionate share of the State Motor Vehicle Fuel Tax, based on the population. The exact amount varies depending on the amount of fuel sold in the State.

General Fund

The General Fund is supported primarily from local taxes to provide governmental services such as police protection, jail services, court services, parks maintenance, recreation programs, building inspections, planning and zoning, construction and maintenance of streets, and general government administration.

Surface Water Management Funds

The City collects a surface water management fee on each City parcel to finance surface water and storm drainage elements of various road improvement projects. In addition, the City uses revenues from the Surface Water Management Fund to finance capital improvement surface water and storm drainage projects.

Real Estate Excise Tax

The Real Estate Excise Tax is levied on all sales of real estate, measured by the full selling price. The City has authorized a locally imposed tax of 0.5%, in two 0.25% increments. These revenues are restricted to financing capital projects as specified in the City's Capital Improvements Program.

State Funding Sources

State funding programs are administered to counties and cities through the Transportation Improvement Board (TIB) and the County Road Administration Board (CRAB). The State also funds projects through the Safe Routes to Schools and Pedestrian and Bicycle Safety Programs.

Federal Funding Sources

Federal programs are currently funded under the Moving Ahead for Progress in the 21st Century Act (MAP-21) and are administered by the Highways and Local Programs Division of the Washington State Department of Transportation (WSDOT), in conjunction with PSRC and the Regional Federal Highway Engineer.

CMAQ

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds transportation programs and projects that will, or are likely to, contribute to attainment of a National Air Quality Standard. WSDOT is required to consult with the Environmental Protection Agency to determine whether a transportation project or program will contribute to attainment of standards, unless such project or program is included in an approved State implementation plan. CMAQ funds cannot be used on projects resulting in the construction of new capacity available to single-occupant vehicles unless they are available to single-occupant vehicles at other than peak travel times. Allocation for CMAQ funds will follow the same criteria as Surface Transportation Program (STP)

funds. To be eligible for funding under this program, a project must be on the Regional Transportation Improvement Program (TIP) list and rank high enough on the region's priority array. Funding is based on a Federal share of 86.5 percent, with a 13.5 percent local match.

STP

The objective of the Surface Transportation Program (STP) is to fund construction, reconstruction, resurfacing, restoration, and rehabilitation of roads that are not functionally classified as local or rural minor collectors. STP also supports funding for transportation enhancements, operational improvements, highway and transit safety improvements, surface transportation planning, capital and operating cost for traffic management and control, carpool and vanpool projects, development and establishment of management systems, participation in wetland mitigation and wetland banking, bicycle facilities and pedestrian walkways.

STP funds have regional allocation through PSRC. The PSRC sub-allocates funds by County region, based on the percentage of the population. Pierce County, as a region, will receive an allocation of 21 percent from STP funds allocated to the PSRC. The Puget Sound Region is formed by the counties of King, Kitsap, Pierce and Snohomish. To be eligible for funding under this program, a project must be on the Regional TIP list and rate high enough within the region's priority array. Funding is based on a federal share of 86.5 percent, with a 13.5 percent local match.

REASSESSMENT

The GMA requires that Fircrest reassess its plans in order to align them with available revenue if the City's financial analysis shows that revenue is inadequate to support transportation needs. Reassessment should occur as part of the eight-year periodic review process and should include:

- Comparison of actual levels of service to adopted levels of service;
- Updated revenue forecasts; and
- Evaluation of progress in implementing the Transportation Element to show that the community is making progress toward construction of projects and implementation of policies identified in the Transportation Element.