CHAPTER 4

FUTURE VISION

"Tacoma is a **sustainable** community with many diverse residents, businesses, and visitors who have various transportation priorities. The City is **strategic** in how it plans its transportation system with an emphasis on carrying the people and goods that foster Tacoma's culture, character, and competitiveness. The transportation system offers **multimodal** travel options that provide safe **access** for all users and neighborhoods, encourage **healthy living**, and protect the **environment**."

This vision is supported by six key goals, which provide guidance for the priorities and recommendations embodied in this plan:

Being a Partner

Proactively **develop partnerships** to best serve all users of the regional transportation system.

Protecting Community

Protect natural, as well as neighborhood, assets to create and connect places where people can live, work, and play in a safe and healthy environment.

Providing Mobility for All

Prioritize the movement of people and goods via modes that have the least environmental impact and greatest contribution to livability in order to build a **balanced transportation network** that provides mobility options, accessibility, equity, and economic vitality for all.

Striving for Fiscal/ Environmental/ Social Sustainability

Design an **environmentally and fiscally sustainable transportation system** that serves its users through strategic planning efforts, funding, and projects.

Leveraging Programs/Strategies

Develop and implement **transportation demand management strategies** and programs that contribute to the overall effectiveness of the multimodal transportation system.

Linking to Land Use

Build a transportation network that **reinforces Tacoma's land use vision, the region's Vision 2040, and the Growth Management Act**.

Goals & Policies

Over the past 18 months, City staff and a citizen-volunteer Transportation Commission have embarked on a major undertaking to establish Tacoma's first ever TMP. The TMP's role is to help the Tacoma community consider its transportation systems, how well they're functioning and what needs, including funding, will be necessary over the next 20 years and beyond. To set the tone for this TMP, the Transportation Commission established the following future vision for Tacoma, which guides all aspects of this plan:

VISION

Tacoma is a **sustainable** community with many diverse residents, businesses, and visitors who have various transportation priorities. The City is **strategic** in how it plans its transportation system with an emphasis on carrying the people and goods that foster Tacoma's culture, character, and competitiveness. The transportation system offers **multimodal** travel options that provide safe **access** for all users and neighborhoods, encourage **healthy living**, and protect the **environment**.

The following goals and policies provide guidelines and direction to achieve the vision and for the continued development and improvement of citywide transportation facilities and services.

1. INTERGOVERNMENTAL COORDINATION AND CITIZEN PARTICIPATION

GOAL

Proactively develop partnerships to best serve all users of the regional transportation system.

POLICY INTENT

Transportation issues involve many stakeholders and do not respect jurisdictional or neighborhood boundaries. Tacoma's transportation planning and implementation processes strive to utilize best practices and tools to effectively coordinate on state, regional, and county-wide efforts, neighborhood needs, and stakeholder issues.

POLICIES

1.1 Intergovernmental Coordination
Ensure a well-planned regional transportation system that uses resources efficiently to serve all users through active coordination with federal, state, regional, local, tribal, and other interested agencies.

1.2 Citizen Participation
Include and encourage citizen participation in all transportation planning efforts through workshops, volunteer commissions, social media, and other outlets to accommodate the needs and desires of the public. Include specific outreach to traditionally underserved or vulnerable populations. Carry work done for subarea plans forward into more broad-reaching efforts.

1.3 Active Transportation Regional Coordination
Coordinate the planning, construction, and operation of facilities and shared-use paths for active travelers with other agencies where key corridors extend outside of Tacoma into neighboring jurisdictions, including but not limited to: extension of the Historic Water Flume Line Trail, Pipeline Trail, Tacoma Dome to Sumner Trail, and the Trail to Mountain Corridor.

1.4 Partner with Transit
Integrate land use and transportation planning, promote transit-oriented or transit-supportive development (TOD) and multimodal transit access, and ultimately improve the reliability, availability, and convenience of bus, streetcar, and light rail transit options for all users and modes through partnerships with public transit agencies, local and regional government, and other regional agencies to leverage resources.

1.5 Emergency Response
Maintain emergency vehicle access throughout Tacoma's transportation network by including emergency service providers in review of roadway planning and design efforts.

1.6 Enforcement
Enhance safety for all road users through increased traffic education and enforcement on city streets, trails, walkways, and bikeways with the involvement of the Tacoma Police Department.

2. COMMUNITY PRESERVATION

GOAL

Protect natural, as well as neighborhood, assets to create and connect places where people can live, work, and play in a safe and healthy environment.

POLICY INTENT

Transportation facilities and infrastructure inherently affect the natural environment and character of neighborhoods. As such, Tacoma recognizes the importance of evaluating transportation projects using objective criteria to reflect community standards (including environmental justice and health equity considerations) and align with project analysis for regional and federal grant funding. The environmental justice approach strives to avoid decisions that can have a disproportionate adverse effect on the environmental and human health of traditionally underserved neighborhoods and vulnerable populations compared to the population as a whole.

These populations may be based on status of religion, color, national origin or ancestry, political affiliation, sex, gender identity, sexual orientation, age, familial status, income, English proficiency, honorably discharged veteran or military status, or the presence of any sensory, mental or physical handicap, as laid out in Council Resolution 38950. The possible adverse effects of transportation projects may include, but are not limited to, disruptions in community cohesion, restricted access or mobility, safety concerns, higher exposures to hazardous materials, raised noise levels, and increased water and air pollution (Source: Puget Sound Regional Council's Transportation 2040 Plan, May 29, 2009).

Tacoma will endeavor to improve safety by following the Washington State Department of Transportation's (WSDOT) most current highway safety plan, applying traffic-calming measures, and implementing efforts in a comprehensive manner to safeguard against shifting traffic problems from one neighborhood to another. The policies below can help improve livability in residential settings by protecting neighborhoods from the potential negative effects of a well-connected street grid, encouraging the landscaping and beautification of transportation facilities, and improving health and safety for all.

POLICIES

2.1 Community Coordination
Assess the effect of potential transportation projects on gathering places or destinations such as schools, community centers, businesses, neighborhoods, and other community bodies by consulting with stakeholders and leaders that represent them. Mitigate these effects when possible.

2.2 Urban Design
Support the appearance and form of the City through consideration of aesthetics, beautification, and safety in designing and locating transportation facilities. The Generalized Land Use Element provides more detail on design standards.

2.3 Improve Safety
Strive to reduce traffic deaths and serious injuries in Tacoma to zero by 2030 as part of the State of Washington's traffic safety efforts using education, enforcement, engineering, emergency medical services, and leadership / policy. Emphasize providing safety along routes used to access schools, including pursuing grants to fund improvements.

2.4 Promote Health
Improve the health of Tacoma's residents and local ecology by implementing a transportation network that reduces auto mode share, increases the number of active travelers and transit riders of all ages and abilities, and improves safety in all neighborhoods. Work with the Tacoma-Pierce County Health Department and other agencies to promote active lifestyles through educational programs and safe and accessible routes for active travelers of all ages and abilities in all neighborhoods.

2.5 Traffic Calming Measures
Protect neighborhoods from the potential negative effects of a well-connected street grid, such as high volumes, high speeds, and pedestrian/vehicle conflicts using design approaches that still allow access for emergency response vehicles and public transit. These approaches may include medians, streetscapes, bulb-outs, traffic circles, traffic control devices, bicycle facilities, road diets, and other accepted measures.

2.6 Safer Routes to School
Support Safer Routes to School Programs in collaboration with Tacoma schools. Apply for Safer Routes to School grants through the Washington State Department of Transportation.

3. MULTIMODAL SYSTEM

GOAL

Prioritize the movement of people and goods via modes that have the least environmental impact and greatest contribution to livability in order to build a balanced transportation network that provides mobility options, accessibility, and economic vitality for all across all neighborhoods.

POLICY INTENT

The City's Bicycle and Pedestrian Technical Advisory Group undertook a significant effort in producing the award-winning Mobility Master Plan (MoMaP) in 2010. While the TMP will replace MoMaP upon adoption, MoMaP guided multimodal investments for several years and much of that effort shapes this plan. Additional materials from MoMaP that provide further detail on active transportation can be found in **Appendix C**.

An efficient multimodal system accommodates the needs for the safe and efficient movement of people and goods. Effective transportation system management measures should be utilized to support safe and efficient travel for all users. Tacoma recognizes that transportation needs and travel choices may change over time as new alternatives become available. Additionally, the City acknowledges that goods movement is critical to Tacoma's economic development and well-being.

By including environmental justice and health equity considerations in transportation planning, Tacoma considers how multimodal projects can be developed and sited to promote safety, support public transit, reduce motor vehicle use, minimize intermodal conflicts, enhance freight mobility, and accommodate the mobility needs of Tacoma residents and visitors, especially those from traditionally underserved neighborhoods or vulnerable populations.

POLICIES

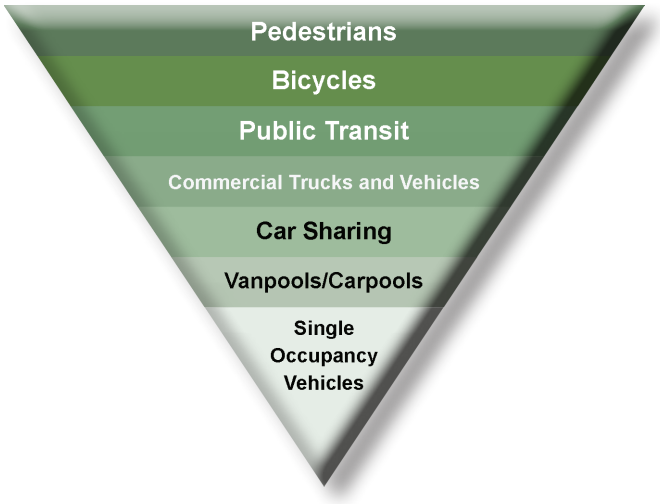
3.1 Complete Streets / Layered Network

Develop and maintain a safe, accessible, and clean transportation network that accommodates all users, whether moving by an active mode, transit, truck, or car, while recognizing that not all streets provide the same quality of travel experience. Apply the Layered Network adopted as a part of the TMP in the planning and design for new construction, reconstruction, and major transportation improvement projects on all streets.

The Layered Network and Complete Streets principles shall also be used to create over time a system of streets that meets user needs while recognizing the function and context of each street by evaluating potential transportation projects and amending or revising design manuals, regulations, standards, and programs as appropriate.

3.2 Green Hierarchy

Elevate active travelers and public transit riders in the planning and design of streets using the Green Transportation Hierarchy.



Source: Mobility Master Plan

3.3 Mode Split Target

Achieve the Climate Action Plan (CAP) goal of reducing GHGs from transportation sources by increasing the non-single occupant vehicle mode split by 2035, and continue gains thereafter. Mode split targets will be based on all trips in addition to commute trips, established for all modes, and set at lower single occupancy vehicle (SOV) levels for regional growth centers (RGCs) than the rest of the city. To the extent that data is available to track mode split in Tacoma's mixed use centers (MUCs), the MUC targets should also be set at higher non-SOV levels than citywide.

3.4 Level of Service Standards
The City will build the transportation system as defined in the TMP at a rate equal or ahead of the pace of development during the planning horizon. This system completeness level of service standard is measured against the proportion of the transportation network that is constructed, and will be accompanied by performance measures that track the transportation system's progress toward meeting the policy goals set forth in this document.

3.5 Concurrency
Ensure that the transportation network adequately serves existing and projected land use growth allocations by performing periodic review and monitoring (every 2-4 years). If adequate service levels are not maintained, pursue improvements to the transportation systems, mitigations of impacts, or modifications to the land use assumptions, where appropriate.

3.6 Street System Design
Facilitate transit and active transportation connections by encouraging street system design in a rectangular grid pattern with smaller block sizes, frequent interconnections, and clear wayfinding; strongly discourage culs-de-sac or dead end streets and only allow them in new locations if a short multi-use path will connect the dead end to another street.

3.7 Special Needs of Transportation Users
Recognize and accommodate the special transportation needs of the elderly, children, and persons with disabilities in all aspects of transportation planning, programming, and implementation. Satisfy the community's desire for a high level of accommodation for persons with disabilities using local, state, or federal design standards.

3.8 Equity in Transportation
Support the transportation needs of traditionally underserved neighborhoods and vulnerable populations, as listed under Goal 2, through investment in equitable modes of transportation and equal spending throughout the City, in addition to potential catch-up investment for areas in need as necessary.

3.9 Pedestrian Facilities
Make all streets in Tacoma safe for walking and traveling with assistive devices using context sensitive designs for sidewalks, crosswalks, trails, and other pedestrian walkways or facilities. Pedestrian priority areas, transit corridors, recreational trails, streets experiencing frequent collisions involving pedestrians or other pedestrian safety problems, and streets connecting pedestrian-oriented land uses shall receive high quality pedestrian facilities and amenities that meet standards set by the United States Access Board as funding is available. See the MoMaP Update in Appendix C for more detail.

3.10 Bicycle Facilities
Complete and maintain a safe bicycling system that connects all parts of Tacoma and accommodates all types of bicyclists. Achieve the highest level Bicycle Friendly Community status as designated by the League of American Bicyclists, or an equivalent designation. See the MoMaP Update in Appendix C for more detail.

SYSTEM COMPLETENESS

POLICY 3.4:

The City will build the transportation system as defined in the TMP at a rate equal or ahead of the pace of development during the planning horizon. This system completeness LOS standard is measured against the proportion of the transportation network that is constructed, and will be accompanied by performance measures that track the transportation system's progress toward meeting the policy goals set forth in this document.

HOW DOES IT WORK?

System completeness is measured against a 20 year list of projects, which will be developed based on the TMP modal networks. The 20 year list of projects can be updated periodically to respond to development patterns, financial resources, community health, safety, and equity goals, as well as a variety of transportation performance measures, which are summarized below:

Mode	Sample Performance Measures
PEDESTRIAN	• Percent of pedestrian network complete • Pedestrian-related crashes • Pedestrian crossing opportunities on key corridors
BICYCLE	• Percent of bicycle network complete • Quality of pavement and striping along bike routes • Bicycle-related crashes
TRANSIT	• Presence of amenities at highly-utilized transit stops • Transit route speed and reliability • Provision of transit-accommodating treatments along major routes • Transit service frequency and headways
AUTO/FREIGHT	• Crash rates along key corridors/intersections • Pavement quality along auto/freight priority routes • Vehicle speeds or vehicle delay along auto and freight priority corridors • Person or goods throughput along auto and freight priority corridors

WHAT ARE THE KEY ADVANTAGES OF THE SYSTEM COMPLETENESS METHOD?

- System completeness ties most cleanly to City's Layered Network and Green Transportation Hierarchy.
- The standard doesn't prescribe that a certain speed or intersection delay threshold be met, as these types of thresholds open the door for unintended consequences related to pedestrian and bicycle accommodation and pose unknown future costs for the City.
- System completeness allows for periodic updates to the project list, which can be developed more holistically based on the full spectrum of City priorities, including total cost, balancing modal needs, and addressing existing gaps in the transportation system.
- While system completeness is not explicitly tied to a simple metric like roadway speed or intersection performance, it can be very transparent to the public by showing an ultimate vision for Tacoma's transportation network, in terms of what will be built.
- Ease of tracking and implementation for City staff – the system could be structured to be as simple as a spreadsheet exercise (although planning-level evaluations could include more detailed data).

POLICIES CONTINUED

3.11 Trails
Improve access to trails for all areas of Tacoma and connections to neighboring jurisdictions for both transportation and recreational purposes by filling gaps in both the trail network and the pedestrian and bicycle networks. See the MoMaP Update in Appendix C for more detail on trails in Tacoma.

3.12 Transit Operational Efficiency
Support efficient transit operations through street and transit stop designs on transit priority streets that comply with standards and include transit-supportive elements for bus, streetcar, and light rail transit. See page 83 for potential transit supportive elements.

3.13 Encourage Transit Ridership
Encourage transit ridership by implementing pedestrian improvements near transit stops, conducting outreach to employers, and working with public transit agencies to identify strategies to improve the frequency and ridership of transit service, including bus, streetcar, and light rail, between high density residential areas and employment centers. These strategies would include locating transit stops / stations to maximize convenience of transfers between modes and / or connecting to other routes.

