

4.9 Transportation

4.9.1: Existing conditions

Streets and roadways - vehicles

In Washington State - a roadway classification system is a requirement for receiving state and federal highway funds (RCW 35.78.10). State law requires that cities and counties adopt a street classification system that is consistent with state and federal guidelines. Washington State Department of Transportation (WSDOT) adopted the following standards accordingly.

Class	Arterial	Collector	Local
Function	Intra-community connections with activity centers.	Inter-neighborhood connections with local arterials.	Individual house and site connections with collector system.
Access	Partially controlled	Limited to abutting lots not fronting onto local street.	Limited to abutting properties
Daily volume	25-40,000 ADT	500-20,000 ADT	>1,500 ADT
Number lanes	4-6 lanes	2-4 lanes	2 lanes
Design speed	30-55 mph	25-35 mph	25 mph
Minimum right-of-way	52-74 feet	44-48 feet	40 feet
Minimum pavement width	48-70 feet	40-44 feet	36 feet
Truck use	Yes	Yes	Limited
Type curb	Type A	Type A	Rolled curb
Minimum sight distance	310 feet	250 feet	160 feet
Minimum radius	560 feet	140 feet	150 feet
Maximum grade	12%	11%	15%
Maximum super elevation	0.06 feet/foot	0.06 feet/foot	0.02 feet/foot
Sidewalks	required	required	One side

The geometric design of arterial roads is case specific and therefore, right-of-way and widths

may vary. * Design speed is used to determine geometric elements, and does not imply posted or legally permissible speeds.

Source: WA Department of Transportation (WSDOT)

Tacoma roadways - are functionally classified within a hierarchy that reflects access priorities, traffic volumes, roadway widths and improvements, traffic controls, and other operating characteristics. Roadway designations are an integral method of managing street use and associated land use developments.

Tacoma classifies city roadways into 4 functional categories based on the purpose each roadway provides to city transportation:

Class	Definition
Principal arterial	Intercommunity and intra-metro area streets that are primarily used for traffic movement at moderate to high speeds of 35-55 miles per hour (mph), of high traffic generators, and no on-street parking. Principal arterials carry the highest levels of traffic in the system at the greatest speed for the longest uninterrupted distance, often with some degree of access control that is used for through trips and connections within the system.
Minor arterial	Intercommunity and intra-metro area streets that provide primarily for traffic movement and secondarily for land access with moderate speeds of 30-40 mph and moderate to high traffic volumes of 1,500 to 16,000 vehicles per day with some restrictions on traffic movements, controlled driveway spacing, and no on-street parking. Minor arterials provide access to high-intensity land uses such as major employers or large commercial centers and connections within the system.
Collector	Streets with primary function to collect and distribute traffic between the local street system and the arterial street system with low speeds of 25-30 mph, low to moderate traffic volumes of 500 to 5,000 vehicles per day, limited regulation of access control, and limited on-street parking. Collectors serve neighborhood centers.
Local	Streets that primarily serve direct

access	land access with the secondary function of traffic movement at low speeds of 25 mph, low traffic volumes of less than 1,500 vehicles per day, few access controls, and permitted on-street parking.
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Tacoma is served by two interstate freeways, i.e., I-5 and I-705, and several state highways including SR-16, SR-7, SR-167, SR-163, and SR-509.

Key north-south arterials include South Tacoma Way, Pacific Avenue, Portland Avenue, McKinley Avenue, Jackson Avenue, Pearl Street, Orchard Street, Stevens Street, Proctor Street, Union Avenue, Sprague Avenue, Port of Tacoma Road, and Schuster Parkway.

Key east-west arterials include 6th Avenue and North 30th, North 26th, North 21st, South 12th, South 19th, South 38th, South 56th and South 74th/East 72nd Streets.

A 2001 inventory indicates that Tacoma has approximately 282 lane-miles of principal arterials, 209 of minor arterials, 164 of collector arterials, and 582 of residential streets, with a total of approximately 1,237 lane-miles.

Federal requirement - is to determine that all public roads in the United States be uniformly classified by function and to identify the percentage of roads to be classified in each level.

Class	Federal	Tacoma	
		Miles	Percent
Principal arterials	5-10%	282	23%
Minor arterials	10-15%	209	17%
Collectors	5-10%	164	13%
Local access	65-85%	582	47%
Total	100%	1,237	100%

Source: Tacoma Comprehensive Plan, Transportation Element

Tacoma has a greater percentage of principal and minor arterials than the federal average and a lesser percentage of local access roads because it is the central city of the surrounding urbanized area.

The MLK subarea contains key east-west arterials including 6th Avenue, South 12th and South 19th Streets, and some key collectors including MLK Way, Yakima Avenue, and South 11th Street.

Traffic volumes

Tacoma Public Works Department conducts citywide average daily traffic (ADT) counts for

major and minor arterial roadways. Traffic volumes are highest in and around the business activities that generate through travel and local resident access volumes, and enter and exit I-705, I-5, and SR-509 at peak hours. For example:

I-705 -volumes were 68,743 ADT north of I-5, then 65,584 at the intersection with SR-509, then 52,697 before the downtown Tacoma exit, then 39,000 north of the downtown exit continuing on to Schuster Parkway.

By comparison, the following are ADT counts for principal streets in the downtown and MLK subarea along with capacity estimates.

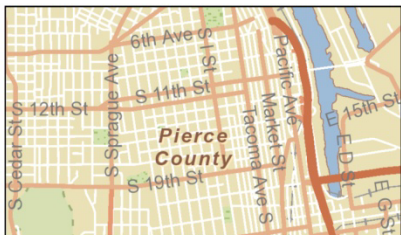