3.14 Streetcar
Create a Tacoma Streetcar network that moves and connects people efficiently and effectively throughout the City focusing on connections to regional destinations, mixed use centers, and local and regional transit centers and routes.

3.15 Inter-Modal Conflict
Address infrastructure gaps, inadequate design, safety hazards, and at-grade railroad crossing conflicts to increase safety, capacity, and timeliness of both over-land and rail freight, especially on identified heavy haul corridors using appropriate programs, regulations, and design standards. Design active transportation facilities in manufacturing industrial centers in a manner that minimizes potential conflicts with trucks and trains to allow for the safe and efficient movement of both freight and people.

3.16 Moving Freight
Strengthen Tacoma as a primary hub for regional, Alaskan, military, and international goods movement and as a gateway to national and international markets by integrating the development and operation of air, trucking, rail, and maritime terminal facilities to enhance the freight transportation system and strengthen the City's economic base. Consider the needs for delivery and collection of goods at local businesses by truck.

3.17 Intelligent Transportation Systems
Boost the efficiency, improve the safety, and reduce the environmental impact of the multimodal transportation system by taking advantage of intelligent transportation systems (ITS) and other technological innovations. Incorporate ITS improvements into capital improvement projects and prioritize development of an ITS infrastructure plan.

3.18 Roadway Capacity
Support multimodal mobility by assessing roadway capacity on the basis of a facility's total people-carrying capacity and only increasing physical capacity when absolutely needed.

4. ENVIRONMENTAL, FISCAL STEWARDSHIP AND SOCIAL ACCOUNTABILITY

GOAL

Design an environmentally, socially, and fiscally sustainable transportation system that serves its users through strategic planning efforts, funding, and projects.

POLICY INTENT

The City of Tacoma recognizes that transportation has a major effect on climate change and that environmental and fiscal stewardship must be a central focus in establishing a transportation system that serves both today's users and future generations. The City adopted its CAP in 2008, which lays out strategies for addressing climate change.

Transportation contributes to more than 50% of Tacoma's GHG emissions. Policies that reduce car use and encourage transit, walking, and bicycling are key to reducing transportation-related environmental impacts and can be found throughout the Comprehensive Plan. In an effort to achieve the GHG reductions laid out in its CAP and in accordance with Washington State Law on electric vehicles (EVs), Tacoma encourages the use of a variety of transportation modes that have low or no emissions. These modes include Low Speed Electric Vehicles (LSVs), bicycles, skateboards, and other forms of active transportation.

Tacoma will emphasize investments for the preservation of existing transportation facilities equitably across all diverse neighborhoods by seeking funding from a variety of sources and pursuing new opportunities for roadway maintenance revenue. In addition, the City will continue to use cost saving strategies, efficiencies, and accountability as guidelines for the best use of the available funds. Intelligent Transportation Systems (ITS) are also important for environmental stewardship. Please see Policy 3.17.

POLICIES

4.1 Minimum Environmental Disruption
Minimize the disruption of natural and desirable community amenities of our environment by employing a collaborative, interdisciplinary approach that involves all stakeholders, particularly those traditionally being underserved, to develop a transportation facility that fits its physical setting and preserves scenic, historic, and environmental resources while maintaining safety and mobility.

4.2 Noise and Air Pollution
Encourage the reduction of noise and air pollution from various modes of transportation and ensure the City of Tacoma meets ambient air quality standards by promoting active modes of transportation and the use of alternative fuels for vehicles.

4.3 Stormwater Management
Employ structural and operational best management practices for stormwater management to ensure stormwater discharges from roadways do not cause impacts to receiving waters. Encourage the use of Low Impact Development techniques to minimize impervious surfaces and minimize stormwater runoff.

4.4 Congestion Management
Decrease the use of SOVs and the environmental degradation associated with their use by encouraging and improving the appeal, convenience, and time competitiveness of travel by active modes, public transit, assistive devices, and ridesharing.

4.5 Environmentally-Friendly Infrastructure
Promote the long term sustainability of transportation infrastructure by using the Greenroads® or equivalent rating system for planning, designing, construction, and maintenance, as adopted through Council Resolution 38945.

4.6 Electric Vehicles
Encourage and promote the use of EVs as they are developed in all automobile, truck, and commercial vehicle classes. Neighborhood Electric Vehicles and Medium Speed Electric Vehicles (MSV) may travel Tacoma's street network where appropriate and consistent with

State law. Encourage the use of such vehicles in a way that conditions are safe and don't impede traffic flow. Provide for a broad range of charging opportunities at public and private parking venues throughout the city, including minimum standards for new developments that provide parking facilities.

4.7 Emission-free Vehicles and Devices
Accommodate the use of transportation devices that have a minimal effect on the environment and do not emit GHGs such as skateboards and bicycles, electric personal assistive mobility devices, electric assist bicycles, Low Speed Electric Vehicles (LSV), and other innovations.

4.8 Reliable Funding
Jointly fund and finance transportation system improvements from public and private sources and pursue dedicated funding sources where possible.

4.9 Street Maintenance and Rehabilitation
Keep roadways operating in safe condition by taking steps to secure roadway funding from a variety of sources to maintain, rehabilitate, or replace sidewalks, crosswalks, trails, bicycle facilities, traffic signal systems, and roadways. Tacoma will work with its partners to understand street maintenance and rehabilitation needs.

4.10 Fix It First
Prioritize system preservation and consider the long term maintenance costs of new capacity as part of the up-front cost of development.

5. TRANSPORTATION DEMAND MANAGEMENT (TDM)

GOAL

Develop and implement transportation demand management strategies and programs that contribute to the overall effectiveness of the multimodal transportation system.

POLICY INTENT

As required by Washington State law, Tacoma adopted a Commute Trip Reduction (CTR) Ordinance in 2008. The City's CTR Plan is an evolving document that is frequently updated and provides guidelines for the City and major employers affected by State law to implement effective strategies to achieve trip reduction goals. The CTR Ordinance establishes requirements for affected employers, including an appeals process, and procedures for the City for program administration, monitoring, enforcement and intergovernmental coordination.

The CTR Plan and Ordinance are designed to achieve the following objectives: improve air quality, reduce traffic congestion, and reduce the consumption of petroleum fuels. With the focus on employer-based programs that encourage the use of alternatives to driving alone for the commute trip, CTR represents a centerpiece of the overall strategy of TDM.

Between July 2008 and June 2012, Tacoma also participated in the Growth and Transportation Efficiency Center pilot that enabled the development of the City's first Transportation Management Association (TMA) called Downtown On the Go (DOTG). This innovative effort to target downtown trip reduction was created in partnership with Pierce Transit and the Tacoma-Pierce County Chamber of Commerce. Transportation Management Associations generally focus trip reduction efforts in areas with

high employment and residential densities. There are a number of Comprehensive Plan policies and strategies that are supportive of CTR and TDM, including policies contained in the Transportation Element, transportation-efficient land use policies contained in the Generalized Land Use Element, and traffic management strategies contained in the Neighborhood Element as well as neighborhood subarea plans. The following policies are intended to provide additional tools to ensure the successful implementation of the CTR Plan and Ordinance, and contribute to accomplishing Tacoma's strategic goals of healthy environment, sustainable economy, and livable community.

POLICIES

5.1 Comprehensive Planning and TDM
Incorporate transportation demand management in the planning for land use, transportation, housing, capital facilities, environmental protection, open space and recreation facilities, neighborhoods and communities, and other applicable disciplines of comprehensive planning. This will be accomplished by promoting TDM-related and supportive programs and implementation steps, such as those described in the Demand-Side Approaches section of the TMP.

5.2 Funding for TDM
Support transportation demand management by assigning higher funding priority to and actively pursuing funding opportunities for improvement projects and programs that are related, integrated, or supportive of TDM.

5.3 Collaboration on TDM
Coordinate TDM and CTR program efforts to best utilize and multiply resources, success stories, and innovative practices. Ensure that fair and consistent services are provided to CTR-affected employers across jurisdictions and CTR-affected employers with worksites located in more than one jurisdiction by working in conjunction with Pierce County, WSDOT, Pierce Transit, Sound Transit, transportation management associations, and other jurisdictions and organizations.

5.4 Innovation and Expansion of TDM
Maximize the effects of TDM by pursuing innovative measures of CTR beyond the statutory suggestions and endeavoring to expand the scope beyond the statutory requirements. Focus efforts on personal trips as well as commute trips with an emphasis on active transportation for short travel distances.

5.5 Monitoring and Evaluation of TDM
Achieve and exceed the statutory goals of CTR by continually monitoring and evaluating the effectiveness of employers' transportation demand management programs and Tacoma's TDM policies, and implementing changes when needed.

5.6 Leadership in TDM
The City of Tacoma, as an employer, should take the leadership role and set a positive example by maintaining strong TDM and CTR programs for its employees and educating other employers on its successes. Support DOTG or an equivalent TMA as the City's agent for implementing TDM strategies.

5.7 Commute or Trip Options
Reduce SOV trips by supporting programs and public-private partnerships that provide alternatives to driving a car alone through ridesharing, transit, bicycling, walking, or other options.

5.8 Education and Encouragement
Focus attention on the outcomes of travel choices and increase the public's use of the range of travel choices available by initiating and supporting public awareness campaigns. Partner with public transit agencies to collaborate on strategies that encourage ridership. Consider multimodal programs such as Safer Routes to School as well as neighborhood-based efforts.

6. LAND USE AND TRANSPORTATION

GOAL

Build a transportation network that reinforces Tacoma's land use vision, Vision 2040 and the GMA.

POLICY INTENT

Land use type, intensity, and distribution, as a result of developments, greatly influences travel choices and decisions on placement and investments of transportation facilities. Because land use and transportation are fundamentally linked, it is important that transportation facilities be designed to meet both community desires and federal, state, regional, and local standards for functionality, safety, service, and efficiency.

Accommodating a large percentage of future growth through TOD and transit-supportive amenities will help create a safer, more comfortable pedestrian environment, encourage alternative transportation, promote active living, and enhance the quality of life of residents. The transportation system should also be designed to balance livability objectives with industrial activities, which are an important economic engine within the City. The Generalized Land Use Element provides further detail on relevant policies and strategies.

POLICIES

6.1 Land Use Considerations
Assure reasonable access for all modes to places of employment, new schools, libraries, parks, transit centers, civic buildings, and other attractions in Tacoma through development, expansion, or improvement of transportation facilities that are coordinated with existing and projected land use patterns and types of development. Similarly, development patterns and designs should account for their effects on the transportation system.

6.2 Land Use Patterns
Encourage land use patterns and developments, especially in MUCs, that support non-SOV travel, access to multimodal options and intermodal connectivity, opportunities to live close to work, and short trips easily made by walking or bicycling for recreation and commuting.

6.3 20-Minute Neighborhoods
Prioritize infrastructure improvements within and between 20-minute neighborhoods based around Tacoma's centers for growth and along identified corridors that connect residential areas to schools, local retail, business, and community services so residents can safely access more of the services they need close to home by active modes, public transit, and using assistive devices.

6.4 Support Mixed-Use Centers
Serve and support the existing MUCs and aid Tacoma in attracting new investments by giving high priority to those transportation facilities that serve these centers. Increase the livability of the MUCs by providing transportation choices and integrating amenities that create a safe and inviting environment for walking, bicycling, and taking public transit.

6.5 Industrial Access
Recognizing the importance of the Port and other industrial uses to Tacoma's economic well-being, provide infrastructure and access to commercial, manufacturing and industrial centers.

6.6 Street Rights-of-Way
Preserve right-of-way needs for future transportation, recreation, streetscape, essential city service or other City-approved purposes. The City should safeguard the general public interest by inventorying, evaluating, and acquiring right-of-way in advance.

6.7 Transit-Oriented Development
Promote TOD or transit-supportive development and provide incentives for development that includes specific TOD features.

Elements of TOD generally include:

- A compact mix of land uses, including mixed-use, residential, and commercial development;
- Moderate to high density housing;
- Affordable housing for all income groups;
- Pedestrian orientation/connectivity;
- Convenient access to transportation choices, including transit, bicycle, and pedestrian facilities;
- Reduced size of surface parking facilities or minimum parking requirements; and
- High quality design.

6.8 Development Incentives
Further TOD, walkability, and/or bicycle facilities through supportive amenities and on-street infrastructure by providing height and density bonuses, relaxing parking minimums, and other incentives to developments that support these ends.

6.9 Parking Management
Manage parking pricing to seek balance among competing uses, be financially self-supporting, help attract investment, and meet the needs of both private and public users in Tacoma's MUCs by expanding parking management and working with City parking advisory groups, businesses, employers, and other parking stakeholders. Consider parking management strategies in residential areas as well. Employ strategies to minimize the amount of land dedicated to parking, increase the amount of shared parking, and encourage alternative modes of transportation.

6.10 Streetcar Network
Develop a streetcar network that serves dense population nodes, aiding the greatest number of people possible. It should focus on concentrations of people, jobs, and activity. This streetcar network should be reviewed regularly so it corresponds with new land use designations, codes, growth, and development.

The Layered Network

The goals and policies provide guidance for achieving Tacoma's vision of strategically providing a multimodal transportation system that is safe, sustainable, and promotes healthy living. To meet this high bar, the TMP was built using a 'layered network' framework, which focuses on how the City's transportation network can function, as a system, to meet the needs of all users. While the 'layered network' concept is a recommended practice of the Institute of Transportation Engineers, the development of Tacoma's layered network has been informed by an emphasis on providing safety for all modes of travel, as well as key City policies, including the Green Transportation Hierarchy, Complete Streets Policy, and the City's CAP.

INTRODUCTION TO THE LAYERED NETWORK CONCEPT

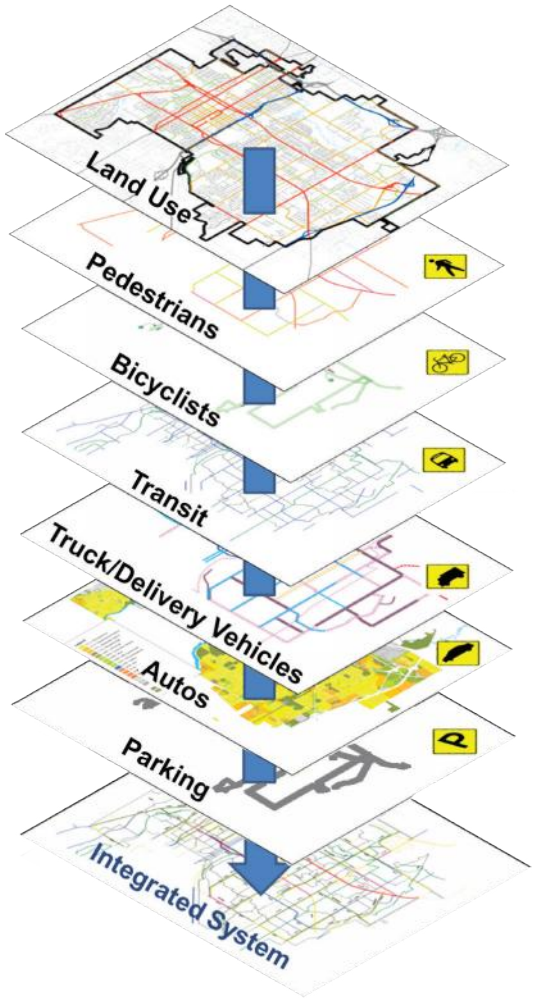
It is often a challenge for a single roadway to meet the demands and expectations of all modes at any given time. This has certainly been the case in Tacoma, where the city streets have been expected to concurrently serve autos, trucks, pedestrians, bicycles, and buses. In response to this challenge, this TMP has been developed using the concept of a 'layered network'.

"Layered networks recognize that while all traveler types need to be accommodated within a community, no single street can accommodate all transportation users at all times."

The layered network concept envisions streets as systems; each street type is designed to create a high quality experience for its intended users. A layered network approach allows for certain streets to cater to specific modes or user types, while discouraging incompatible uses. For example, a downtown street may be planned to provide a pleasant experience for shoppers on foot, recreational bicyclists, and people wishing to park on-street, while discouraging use by 'cut-through' traffic and large trucks.

The following sections of this chapter describe the individual modal networks that have been developed for walking, biking, transit, freight, and autos. Each of these individual networks recognize that not every street (or trail) can accommodate all modes at all times. Instead, the networks identify the facilities citywide that are most critical to accommodating each mode. This approach helps the city to focus its investments on transportation projects that provide the biggest bang for its buck, while simultaneously ensuring that all modes are accommodated.

At the end of this chapter, a section called "Roadway Typologies" discusses how streets might be designed when multiple modes are a priority.



LAYERED NETWORK CONCEPT

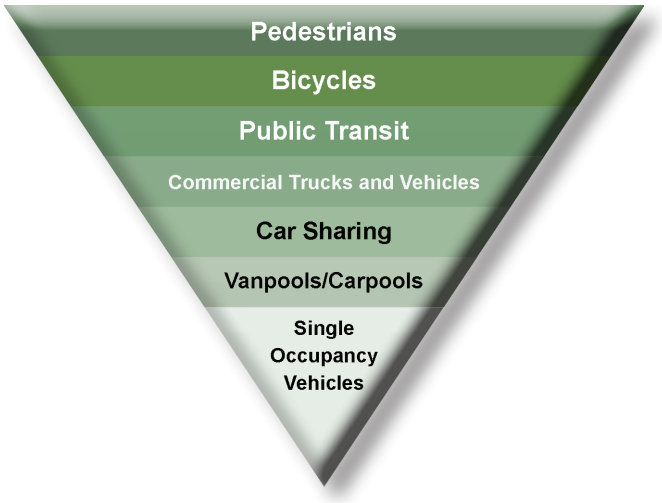
Source: Institute of Transportation Engineers, 2011

GREEN TRANSPORTATION HIERARCHY

The 'Green Transportation Hierarchy' is a prioritization strategy that recognizes transportation modes with the least environmental impact and greatest contribution to livability. The Green Transportation Hierarchy was adopted in the City's last Transportation Element and remains important policy guidance in Tacoma today.

The Green Transportation Hierarchy promotes funding and development of facilities for modes that affordably enhance access for the majority of Tacoma residents, rather than using LOS standards focused on vehicle movement. The hierarchy gives precedence to pedestrians (including individuals using assistive devices for mobility and sensory disabilities), then to bicyclists and public transit. Commercial vehicles and trucks are also recognized as having priority over passenger vehicles.

GREEN TRANSPORTATION HIERARCHY



Source: Mobility Master Plan, 2009

COMPLETE STREETS POLICY

Complete Streets is a nationally recognized term referring to streets and sidewalks that are designed, operated, and maintained to enable safe and convenient access and travel for all users – pedestrians, bicyclists, transit riders, and people of all ages and abilities, as well as freight and motor vehicle drivers. Complete streets also focus on fostering a sense of place in the public realm and incorporating green features including trees, landscaping and, in some cases, low impact development stormwater features.

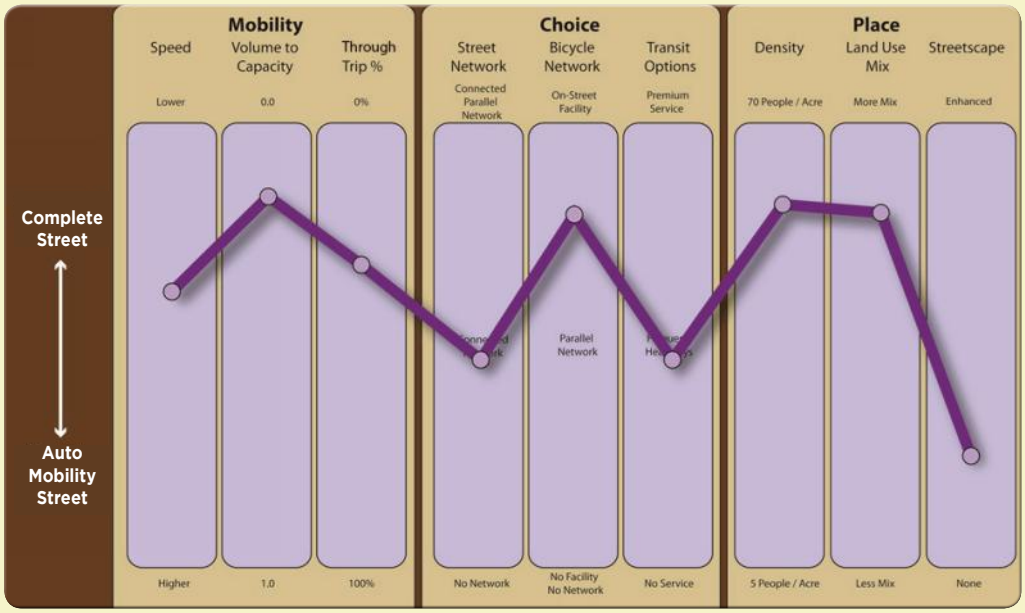
The City has had a Complete Streets policy in place since 2009. The policy states that the City will develop and maintain a safe, accessible, and clean transportation network that accommodates all users, whether moving by an active mode, transit, truck or car, while recognizing that not all streets provide the same quality of travel experience.

CLIMATE ACTION PLAN

In 2008, Tacoma adopted a CAP, which establishes carbon reduction goals for the City and community and offers more than 40 new strategies to achieve those goals. Most relevant to this TMP, the CAP includes strategies to move people and goods more efficiently and to enhance compact livable neighborhoods. The CAP includes goals to increase the mode share by non-single occupant vehicles and to develop neighborhoods that are welcoming for walking and biking. These goals have been incorporated into the TMP.

COMPLETE STREETS TOOLBOX

Identifying Opportunities for Complete Streets Projects



Tacoma's Layered Network and the Green Transportation Hierarchy work together to establish the modal priorities on city streets at a general level, as described in the modal networks of this plan. The City also wishes to identify opportunities for complete streets projects by using accepted indicators whether the street is a busy arterial or a quiet neighborhood street. These mobility, choice, and place indicators, combined with an assessment process, can help Tacoma strategically invest in complete streets.

The mobility measures address the level of automobile activity on a street. Streets with lower speeds, additional capacity available, and fewer trips passing through without stopping make better candidates for complete streets projects. The choice indicators describe existing travel options on the street. A well-connected street grid provides more route options for people traveling by any mode. Existing bicycle and transit facilities encourage travel by multiple modes and make streets good candidates for complete street investments.

Place might be the most important aspect of creating complete streets because people will tend to collect in dense areas with a mix of land uses. Enhanced streetscape elements such as wide sidewalks, street trees, and benches can make the street itself a desirable place to be.

The initial assessment below lays out a simple screening process that can help the city narrow down the corridors it wishes to consider for complete streets projects before collecting the information for all of the indicators in this plan. These tools combined can help Tacoma strategically invest in complete streets that are safe and pleasant for everyone.

STEP 1
Initial Assessment
Complete Steps 1a, 1b, and 1c. If you answer "yes" to 1a, 1b and 1c, the street is a good candidate to become a complete street.

1A Safety
Could a Complete Street Significantly Improve Safety?

1B Built Environment Factors/ Comfort
Is the Network for Bicyclists, Pedestrians, & Transit Riders Absent or Unacceptable?

1C Existing and Forecasted Auto Volumes
Is the Roadway Operating Under Capacity?

Modal Networks

PEDESTRIAN PRIORITY NETWORK

Almost everyone is a pedestrian at some point during the day. Whether walking or using assistive devices to get from a car to a home, a transit stop, a business or park, the pedestrian portion of a trip contributes to a person's enjoyment, safety, and convenience.
The pedestrian system is the glue that holds other transportation networks together and provides critical linkages to public transit.
A fragmented or missing pedestrian system is a major obstacle to active living. A less active population contributes to obesity and other health related issues. The Tacoma TMP recognizes the importance of people walking and using assistive devices by placing them at the top of the modal hierarchy, meaning that if a modal conflict arises on a specific street, the needs of the pedestrian will be met before other modes.

Source: Department of Transport, Planning and Local Infrastructure, 2013

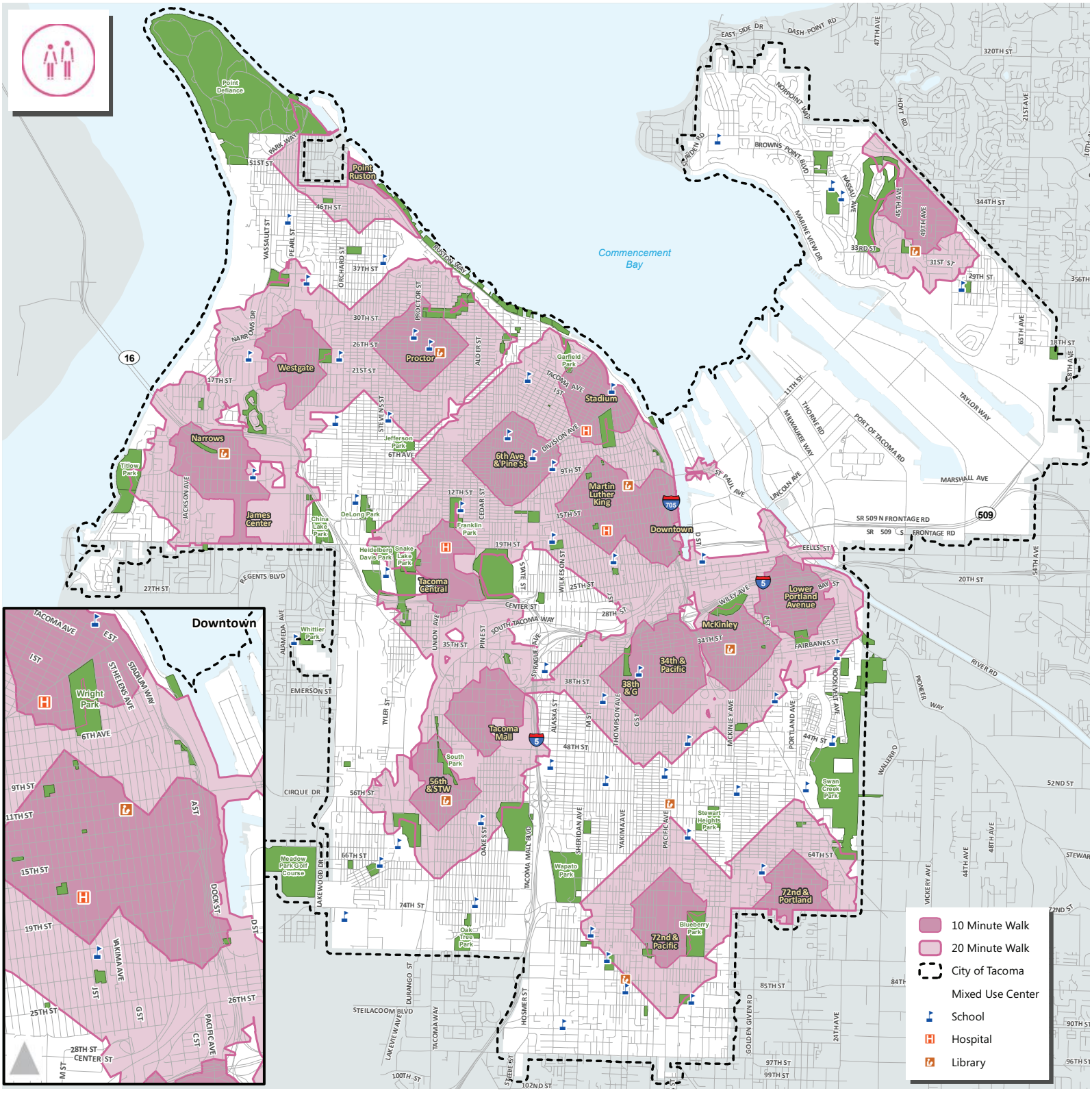
20-MINUTE NEIGHBORHOODS

The TMP applies the concept of 20-minute neighborhoods around designated growth centers. These neighborhoods are built on the idea that most walking trips in the US are less than one mile and while all streets in Tacoma will be used by pedestrians, these areas are likely to serve the greatest number of people.

As shown on the pedestrian priority network map, 20-minute neighborhoods cover much of Downtown Tacoma and the North End, while South Tacoma has fewer 20-minute neighborhoods that are more spread out and centered on Tacoma Mall and the Oakland-Madrona neighborhood. These are areas that already have, or are planned to realize more dense residential uses and a mix of nearby destinations that people can walk to. The Port area doesn't have a 20-minute neighborhood but it also has no homes.

Many key destinations – hospitals, schools, parks, and libraries are contained within the pedestrian priority areas. It will be a high priority for the City to provide an accessible, continuous, and comfortable network of pedestrian facilities within these priority areas so that people can reach their destinations on foot or using assistive devices without encountering difficult or potentially dangerous situations.

PEDESTRIAN PRIORITY NETWORK



PEDESTRIAN FACILITY TYPES

The pedestrian element recognizes that sidewalks and crossings should be improved to complete missing linkages between home, shopping, work, and transit, as well as create a complete neighborhood. All pedestrian facilities should be designed to meet standards set by the US Access Board to ensure access for all users. Trails are also recognized as an integral part of both the pedestrian and bicycle networks and will be addressed in the bicycle element of this plan.

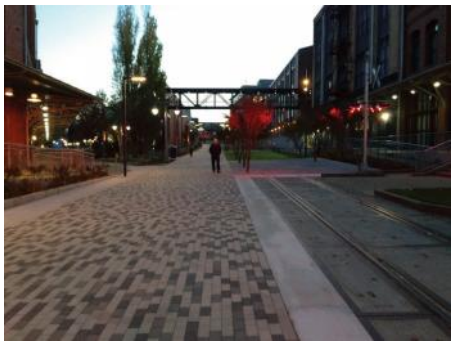
Sidewalks
Sidewalks are designated raised paths for pedestrians and non-motorized users to safely walk without the threat of vehicle traffic. Sidewalks are fundamental to a walking network in urban and suburban areas and must be a minimum of 5 feet wide to provide safe passage for users in wheelchairs. Sidewalks are typically concrete and separated from the roadway by a curb or gutter. Sometimes they also feature planted buffers with trees or places to sit and rest. At intersections, sidewalks must have curb ramps for wheelchairs, strollers, and other wheeled users to cross the roadway.

Source: Fehr & Peers

Roadway Crossings
Pedestrians crossing a street with multiple travel lanes, high volumes of traffic, and high speeds need a dedicated crossing with high visibility crosswalks and ideally a pedestrian walk signal with a countdown timer. These amenities create safe, predictable conditions for pedestrians and motorists. High visibility crosswalks may have a ladder pattern and encourage vehicles to stop and allow space for pedestrians to cross comfortably and in view of all other road users. Crosswalks should be present every 600 feet or more frequently, depending on the layout of the street grid and the presence of land uses that generate pedestrian activity.

Source: Alta Planning + Design

Shared Use Paths / Trails
Shared use paths and trails are separate rights-of-way for the shared use of pedestrians, skateboarders, bicyclists, and other non-motorized users. They can be in urban or more rural and park-like settings. These types of facilities are great for recreational use as well as transportation and appeal to users of all ages and abilities.

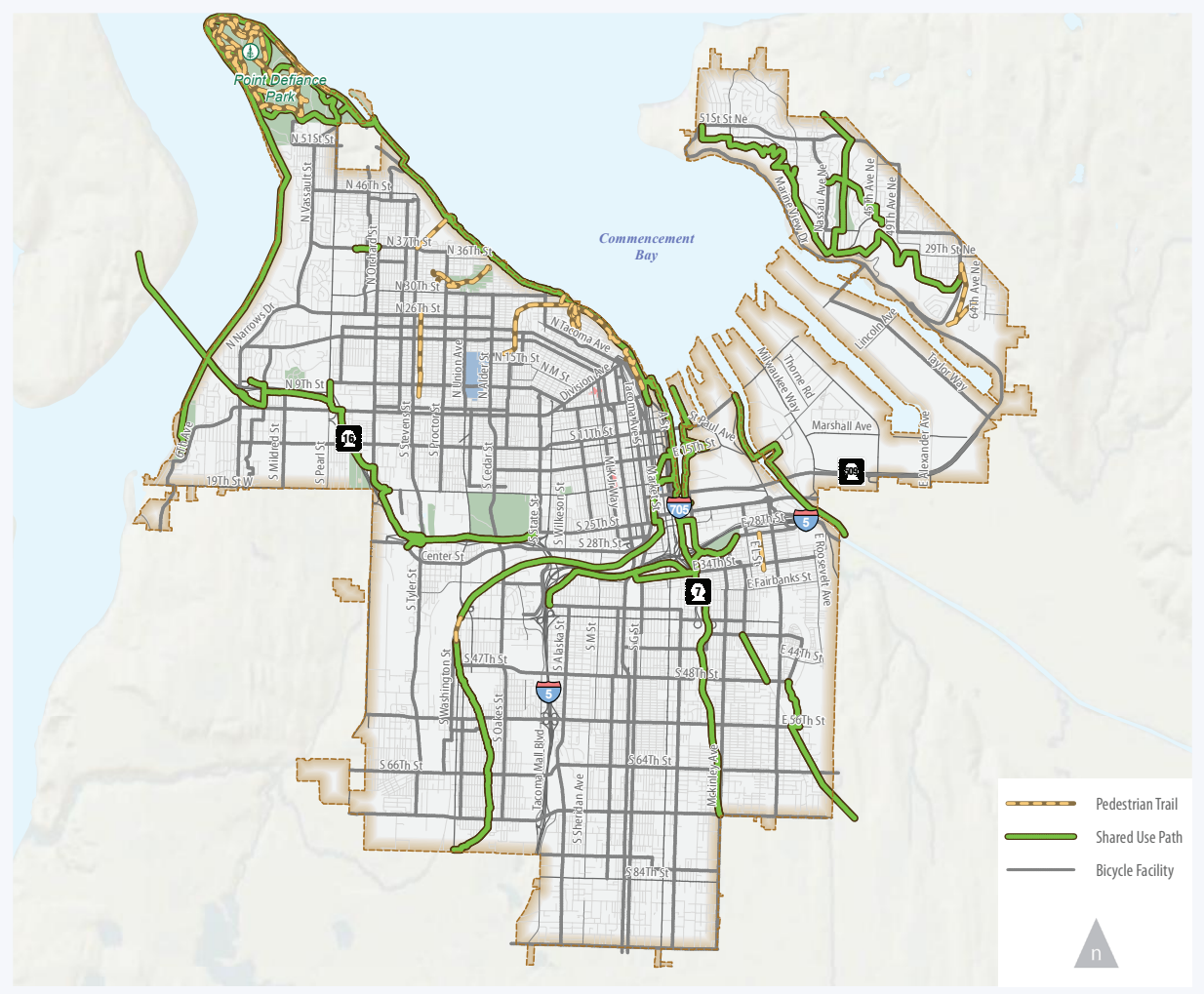


Source: Alta Planning + Design

Median Refuge Islands
If there is a particularly wide roadway, a median refuge island can shorten the crossing distance for pedestrians and allow slower moving pedestrians to safely cross the roadway in two segments. Median refuge islands also allow pedestrians to gauge safe crossing times by looking at one direction of traffic at a time. Median refuge islands are applicable at both signalized and unsignalized intersections, as well as midblock crossings.

Source: Alta Planning + Design

PEDESTRIAN TRAILS AND SHARED USE PATHS



Pedestrian Warning Beacons
At unsignalized crossings, either midblock or at an intersection, high pedestrian volumes, traffic volumes, or traffic speeds may warrant the implementation of a user activated flashing beacon. This treatment alerts motorists to slow and stop to allow pedestrians to cross safely. These beacons are used in conjunction with a pedestrian yield sign. Rectangular rapid flashing beacons (RRFBs) are current best practice.

Source: Fehr & Peers

Pedestrian Signals
Signals provide positive guidance to pedestrians regarding the permitted signal interval to cross a street and prohibit pedestrian crossings when conflicting traffic may impact pedestrian safety. Pedestrian countdown signals can help reduce pedestrian crossings near the end of the pedestrian phase. The use of WALK/DON'T WALK pedestrian signal indications at signal locations are important in many cases, including when vehicle signals are not visible to pedestrians, when signal phasing is complex (e.g., there is a dedicated left-turn signal for motorists), at established school zone crossings, when an exclusive pedestrian interval is provided, and for wide streets where pedestrian clearance information is considered helpful.

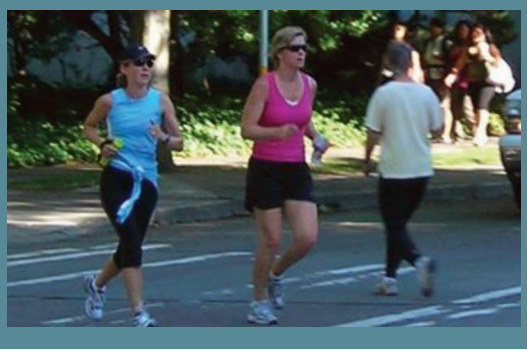
PEDESTRIAN TOOLBOX

One of the existing challenges in planning for walking and quality pedestrian facilities in Tacoma is a lack of information on existing conditions. The City's sidewalk data is out of date so city staff and decision makers cannot easily assess needs. An inventory of sidewalks, crosswalks, and paths is the first step toward guiding expenditures on walking.

The inventory should include:

- **Presence of facilities**
- **Condition of facilities, including description of navigability for persons with disabilities**
- **Type of facility – curbs, gutters, and sidewalks vs. paths; longitudinal stripe vs. advanced design crosswalks**
- **Additional amenities – streetlights, signage, flashing beacons, buffers from vehicle traffic**

Data collection efforts should first focus on Tacoma's mixed use centers and 20-minute neighborhoods because these are areas with high levels of pedestrian activity. Areas near schools, parks, libraries, hospitals, transit stops, other land uses that encourage pedestrians, and locations with a history of pedestrian collisions should also be prioritized.



SYSTEM COMPLETENESS FRAMEWORK

The pedestrian policies and 20-minute neighborhood concept fall easily into the system completeness framework. A key metric will be the percentage of the pedestrian network that is complete and meets the acceptable level of facility quality or better.

It is recognized that not all 20-minute neighborhoods will immediately meet these infrastructure goals, but the system completeness framework establishes supportive policies and performance metrics to track performance and implementation over time.

The 2015 Transportation Element will define what can be constructed over the next 20 years for gauging system completeness. To gauge system completeness, a short-term level of service for pedestrian infrastructure was developed. This analysis is dependent on data availability and provides a basic snapshot of pedestrian infrastructure in 20-minute neighborhood focus areas and along higher classified roadways. The following tables provide some guidance.

The City's Pedestrian Safety Improvement Project laid groundwork for building out the pedestrian network through a broad reaching public process in 2014. The effort included identifying key pedestrian investments, establishing a prioritization process for these projects, and developing a final project list. These projects and the funding behind them will support the 20-minute neighborhood approach and improve safety for pedestrians. Appendix E provides further information.

RECOMMENDED APPROACH FOR ASSESSING QUALITY OF PEDESTRIAN FACILITIES

Sidewalks

Quality of Facility	Within 20-Minute Neighborhoods	Other Areas
High	Complete sidewalks with buffers on both sides of arterials and collectors	Complete sidewalks on both sides of arterials and collectors
Acceptable	Complete sidewalks without buffers both sides of arterials and collectors	Sidewalks present
Needs Improvement	Incomplete or no sidewalk	Incomplete or no sidewalk

Crosswalks

Quality of Facility	Within 20-Minute Neighborhoods	Other Areas
High	Crossing every 300 feet in pedestrian activity area or downtown that meets Tacoma's current best design practice	Existing marked crossings meet Tacoma's current best design practice
Acceptable	Crosswalks present every 600 feet	Crosswalks present
Needs Improvement	No crosswalks within 600 feet	No crossings present

BICYCLE PRIORITY NETWORK

Bicycling is the symbol of Tacoma's healthy community and active lifestyle. With growing public health concerns about obesity and air quality, increasing bicycle activity is one of the most effective ways to reduce health costs, preserve infrastructure, and improve air quality. The bicycle element builds on the network presented in Tacoma's MoMaP and seeks to build a continuous network of crosstown corridors in order to facilitate comfortable and safe bicycle travel for people of all ages and abilities. Some of the identified projects would require additional right of way to fully implement vision.

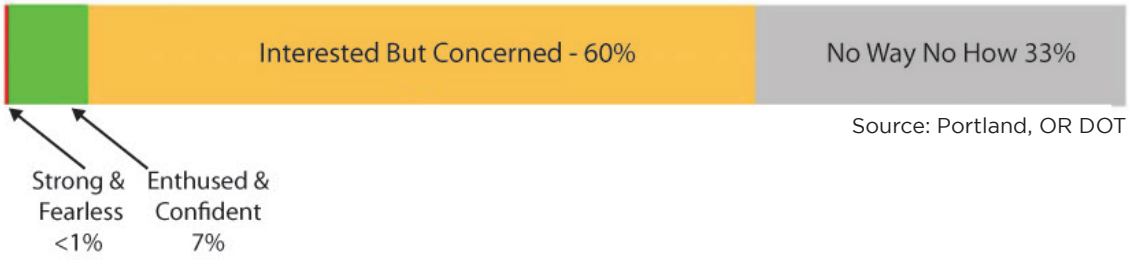
Developing a connected network of more comfortable bicycling facilities will make cycling more appealing to a greater segment of the population. Network construction is likely to be incremental in some locations; a new or existing bicycle lane may eventually evolve into a protected bicycle lane or protected bicycle facility to meet the long term vision set forth in this plan. Establishing a bicycle counting or detection program as well as tracking the bicycle mode split is important for measuring the success of the bicycle network.

MODAL NETWORK

The bicycle network is characterized by long, continuous routes with supportive traffic control elements that facilitate travel both north and south as well as east and west. The long term network laid out here recognizes that many different people bicycle for many different reasons. By providing a robust network with redundant or alternative routes in some areas, the City can plan for bicycle riders of all ages and abilities. For example, a confident bicycle commuter is likely to prefer a direct route that minimizes out of direction travel and may be willing to ride on facilities requiring more interaction with motor vehicles, whereas a parent bicycling with their child would prefer to travel along quieter residential streets, trails, or protected bicycle lanes that provide complete separation from motor vehicle traffic.

A dense network of bikeways is recommended in and around downtown, while network spacing is coarser west of downtown and north near Point Defiance. The network in South Tacoma is strategically constructed to take advantage of the existing I-5 over- and underpasses. Connections to Northeast Tacoma would be achieved through a proposed trail along the SR 509 corridor and provide access to destinations such as the Mary Rose Kobetich Library.

FOUR TYPES OF BICYCLISTS BY PROPORTION OF POPULATION

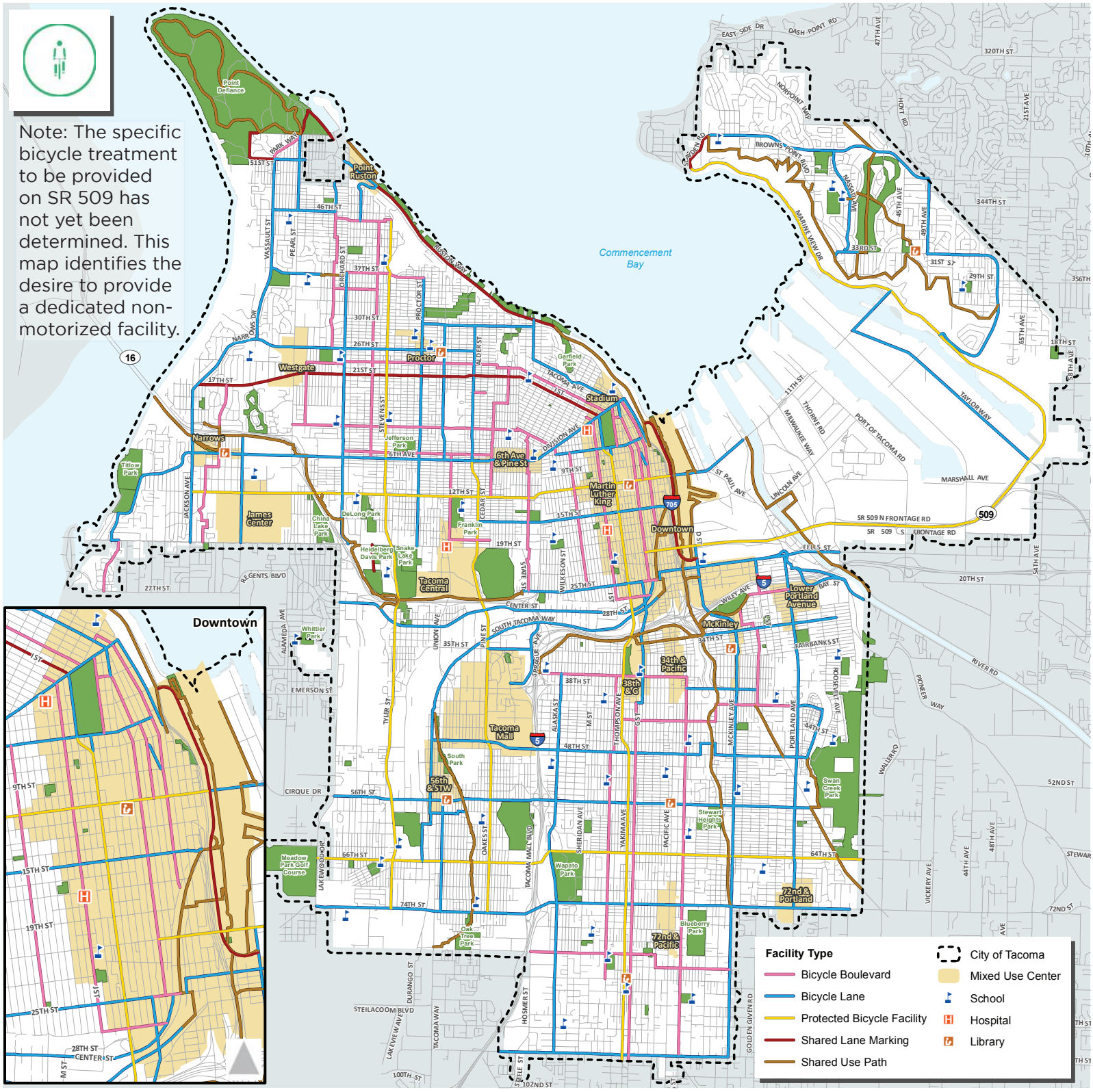


Source: Portland, OR DOT

The goal is to build infrastructure for the Interested, but Concerned group by making the bicycle network feel safe for everyone.

BICYCLE PRIORITY NETWORK

Note: The specific bicycle treatment to be provided on SR 509 has not yet been determined. This map identifies the desire to provide a dedicated non-motorized facility.



BICYCLE FACILITY TYPES

Bicycle Lanes

A bicycle lane is a designated lane for exclusive use by bicycles, flowing in the same direction as traffic. Generally, bicycle lanes are 5-6 feet wide and are indicated by pavement markings and signage. Bicycle lanes are typically placed on the right side of the road, between a travel lane and curb or other road edge. Bicycle lanes allow for more predictable behavior from motorists and bicyclists, visually remind motorists of the presence of bicyclists, and can increase roadway efficiency for more bicycle and motorist volumes.

Source: Fehr & Peers

Buffered Bicycle Lanes

Buffered bicycle lanes add a painted buffer of 18 inches to 3 feet wide to a typical bicycle lane to increase separation from motor vehicles. Buffered bicycle lanes are appropriate in areas where standard bicycle lanes are considered, streets with higher traffic speeds and volumes, or streets with additional width to accommodate a buffer. An added buffer to a bicycle lane provides a greater sense of safety for less confident bicyclists, gives clearance from the door zone of parked cars if the bicycle lane is adjacent to parking, and allows bicyclists room to pass each other.

Source: Alta Planning + Design

Bicycle Boulevards

Bicycle boulevards are low speed, low volume streets with traffic calming measures such as speed humps, roundabouts, chicanes, and stop signs to allow bicyclists to comfortably use the road in a low stress setting. Bicycle facilities are indicated on these streets by signs and pavement markings, including sharrows. These facilities are appropriate for users of all ages and abilities.

Source: Fehr & Peers

Protected Facilities

Protected facilities are designated lanes for bicyclists, fully protected from motor vehicle by a physical barrier such as bollards and pavement markings, parked cars, a raised curb, or a planted median. Protected facilities can be one-way or two-way flows, and can be at the street level, sidewalk level, or intermediate elevation. Protected facilities are appropriate in locations with high bicycle volumes, high motor vehicle speed or volumes, and other locations where bicyclists may feel unsafe due to parked cars, multiple vehicle lanes, or high traffic speeds. Protected facilities encourage use from bicyclists of all ages and abilities as this type of facility has physical barriers from vehicles.

Source: Alta Planning + Design

SYSTEM COMPLETENESS FRAMEWORK

The bicycle priority network is complemented by supportive policies, including the system completeness framework. The key metric will be percentage of network complete but facility quality and improved safety should be tracked over time. System completeness will be measured against the 20 year project list identified in the Transportation Element.

To rate facility quality, the below table provides guidance. The most desirable outcome is provision of a facility that meets or exceeds the level of quality recommended by the TMP. An acceptable facility is met by providing some type of designated bicycle facility that improves the current facility but provides a lower quality experience than that recommended as part of this plan.

Using this approach, S 15th Street would provide acceptable facility quality at the time of writing this TMP as the existing facility is a bicycle lane and the recommended long term facility is a bicycle lane. Given limited available resources, bicycle improvements will be prioritized and constructed over time, which is consistent with current practices utilized in the MoMaP. The current MoMaP prioritization scheme will still be used to prioritize bicycle facility construction, which will be complemented by elevating projects as opportunities arise (e.g., a roadway repaving project on a corridor scheduled for bicycle improvements).

RECOMMENDED APPROACH FOR ASSESSING QUALITY OF BICYCLE FACILITIES

Quality of Facility	Within Bicycle Priority Network
High	Provides treatment recommended in the Bicycle Priority Network
Acceptable	Provides a lower-level facility than recommended in the Bicycle Priority Network
Needs Improvement	No Facility

Bicycle facilities – lowest-level to highest-level of treatment: shared; bicycle lanes; buffered or protected bicycle facility; separated trail.

TRANSIT PRIORITY NETWORK

Public transit is an important component of Tacoma's multimodal transportation network and can allow the City to move people efficiently while minimizing environmental impacts. While Tacoma itself does not operate transit service, it can support transit operated by Pierce Transit and Sound Transit through active management of the street system and right of way. These can include supportive policies, such as prioritizing transit service and access to it on certain streets, or infrastructure, such as transit signal priority, on-street parking management, and safer routes to transit for pedestrians and bicyclists. This section summarizes where Tacoma will prioritize transit, priority treatments that the City can use to support transit, and ways that the City can collaborate with transit providers.

In the longer term, the City may need to deploy strategies that go beyond managing the right of way. For example, the City may find that targeted investments in transit service or expanding transit infrastructure, (e.g., adding to the streetcar network), are of significant importance in maximizing transit's mode share. This vision sets a foundation on which those types of strategies can be launched in the future.

MODAL NETWORK AND TRANSIT PRIORITY TREATMENTS

Transit will be prioritized over other modes on certain streets, which is illustrated in the transit priority network. This map highlights the streets where transit will be prioritized and indicates the level of transit service intensity that the City could support in the future. Access to these transit priority streets by walking or bicycling is also important because transit riders need to get to the stop. For this reason, the transit priority network has significant overlap with the pedestrian and bicycle priority networks.

These levels of intensity are summarized in the accompanying table.

Transit Intensity Levels
Streets highlighted in dark blue are **High Capacity corridors** and would support the highest level of transit intensity. The transit technology used to operate this level of intensity could be either bus or rail, and appropriate modes include street running light rail, urban streetcar, bus rapid transit, and arterial rapid bus.

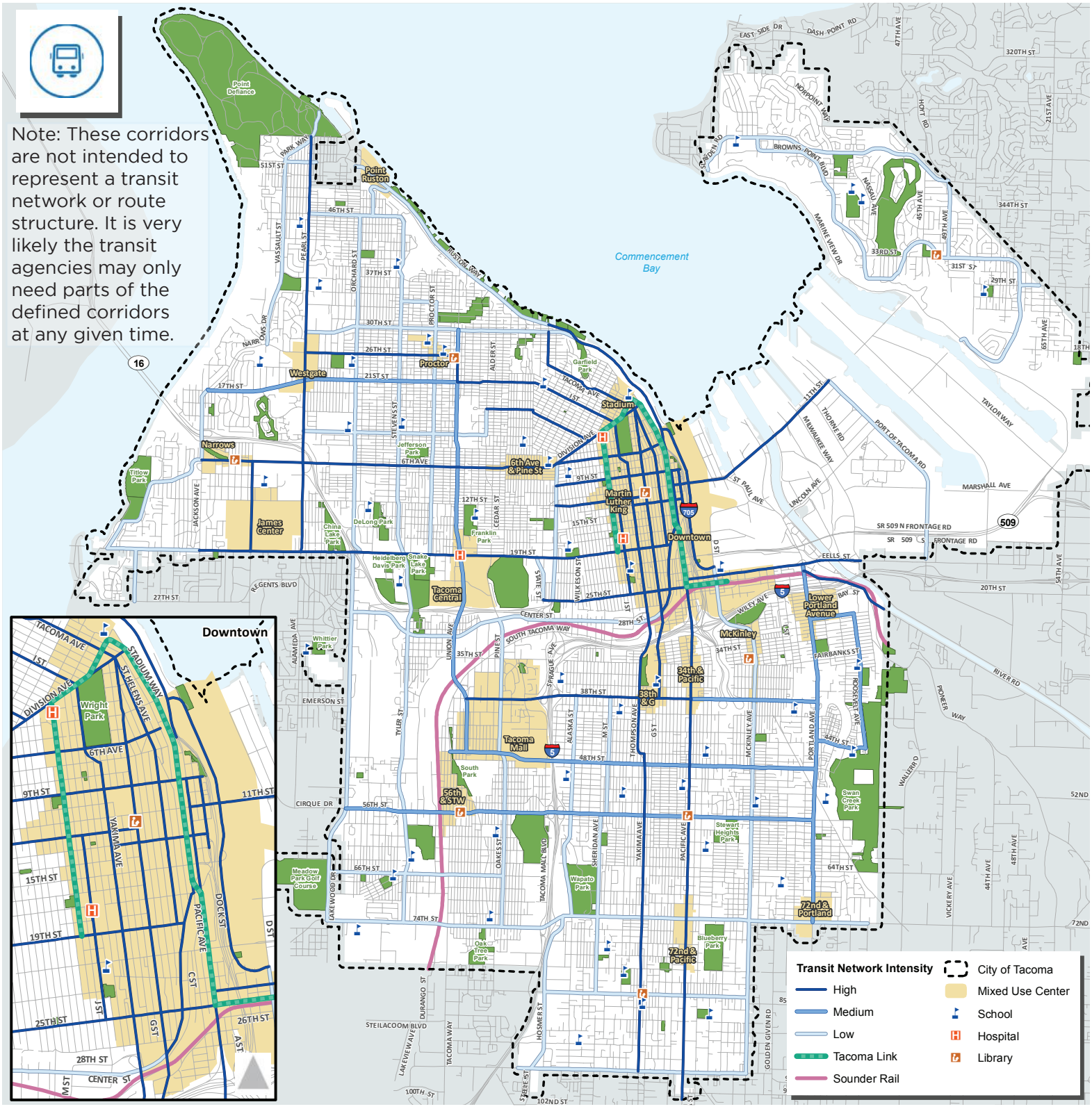
Streets highlighted in medium blue are **Urban corridors** and have slightly lower intensity than High Capacity corridors. Service could be provided by buses on this type of corridor, with the potential for very high quality service like bus rapid transit.

Light blue streets represent **Collector and Neighborhood corridors**, which have the lowest intensity. These corridors could be served by buses.

It is important to note that the level of intensity indicated on the map is the level that could be supported by the City, but Pierce Transit or Sound Transit will not necessarily operate that level of service on the corridor in the future. A high number of corridors were selected as transit priority streets so that infrastructure planning would not preclude transit with the understanding that service will not be justified on all of the corridors in the future. For example, there will likely not be demand for 10 minute service on all of the corridors highlighted in dark blue in the future, so only a selection will receive that level of service. This is where coordination with the two transit agencies will be crucial. Many of the transit supportive actions in the higher intensities will take time to implement. It will be important that the transit agencies work with the City as plans are made to upgrade service in particular corridors.

TRANSIT PRIORITY NETWORK

Note: These corridors are not intended to represent a transit network or route structure. It is very likely the transit agencies may only need parts of the defined corridors at any given time.



TRANSIT INTENSITY LEVELS

	HIGH CAPACITY	URBAN	COLLECTOR AND NEIGHBORHOOD
MAP COLOR	DARK BLUE	MEDIUM BLUE	LIGHT BLUE
Peak Frequency	10 min or better	11 to 15 minutes	16 or more minutes
Off Peak Frequency	15 min or better	16 to 30 minutes	31- 60 minutes
Appropriate Modes	Street Running Light Rail (e.g., Tacoma Link) Urban Streetcar (e.g., Seattle South Lake Union) Bus Rapid Transit (e.g., Community Transit Swift or Eugene EmX) Arterial Rapid Bus (e.g., King County Metro RapidRide)	Bus Rapid Transit (e.g., Community Transit Swift or Eugene EmX) Arterial Rapid Bus (e.g., King County Metro RapidRide) Arterial Bus (e.g., Pierce Transit Route 1) Local Bus	Local Bus

TRANSIT-SUPPORTIVE CITY ACTIONS

CITY ACTIONS	HIGH CAPACITY	URBAN	COLLECTOR AND NEIGHBORHOOD
TRANSIT SIGNAL PRIORITY/TRAFFIC SIGNAL TIMING	Consistently throughout corridor	Considered if person throughput of intersection is enhanced	Only at intersection points with higher intensity modes
QUEUE JUMPS	Where transit in mixed traffic is delayed by more than 10% of free running speed	Selected intersections where transit is delayed by more than 20% of free running speed	Not considered
DEDICATED RIGHT OF WAY OR TRANSIT PRIORITY LANES	Considered throughout corridor if transit travel time advantage can be improved by more than 10%	Selected locations if transit travel time advantage can be improved by more than 20%	Not considered
ON-STREET PARKING MANAGEMENT	Transit has priority, on-street parking provided only if there is no conflict with transit	Transit has priority, on-street parking provided only if delay/transit conflict is minimal	Parking prohibited only at bus stops
SELECTIVE USE OF CURB EXTENSIONS	Only as a transit priority measure – in-lane stops for example.	Selected locations with transit delay a decision factor in placement	Transit delay a decision factor in placement but pedestrian crossing width primary decision factor
BICYCLE LANE PLACEMENT	Full separation of transit and bicycle facilities	Separation and delineation in conflict areas	Considered in high conflict areas
DEVELOPMENT SITE PLAN REVIEW	Yes – including off-site improvements	Yes – including off-site improvements	Yes, but only on-site and immediately adjacent right of way improvements
PROVISION OF CURBSIDE TRANSIT PASSENGER AMENITIES	City will prioritize provision	City will ensure amenities can be installed	Not provided – transit agency responsibility
PEDESTRIAN INFRASTRUCTURE	City will prioritize up to 1/4 mile from corridor based on Pedestrian Priority Network	City will prioritize up to 1/4 mile from corridor based on Pedestrian Priority Network	As per Pedestrian Priority Network
BICYCLE INFRASTRUCTURE	City will prioritize up to 1 mile from corridor based on Bicycle Priority Network	City will prioritize up to 1 mile from corridor based on Bicycle Priority Network	As per Bicycle Priority Network

Actions that the City will take to support transit are summarized in the accompanying table. The majority of the actions are measures to improve transit speed and reliability, such as queue jumps, dedicated right of way, and transit priority lanes. This may require a Street Occupancy Permit or other Agreement between City and Transit for exclusive use rights. Other actions make transit more attractive to use (provision of curbside transit passenger amenities) or make it easier to access (pedestrian infrastructure). When applied correctly, all of the actions have the potential to increase the quality of transit service, thereby improving its effectiveness and increasing ridership.

The level of action taken will depend on the level of intensity in a corridor, with support for high-capacity corridors being more robust than for lower intensity corridors. For example, one city action may be transit signal priority or changes to transit signal timing. On high-capacity corridors, transit signal priority/timing will be applied consistently throughout the corridor. On urban corridors, this action will be considered if person throughput at an intersection is enhanced, i.e., if prioritizing buses increases the overall number of people traveling through an intersection compared to doing nothing at all. Transit signal priority/timing will be applied on collector and neighborhood corridors only at intersection points with higher intensity modes.

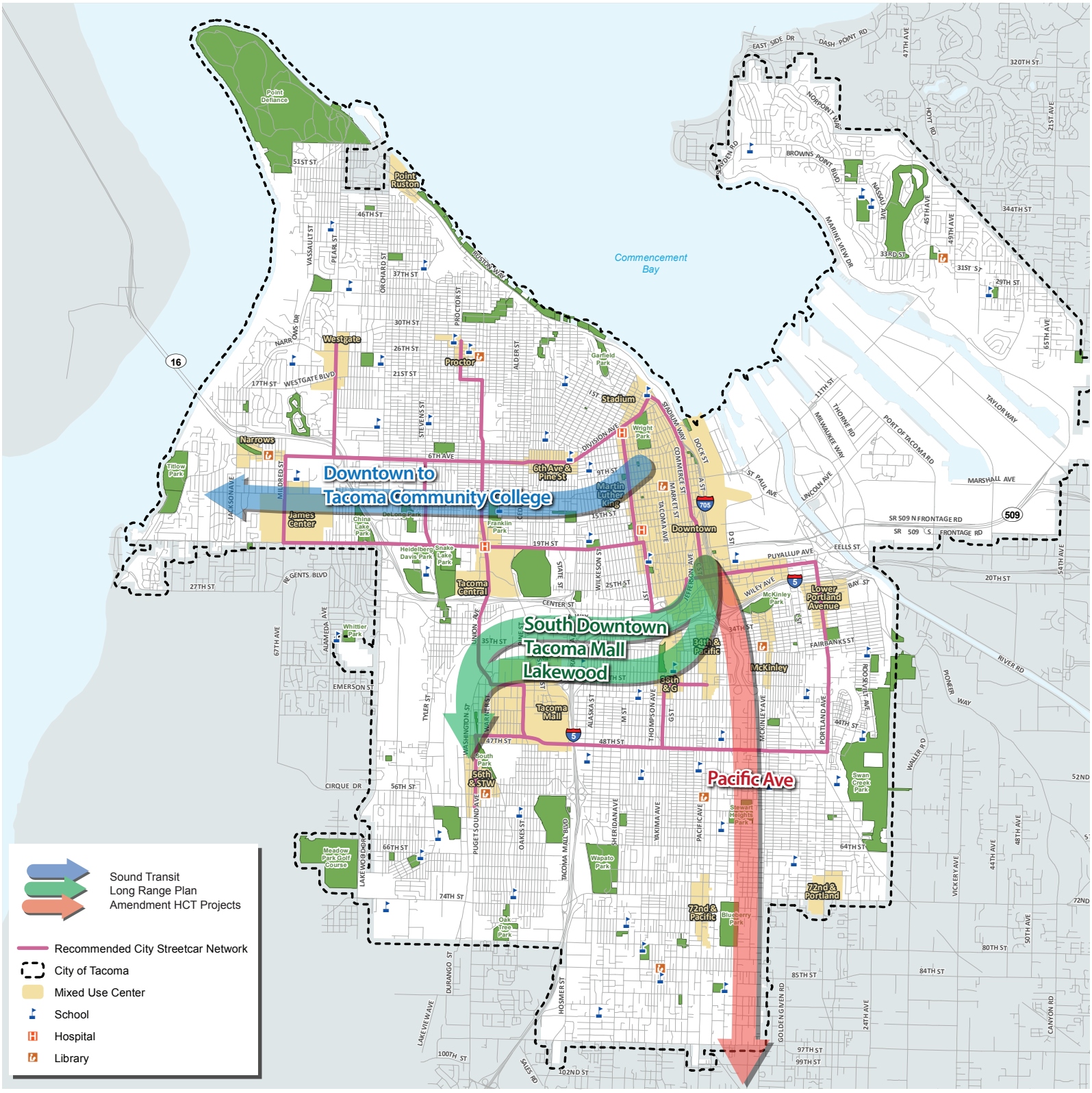
Some corridors in Tacoma accommodate more than one prioritized mode, such as transit and bicycle or transit and auto/freight. In corridors like this, compromises may be necessary to accommodate treatments for both modes rather than just one. For example, if transit and bicycle are both prioritized on the same street, it may not be possible to have both transit priority lanes and bicycle lanes on the street due to space limitations. The cross-sections described in the Roadway Typologies section later in this chapter provide examples of how situations like this may be handled.

POTENTIAL HCT CORRIDORS

In addition to the street-level planning for transit in Tacoma, the City is also looking ahead to potential rail and high capacity transit investments. The Sound Transit Long Range Plan Update, under way in 2014 and 2015, identified several areas in Tacoma that could be connected well via light rail, streetcar, or bus rapid transit. Sound Transit has not committed to investing in these corridors at this time, but they are good candidates for high capacity transit and could be operated by Pierce Transit as well.

The City has also identified potential corridors for a future streetcar network. The network connects many of Tacoma's mixed use centers and key destinations. The corridors called out on the streetcar map coincide with corridors on the transit priority network so they may begin with incremental investments in transit service in the shorter term. In the long term and with an infusion of funding, the streetcar network would provide an efficient transit experience for many of Tacoma's residents, workers, and visitors.

POTENTIAL SOUND TRANSIT HCT AND CITY OF TACOMA STREETCAR CORRIDORS



PRIORITIZATION FRAMEWORK

Transit-supportive city actions will be prioritized and implemented over time, and all actions will be coordinated with service changes made by Pierce Transit and Sound Transit.

The first priority in implementing transit-supportive actions is to conduct an inventory of streets in Tacoma that currently have transit service. Conditions along corridors with peak period frequency of 15 minutes or greater should be compared to the transit-supportive actions described in this plan. Gaps along the corridors where the City has not taken action to support transit should be identified, and improvements to fill these gaps should be prioritized.

After identifying corridors where improvements are needed, the corridors will be prioritized so that investments can be directed where they will have the largest impact. The following criteria will be used to prioritize corridors:

1. **Ridership** - in general, improvements made to corridors with high ridership will have the greatest impact because they will benefit a large number of people.

2. **Service Intensity** – corridors with high service intensity will benefit from improvements more than corridors with low service intensity because a higher number of trips and vehicles will benefit, improving efficiency.

3. **Transit speed and reliability** – corridors with poor transit speeds and/or poor reliability should be prioritized when it comes to transit supportive actions that can improve transit speed and reliability, such as transit signal priority. The priority for addressing these would first fall to high intensity corridors (meaning the transit service is already in place), where due to the impacts of the street system transit speed and reliability is compromised beyond the standard established in the previous table.

After current gaps have been addressed, the second priority is to examine future funded system plans from Pierce Transit and Sound Transit to identify corridors that will receive enhanced transit service in the short-term. Transit-supportive actions taken by the City should be coordinated with service enhancements by Pierce Transit and Sound Transit to ensure that investments in service will be supported by City policies and infrastructure. As all three jurisdictions are required to maintain six year plans, it is suggested this coordinated planning effort occur through the six year planning efforts of the three agencies. Thus each year as plans evolve, the City, Pierce Transit, and Sound Transit will maintain fully coordinated plans.

FIT WITHIN THE SYSTEM COMPLETENESS FRAMEWORK

The 2015 Transportation Element of the City's Comprehensive Plan will identify transit investments that should occur over the next 20 years. These investments will be developed based on the transit priority network and transit supportive actions described in this plan. The City's progress in providing a transit system will be measured based on its progress in making these transit investments relative to the City's growth over time.

FUTURE VISION

FREIGHT PRIORITY NETWORK

In 2009, the Washington State Legislature amended the GMA to include a requirement for a Container Port Element in the GMA Comprehensive Plan for cities that contain a marine container port with annual operating revenues in excess of $60 million. The City of Tacoma falls into this category. The legislative intent is "... to ensure that local land use decisions are made in consideration of the long-term and widespread economic contribution of our international container ports and related industrial lands and transportation systems and to ensure that container ports continue to function effectively alongside vibrant city waterfronts." (RCW 36.70A.085).

Accordingly, the City of Tacoma, in collaboration with the Port of Tacoma, prepared a Container Port Element (adopted July 2014). The major components of that Plan are included in this Freight Element.

Consistent with state requirements, the element provides policy guidance to achieve the following:

- Protection of core areas of container port and port-related industrial areas within the City;
- Efficient access to the core area through freight corridors within the city limits;
- Protection against potential land use conflicts along the edge of the core area; and
- Identification of key transportation corridor improvements.

PORT ACTIVITIES AND FACILITIES

The Port of Tacoma container port activities are concentrated in the Commencement Bay Tideflats area, located in Tacoma's central waterfront. This area has an established history of maritime industrial activity, dating back to the 1800s. In 1918, the Port of Tacoma was created and began development on 240 acres of Tideflats. Currently, the Port is home to a wide mix of industrial uses, including cargo terminals, manufacturers, warehouses, repair facilities, rail yards, and others. Some of the largest cargo terminals, especially the container terminals, are owned by the Port of Tacoma, but there are also numerous private facilities that transfer cargo to and from ships and barges. The Port also owns terminals handling bulk products, auto imports, breakbulk cargoes, and heavy-lift cargoes. With ownership of approximately 2,725 acres, the Port of Tacoma owns approximately half of the land area in the Commencement Bay Tideflats area operating and leasing significant piers, docks, wharfs, cargo handling equipment, and related upland facilities.

THE PORT'S ECONOMIC CONTRIBUTION

In 2013, Tacoma's total seaport activity equaled 1.9 million twenty-foot equivalent units (TEUs), making it the 10th largest among North American ports by total TEUs. Tacoma's role in foreign exports is especially important; containerized trade accounts for over half of the total tonnage moving through the Port. The marine cargo terminal trade plays a vital role in the Tacoma and Pacific Northwest economy, contributing thousands of jobs and millions of dollars in revenues and state and local taxes to the region. A 2014 Port of Tacoma economic impact study provides specific data describing the magnitude of the economic impact of the Port on the local and regional economy. As described in this report, economic impacts associated with container port activity can be summarized in terms of employment, income, revenue, and taxes. Key findings described in this report are listed below.

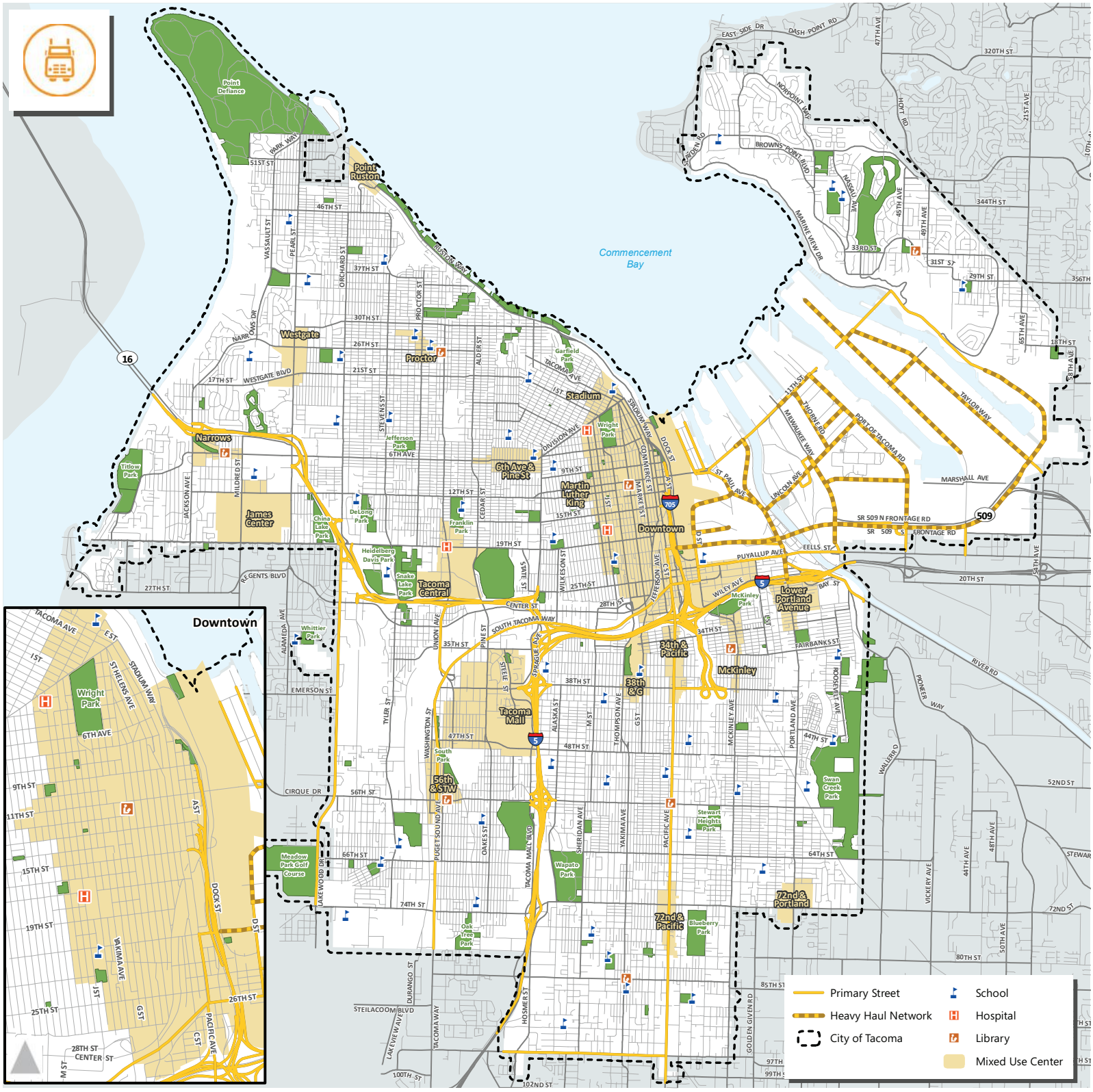
- Marine terminal activities at the Port of Tacoma generated approximately 10,000 jobs.
- When induced and indirect jobs were included, the total number of jobs generated by the Port's presence was estimated at 29,000. If farmers and manufacturers who ship products through the Port of Tacoma were considered, the Port's activities reach 267,000 jobs in Washington State.
- The marine terminal activities at the Port of Tacoma generated more than $3 billion in revenue.
- This economic activity translates to more than $223 million in state and local taxes for education, police, fire services, and road improvements.
- Cargo movement at the Port of Tacoma was estimated to generate nearly $1.5 billion in direct revenue. Of this total, an estimated $1.25 billion was generated by containerized cargo.
- Estimates of the annual state and local taxes generated by the Port of Tacoma totaled $107.5 million with approximately $82.4 million collected by the state, $11.5 million by the county, and $13.6 million by local government.

CORE VISION & PRINCIPLES

For the Core Area, this element envisions a strong and vibrant container port and port related industrial center in Tacoma's Commencement Bay, supported by appropriate levels of service for capital facilities and other infrastructure and an efficient truck and rail transportation network. Key planning principles that guide the goals and policies for the Core Area include:

- Uses should be prioritized as follows: (1) cargo facilities and activities, (2) water dependent port uses, (3) water related port uses, and (4) other uses permitted in Port Maritime Industrial zoning;
- The Port of Tacoma should have the opportunity to work cooperatively with the City of Tacoma in setting LOS standards for utilities and transportation; and
- The Port of Tacoma should have the opportunity to work cooperatively with the City of Tacoma in ensuring that future developments pay for the costs of those capital improvements necessary for the proper functioning of the Core Area.

FREIGHT PRIORITY NETWORK

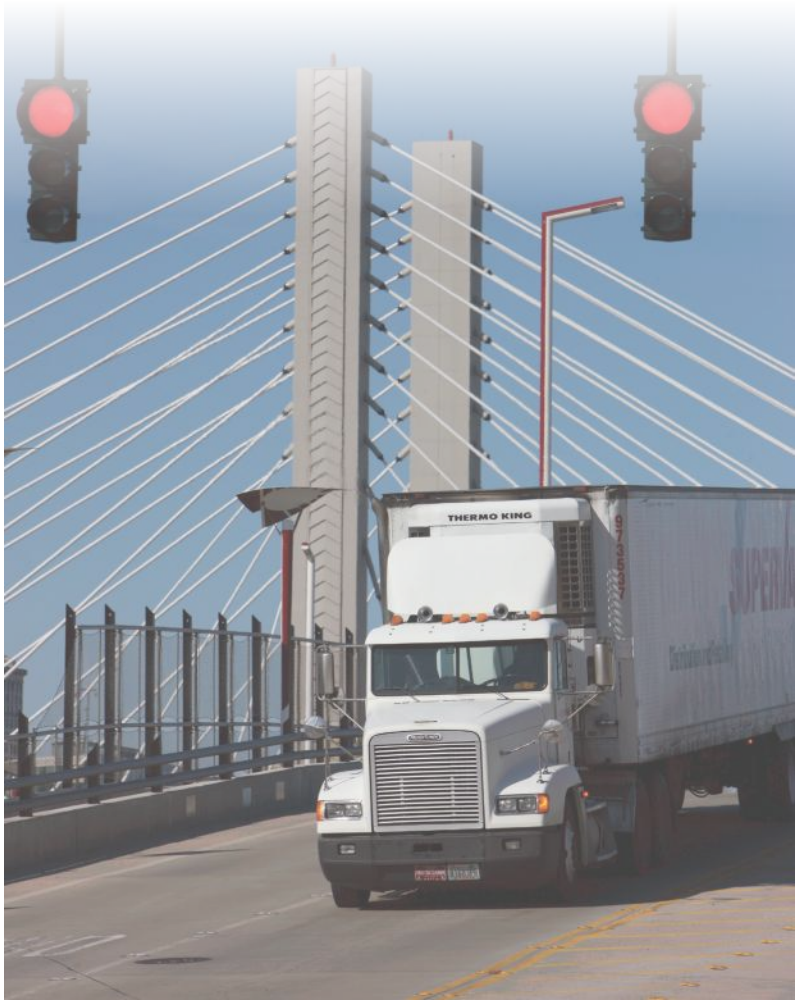


HEAVY HAUL NETWORK

The City of Tacoma has an established Heavy Haul Network to support commerce associated with the Port of Tacoma. This network establishes corridors within the City's transportation network where designing roadways to accommodate freight as a priority modal user will be essential. Design considerations include turn radii, paving and materials, lane widths, as well as maintenance schedules.

FIT WITHIN THE SYSTEM COMPLETENESS FRAMEWORK

The 2015 Transportation Element will identify investments along the Heavy Haul Network that should occur over the next 20 years. These investments will be developed based on the design considerations described in this plan. The City's progress in providing for freight will be measured based on its progress in making these investments relative to the City's growth over time.



AUTO PRIORITY NETWORK

This element provides guidance for future right-of-way improvements, recognizes the limitations associated with street widening, and attempts to balance the access and mobility needs of all users including motorists, pedestrians, bicyclists, transit, and freight while responding to anticipated growth. The Auto Element also strives to balance safety, preservation, and maintenance of the roadway infrastructure, as well as environmental sustainability. The City's street network includes State Highways and streets ranging in size from local streets to principal arterials linking neighborhoods and business areas to each other and the region.

STATE HIGHWAYS AND HIGHWAYS OF STATEWIDE SIGNIFICANCE

The City of Tacoma has been greatly impacted by State Highways, which are owned by the State and managed by WSDOT. These highways connect communities to one another throughout the Puget Sound Region. To serve traffic at higher speeds and meet mobility and safety goals, access to these streets is restricted and regulated in accordance with RCW 47.05. The State Highways that are within or adjacent to Tacoma are designated into two categories, depending on their role in the regional network: Highways of Statewide Significance (HSS) or Highways of Regional Significance (Non-HSS). In addition, the State identifies highways that are part of the Washington State Freight and Goods Transportation System (RCW 47.06A.020). HSS include interstate highways and other State routes needed to connect major communities in the state. The State uses the designation to allocate and direct funding. The HSS system was mandated by the 1998 legislature through enactment of House Bill 1487 and codified into RCW 47.06.140.

WSDOT is the owner of the major highways in the state, including I-5, which passes the Tacoma Mall and intersects major highways, such as SR 16, I-705, SR 7, SR 163, and SR 167 before going east into Fife; SR 509 in the Port area; SR 16 connecting Pierce and Kitsap counties; I-705 which serves as the connector between I-5, Downtown Tacoma, Tacoma's waterfront, North Tacoma, and the Tacoma Dome; and SR 167, commonly known as the Valley Freeway connecting I-5 in Tacoma with I-405 in Renton. SR 167 is not a complete freeway between Puyallup and Tacoma. This uncompleted freeway link has been identified as a critical missing link in the state's highway network. WSDOT, as the administrator for federal and state transportation funds, works with the City to improve the transportation system locally and regionally.

The Green Transportation Hierarchy recognizes that past transportation investments have focused on auto mobility. Moving forward, Tacoma will take a more balanced multimodal investment approach.

City Street Functional Classification System

The City street network provides facilities for a wide variety of users. For vehicles, it is a network whose efficiency depends upon how well the streets move traffic through the system. The City classifies streets according to a hierarchy of function, from most intensive use to least intensive. Functional classification, as this is called, groups streets and highways into classes according to their role in the network. The functional classification of each roadway determines its roadway design and ultimate cross section for reconstruction.

Classification is important to the City because it helps ensure that the needed capacity will be available and that street improvements will balance the differing needs of vehicles and non-motorized travelers. The City defines the specific standards for streets in Tacoma. The following figure shows the existing functional classification of the streets within Tacoma. There are five main classes of streets in Tacoma: Principal Arterials, Minor Arterials, Collector Arterials, Neighborhood Collectors, and Local Streets.

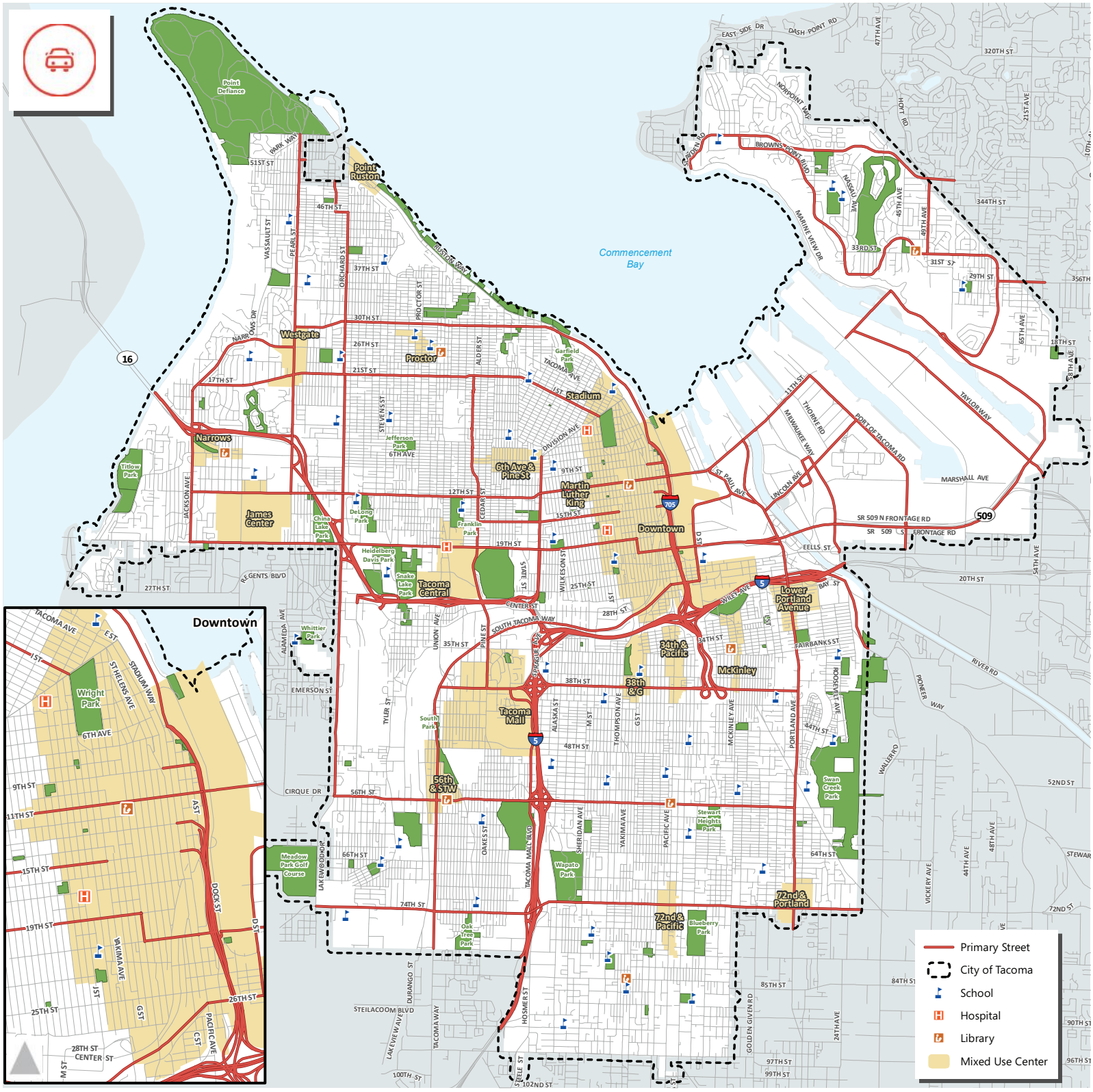
FUNCTIONAL CLASSIFICATION OF ROADWAYS IN TACOMA

Principal arterials are streets that have a high percentage of long-distance vehicle trips.

Minor arterials are streets that have a near balanced percentage of long-distance vehicle trips, with local access usage.

Collector arterials are streets that have a low percentage of long-distance vehicle trips.

AUTO PRIORITY NETWORK



KEY AUTOMOBILE CONCEPTS

Auto Priority Network
In developing this TMP, the City's roadway network was evaluated to determine the routes that are most critical to auto mobility. These routes are considered a part of the auto priority network, as summarized in the adjacent figure. Similar to the other modal priority networks, the City will prioritize treatments along the auto priority network that accommodate auto travel. The future auto priority network, in some cases, differers from the existing functional classification. This is due to the changing priority of that roadway/corridor.

Treatments include providing sufficient vehicle lanes and widths to accommodate reasonable vehicle throughput as well as intersection improvements that contribute to corridor mobility and safety.

As shown in the Green Transportation Hierarchy, areas where autos take priority over other modes should be limited. While autos still make up the majority of trips in Tacoma, this is in part due to the fact that transportation planning has historically focused on accommodating auto trips over other modes. The City is actively working to encourage people to use other modes, by shifting its investment priorities.

Regional Access to Downtown
The largest RGC being planned in Tacoma is the downtown area. While new roadway capacity in this area is, for the most part, not necessary to accommodate the planned growth, it will be important to preserve the existing access and capacity to and from downtown to help mitigate the growth and employment and new residences.

It is recognized that numerous multimodal improvements will be necessary to accommodate growth in the downtown area. This will have to be balanced with the desire to link Downtown Tacoma with the waterfront area.

Fit Within a System Completeness Framework
The City has historically measured LOS based on automobile delay alone. This TMP generally moves away from this approach by focusing on system completeness based on the projects included in the City's 20 year list within the 2015 Transportation Element. However, the City should continue to measure and prioritize vehicle mobility along the auto/freight priority network, as described in the performance measurement section in the following chapter.

Access Management
Access management refers to the proactive management of vehicle access points to adjacent parcels through roadway and driveway design. Access management promotes safe and efficient use of the transportation network for all classes of roadways. The City of Tacoma utilizes several techniques to attempt to control access to roadways. These techniques include:

- **Signal Spacing:** Increasing the distance between traffic signals improves the flow of traffic on major arterials, reduces congestion and improves air quality for heavily traveled corridors. However, increased spacing results in limited opportunities for pedestrians to cross at a signalized location.
- **Driveway Spacing:** Fewer driveways, spaced farther apart, including combining access points for shared access allow for more orderly merging of traffic and present fewer conflicts to all road users.
- **Separated Turning Lanes:** Dedicated lanes for left, right and U-turns, as well as roundabouts, keep through-traffic flowing and improve safety.

- **Roundabouts:** Roundabouts represent an opportunity to reduce conflict points in an intersection or reduce the severity of crashes.
- **Median Treatments:** Curbing and non-traversable raised medians are some of the most effective means to regulate roadway access and reduce crashes.

The access management techniques for a given roadway must be appropriate for the facility with respect to the roadway classification, traffic volumes, adjacent land uses, and traffic speeds.

Lighting

Street and intersection lighting is a highly effective tool for improving safety and personal security along roadways. Well designed and maintained lighting allows pedestrians to feel safe when walking in their neighborhoods and drivers can better see the street, as well as the surrounding sidewalks. The City's priority for street lighting is to illuminate higher classified streets and the intersections on those roadways. A few other general statements can be made regarding the potential safety benefit of roadway lighting:

- A disproportionately large number of crashes and fatalities occurs in dark conditions, especially those involving pedestrians. Pedestrians are the most vulnerable population on roads at night and in terms of crash reduction appear to benefit the most from street lighting. Some studies estimate that pedestrians are between 3 and 6.75 times more vulnerable in the dark than daylight. Prioritizing lighting at crossing locations and providing a higher level of lighting during the busiest dark hours are cost-effective strategies.
- Lighted intersections and interchanges have fewer crashes than unlit intersections/interchanges.
- Crime Prevention Through Environmental Design (CPTED) is an important design component for all transportation facilities, but especially for pedestrians. Lighting is a critical element of CPTED that the City strives to provide in all needed locations. Elements of CPTED include designing streets to encourage pedestrian and bicycle traffic, providing natural surveillance, and performing necessary maintenance.

Traffic Calming

Tacoma has a Neighborhood Traffic Calming Program that helps ensure safe traffic conditions on Tacoma's neighborhood streets. The City responds to residents questions and concerns regarding speeding, traffic safety, traffic signs and signals, and similar issues.

The City also administers its neighborhood traffic circle program and the arterial and non-arterial traffic calming programs. Traffic speeds and volumes are a concern on neighborhood streets. Tacoma's Traffic Engineering Section will partner with neighborhoods to address these concerns and develop traffic calming projects that are both feasible and fundable.

Complete Streets
On November 17, 2009 the City Council adopted Resolution Number 37916: "A Resolution relating to the City's street design; endorsing the creation and ongoing development of Tacoma's Complete Streets Design Guidelines; and directing the City Manager to implement the Mixed-use Centers Complete Streets Design Guidelines and the Residential Complete Streets Design Guidelines." Since adoption, the Council's Complete Streets direction is being incorporated into multiple City policy initiatives, including this TMP.


D

Demand-Side Approaches

Much of this plan addresses building out Tacoma's future transportation network, the supply side, to serve the travel of residents, employees, and visitors accessing the city's various land uses. However, another very important piece of this relationship between land use and transportation is Transportation Demand Management (TDM), which addresses the demand side of travel.

WHAT IS TDM?

TDM is an umbrella term for strategies to increase the efficiency of the transportation network by giving people options in how they travel around the city. Severe congestion occurs when too many people attempt to travel at the same time using the same mode. This condition is most prevalent in the United States when too many people travel in SOVs. TDM focuses on providing people with choices to travel by other modes, at different times of day, or not at all if they have options available to them. TDM strategies support these travel options by providing resources, programs, tools, and partnerships that can help keep Tacoma moving and accommodate the city's planned growth.

COMMUTE TRIP REDUCTION (CTR) AND DOWNTOWN ON THE GO (DOTG)

As required by the CTR Efficiency Act of 2006 (RCW 70.94.521-551) and the associated Washington Administrative Code 468-63, the Tacoma City Council adopted the CTR Plan on July 10, 2007 (Resolution No. 37220) and adopted the CTR Ordinance into the Tacoma Municipal Code Chapter 13.15 on December 9, 2008 (Ordinance No. 27771).

The CTR Plan and Ordinance are designed to improve air quality, reduce traffic congestion, and reduce the consumption of petroleum fuels. With the focus on employer-based programs that encourage the use of alternatives to driving alone for the commute trip, CTR represents a centerpiece of the City's overall TDM strategy.

Tacoma created DOTG as its first ever Transportation Management Association (TMA). This innovative effort to target downtown trip reduction was created in partnership with Pierce Transit and the Tacoma-Pierce County Chamber of Commerce. Pierce Trips provides similar services for businesses, workers, and students as the TMA for Pierce County.

Source: Downtown On The Go

TMAs generally focus trip reduction efforts in areas with high employment and residential densities. Tacoma's RGCs and MUCs are appropriate areas to focus TDM efforts.

TDM STRATEGIES

In addition to building out the transportation network to support travel by all modes, there are methods for supporting each mode through transportation demand management. Many TDM strategies can be as simple as showing people the ease of walking or taking transit to work. Others involve targeted tools or programs that encourage travel options other than driving alone.

WALKING

The City, TMAs, and employers can encourage walking for both transportation and recreational purposes through outreach programs, such as the Walking Wednesdays effort that DOTG offers. Many employees who live within walking distance of their workplace may be used to driving to work but find commuting on foot enjoyable, either regularly or occasionally. Some TMAs hold annual walking contests in which commuters log their trips to work on foot and enter to win prizes.

Similarly, recreational tours or walking groups provide a healthy activity that can get people more comfortable with walking around Tacoma. Safer Routes to School (SRTS) is another excellent example of providing transportation choices for students by encouraging walking and improving safety. Simply introducing people to this option opens up new choices whether they are walking for work or fun.

Source: Downtown On The Go

BIKING

Tacoma has tools and programs in place currently that support bicycling as a viable travel option and there are other possibilities to explore. Bike Month draws numerous bicyclists onto the street to make riding a bicycle to work or for other purposes a visible and approachable option for anyone. DOTG supports the Bike Buddy program for people who are interested in trying bicycling around the city and the Bike to a Business discounts program can encourage more people to travel by bicycle. Bicycle Trains, groups of bicyclists that meet up at pre-arranged "stops" to bicycle safely to work on a regular basis, are another example of programs that make bicycling an attractive option. Ciclovias, also known as open streets events, give residents and visitors the opportunity to experience city streets free of traffic and typically draw thousands of participants in locations all over the world. Downtown to Defiance (now in year 3) is an example of a Ciclovia in Tacoma. These outreach efforts in addition to education programs that teach safe habits for both motorists and bicyclists when operating near each other can encourage greater confidence and improve safety for all users. The MoMaP Update appendix provides further information.

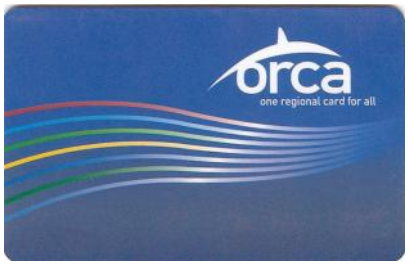
Source: www.prontocycleshare.com

Aside from outreach programs and capital projects that build out the bicycle transportation network, there are also supportive amenities that can boost bicycling. Public bicycle and secure parking areas, such as bike cages, are necessary for people to feel safe leaving their bicycles locked while not riding them. Tacoma has a free bicycle rack request service for locations in the public right of way.

Locker rooms, showers, and maintenance tools are additional amenities that make bicycling an easier choice. Some cities have bicycling centers, run either privately or through public-private partnerships, in central locations to give many people access to these amenities. Public bicycle share programs are another successful way that many cities boost travel by bicycle.

TRANSIT

Public transit is an easy and affordable option for many commuters and travelers around Tacoma today. The One Regional Card for All (ORCA) card program makes boarding transit vehicles and transferring to another extremely easy and gives employers a simple way to subsidize their employees' travel by transit. Advances in smart farecard technology are allowing integration of other transit providers, travel modes, and payment purposes as time goes on, making pay-as-you-go transportation options even easier.



Source: en.wikipedia.org/wiki/ORCA_card

Trip-planning platforms for transit and real time arrival information are another key to encouraging people to use public transit.

Websites and applications such as Google Maps and One Bus Away can help Tacoma residents, workers, and visitors make to-the-minute decisions on how to get around on public transit. Some jurisdictions also offer guaranteed ride home programs in partnership with employers to ensure employees a way to get home in case they miss the last bus or another emergency occurs.

VANPOOL / CARPOOL

Perhaps the most readily available source of transportation capacity is the empty seats in vehicles on Tacoma's streets today. Matching people who live and work in similar locations or who otherwise have similar travel patterns can increase the efficiency of the city's transportation network while helping contribute to other policy goals as well. Pierce Transit operates regular vanpools for groups of varied sizes traveling short and long distances alike. Vanpools offer the flexibility and door-to-door service that many travelers enjoy, especially for the work commute.

Formal and informal carpooling is also on the rise, especially as more freeways receive HOV and managed lanes. DOTG and Pierce Trips both connect people to ridesharing options through web services that match potential carpooling partners. Individual employers can route their employees through these existing carpool matching services or undertake their own efforts, as many large employers have begun to do using employee shuttles. Lastly, smartphone applications support ride matching for frequent commuters and occasional passengers alike.

Source: rideshareonline.com/

CARSHARING

Private companies and public programs supporting carsharing can reduce the burden of parking on Tacoma's streets. They can also contribute to lower vehicle miles travelled (VMT) by reducing dependence on privately-owned vehicles and making drivers pay for each time they use a shared vehicle. Zipcar currently operates at the University of Washington Tacoma, the University of Puget Sound, and Pacific Lutheran University. There are other examples of private, public-private partnership, and publicly run carsharing models around the country that Tacoma could adopt as an additional option to private car ownership.

Source: Iconathon

FLEXIBLE WORK ARRANGEMENTS

An extremely cheap and easy way to reduce demand on the transportation network, especially during peak times, is for employers to offer flexible work arrangements. Whether employees work from home one day a week, work a compressed work week, or simply shift their commute time away from the peak hour, removing some trips during the peak hour can reduce the demand placed on the transportation system and contribute to better employee work life balance through flexibility.

PARKING MANAGEMENT

The management of parking resources is vital to the success of many businesses and retailers and it can help to reduce the need for additional parking capacity. TDM is one tool shown to be effective in the management of parking. The goal of Tacoma's parking system is to maximize the use of the right-of-way while encouraging behavior that is consistent with the priority user of each district or area. For example, the parking priority user in the downtown is customers, clients, and visitors. Tacoma currently manages the short term on-street parking supply utilizing various tools to influence the desired parking behaviors. Within the downtown core a combination of time restrictions and paid parking are utilized to influence demand at no greater than 85% occupancy or 1 stall in 6 is available for use.

In areas immediately outside the downtown core (buffer zone) and other areas throughout the City (outlying zones) parking is almost entirely managed with time restrictions and enforcement patrol. Parking spaces throughout the system are managed on a first-come, first-served basis. The City allows certain uses by parking permits. Based on the City's projected household and employment growth and lacking new parking facilities, the need to manage more parking areas by deployment of new parking control technologies will be necessary.

There are various thoughts on free parking in dense commercial and residential centers. For the City of Tacoma and its downtown merchants and businesses, they decided in 2009 that free parking and inconsistent parking controls were detrimental to the success of the downtown core retailers. The implementation of pay stations and new enforcement tools created the desired 85% occupancy. The parking system is now monitored annually so that various adjustments to rates and supply can be made strategically.

The Parking Technical Advisory Group (PTAG), formerly the Parking Management Advisory Task Force, was established in October 2009 (Ordinance No. 27840) to work alongside City staff to analyze parking policies and address parking issues within the downtown metered parking area. The PTAG influence has since grown to areas outside of the metered district, including reviews of off-street parking pricing and residential parking zones. The group continues to be an invaluable asset to the City as it provides varied and timely perspective as it reviews current parking policies and how they impact stakeholders. The group also makes periodic recommendations to the City Manager regarding policy and parking rate changes.

Due to the dynamic nature of a parking system and the possibility of detrimental "unintended consequences", changes are made within a public input environment. These sessions have been instrumental in helping to educate and to help reduce impacts. A similar process should be utilized for mode use changes resulting from the "arterial priorities" in this document. The arterial changes could have a significant detrimental impact on critical on-street parking spaces that support abutting commercial properties, retailers, and businesses.

HOW TDM FITS WITH SYSTEM PERFORMANCE

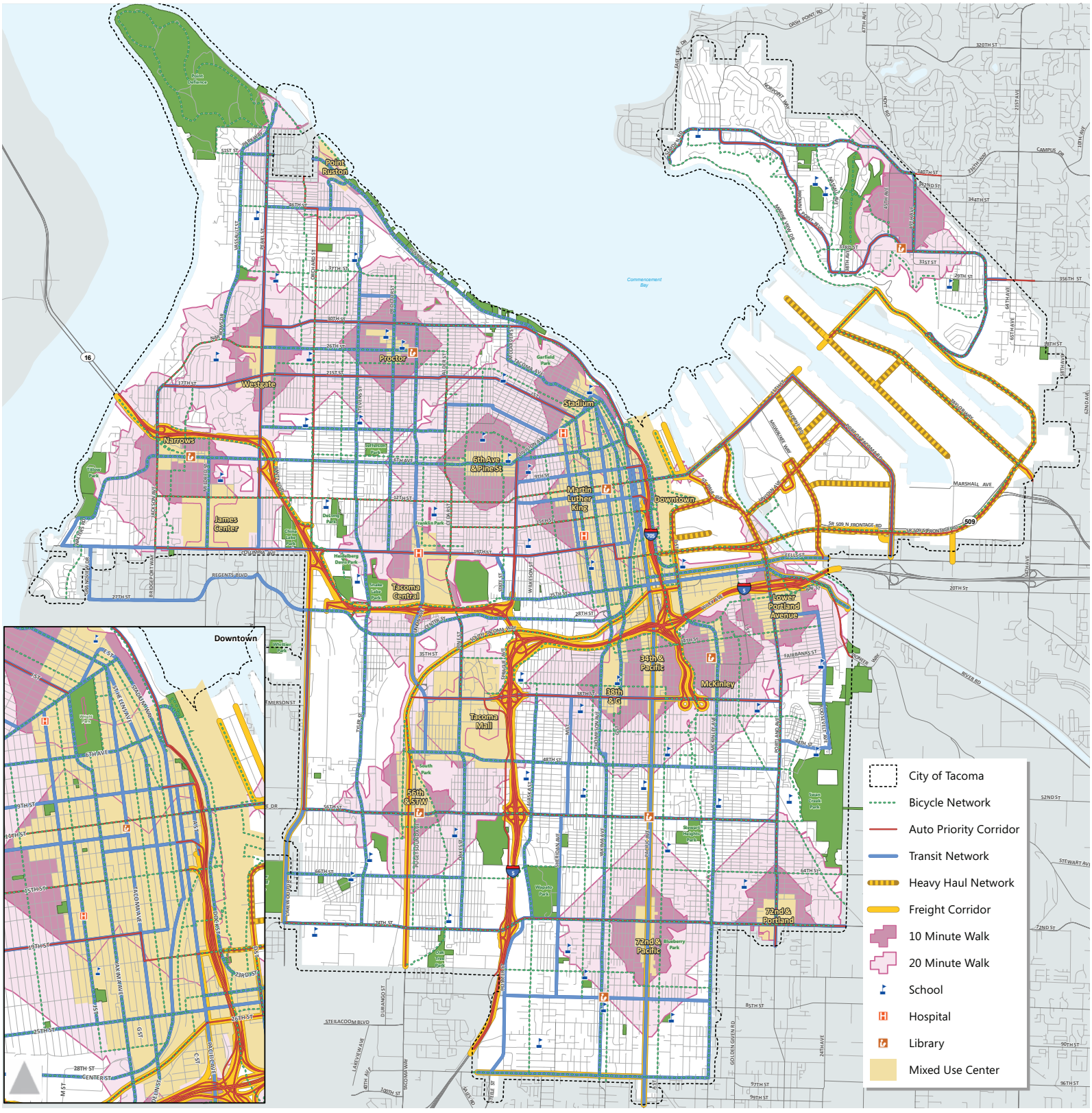
While TDM strategies are not a physical aspect of the transportation network to be built out over time, they still contribute to significant boosts in efficiency. As such, TDM is extremely valuable to monitor over time as a measure of overall transportation system performance. Participation in TMAs is a direct and easy way to track the exposure of residents and workers to their transportation options.

PARKING MANAGEMENT TOOLBOX

A parking demand management strategy can include some but is not limited to the following:

- **Once on-street parking supply utilization exceeds 85 percent on roadway segments during business hours, consider the appropriate tools necessary to ensure the priority users for the area remain the priority. If parking spillover is determined to be an issue on residential streets, deploy the City's residential parking zones (RPZs) program to prioritize curb space for neighborhood residents and their visitors while maximizing the use of the right-of-way with deployment of time stay controls.**
- **As centers develop, review Tacoma's parking codes to ensure they align with the desired urban setting. This may include adopting parking maximums rather than minimums for new developments and major remodels.**
- **Encourage more shared parking by developing public parking facilities that promote a "park once" concept. Additionally, future developments should embrace, where partnerships make sense, multi-use shared parking facilities where the tenant mix allows for the maximum use of the parking space.**
- **Eliminate subsidies for drive-alone employees.**
- **Continue to encourage Tacoma area employers to offer incentives for commute options including use of carpools/vanpools, fully paid transit passes, and parking cash out programs that encourage multi occupant commutesemployees' transportation costs through monetary benefits rather than free parking.**

PRIORITY NETWORKS (ALL MODES)



Roadway Typologies

The previous section described the modal priority networks in Tacoma for walking, biking, taking transit, delivering freight, and traveling by car. Where the wheels really hit the road (so to speak) is in combining these layers together in the context of a citywide transportation network.

As the previous map shows, Tacoma's Layered Network assigns primary priority to more than one mode on some streets. Installing facilities for multiple modes may be simple on corridors with sufficient right of way width and available capacity, but many streets in Tacoma will require a delicate balance in order to support the prioritized modes.

The Green Transportation Hierarchy provides overall guidance on modal priorities city-wide. The City plans with this in mind and this hierarchy helps plan and prioritize transportation investments throughout the City. While the Green Transportation Hierarchy provides overall guidance on modal priorities citywide, the City must still have flexibility to plan and implement projects that are sensitive to the context of an individual corridor. The below cross-sections show example treatments that the City may consider for corridors with two primary modes.

ID	Street / Corridor	# of Modal Conflicts	Transportation Commission Recommendations				
			Transit	Pedestrian	Bicycle	Auto	Freight
1	Division / 6th Ave	3	Primary	Standard	Secondary		
2	N Narrows Dr / 26th						
	• Proctor to Pearl	3	Secondary	Standard	Primary		
	• Pearl to SR-16	3		Standard	Primary	Primary	
3	N 21st St	3	Primary	Standard		Primary	
4	S 12th St	3		Standard	Primary	Primary	
5	S 19th St	3	Primary	Standard		Primary	
6	SR-509 / Marine View Dr	3		Separated Trail		Primary	Primary
7	Center St	3	Primary	Standard	Primary		
8	S 56th	4	Primary	Standard	Secondary	Primary	
9	S 72nd	4	Primary	Standard	Secondary	Primary	
10	N Orchard St	3		Standard	Primary	Primary	
11	S Tacoma Way	3		Separated Trail		Primary	Primary
12	Yakima / Thompson	3	Primary	Standard	Primary		
13	E D St / McKinley Way	3	Primary	Standard	Primary		
14	E Portland Ave (South of I-5)	4	Primary	Standard	Primary	Primary	
15	N Pearl St						
	• S 12th St to N 46th St	3	Primary	Standard		Primary	
	• N 46th St to Pt Defiance	4	Primary	Standard	Primary	Primary	
16	Puyallup Ave						
	• Pacific Ave to E D St	3	Primary	Standard	Primary		
	• E D St to City Limits	3		Standard	Primary		Primary
17	Pacific Ave (South of I-5)	3	Primary	Standard			Primary

Basic Pedestrian accommodations to be provided on every corridor for safety, accessibility, and access (sidewalks, crossings)

HOW THIS MATRIX IS USED

Each cell of the matrix represents a location in the layered network where two primary modes intersect. Recognizing that one mode must take precedence on each street, the mode shown in the row receives the highest priority treatment while the mode listed in the column receives a treatment that is also highly supportive. For example, the intersection of the bicycle network (row) and auto/freight network (column) depicts a protected bicycle facility with a wide outer lane for freight vehicles. The cross-section also presents a potential treatment using a green painted bicycle lane separated from the vehicle lanes by a striped buffer.

In another example where the auto/freight networks (row) intersect with the bicycle network (column), autos and trucks receive higher priority treatment with parking and a center turn lane present. Bicycle facilities in the form of a protected bicycle facility or a green painted shared lane marking are provided. The treatments shown do not represent a street design standard, but instead an overall philosophy to how modal accommodation and prioritization might occur.

IMPLEMENTING THE LAYERED NETWORK WHEN PRIORITY NETWORKS OVERLAP

FUTURE VISION

Project List

The end goal of this TMP is to create a project list that guides the City's transportation investment priorities over the next 20 years and beyond. The following table provides a high-level snapshot of the types of investment priorities that are envisioned. A detailed listing of projects and priorities is shown in **Appendix B**. It is important to note that this TMP is setting a long term vision for Tacoma that will likely take more than 20 years to realize.

The following chapter describes how this vision should be implemented over the next 20 years, including funding and prioritization approaches to ensure that transportation investments match the City's overall goals for the transportation system.

PROJECT LIST SUMMARY

TYPE	EXAMPLE PROJECTS
Modal Conflict Studies	Planning studies along: • Pacific Avenue • Portland Avenue • Puyallup Avenue • S Pine Street • S 38th Street • S 56th Street • S 72nd/74th Street • SR 509
Pedestrian/Bicycle/ Trail Projects	• Shared use bicycle and pedestrian trails • Grade separation and safety improvements for pedestrian and bicycle crossings, especially over rail tracks. See Sound Transit Tacoma Link Expansion for more information. • Pedestrian data collection • Sidewalk completion in 20-minute neighborhoods • Pedestrian access to transit projects • Bicycle lanes and protected facilities • Accessible pedestrian signals (APS) and bicycle signal enhancements
Transit Projects	• Partnership with Sound Transit on light rail extensions between downtown and the Tacoma Mall and Tacoma Community College and High Capacity Transit to Parkland • Speed and reliability improvements • Study and improvement to High Capacity Transit corridors

Auto Projects	• Improvement of existing corridors to become "complete streets" • Intersection modifications, including new signals and roundabouts • Added lanes to address capacity pinch points • New roadway segments to improve connectivity • Railroad grade separations • Intelligent Transportation Systems to move people and goods more efficiently without adding lanes • Major roadway rehabilitation
Tacoma Rail Projects	• Track replacement • Railroad grade separations • Rail yard reconfiguration and improvement • Intelligent Transportation Systems (ITS) improvements related to rail operations to reduce at-grade rail crossing blockage times and/or provide rerouting information.
Comprehensive Plan Neighborhood Action Strategies	Neighborhood-level improvements including: • Improvement of streets to include curb, gutter, and sidewalk • Street lighting, furniture, and public arts • Crosswalk treatments • Bicycle lanes • Pavement rehabilitation • ADA improvements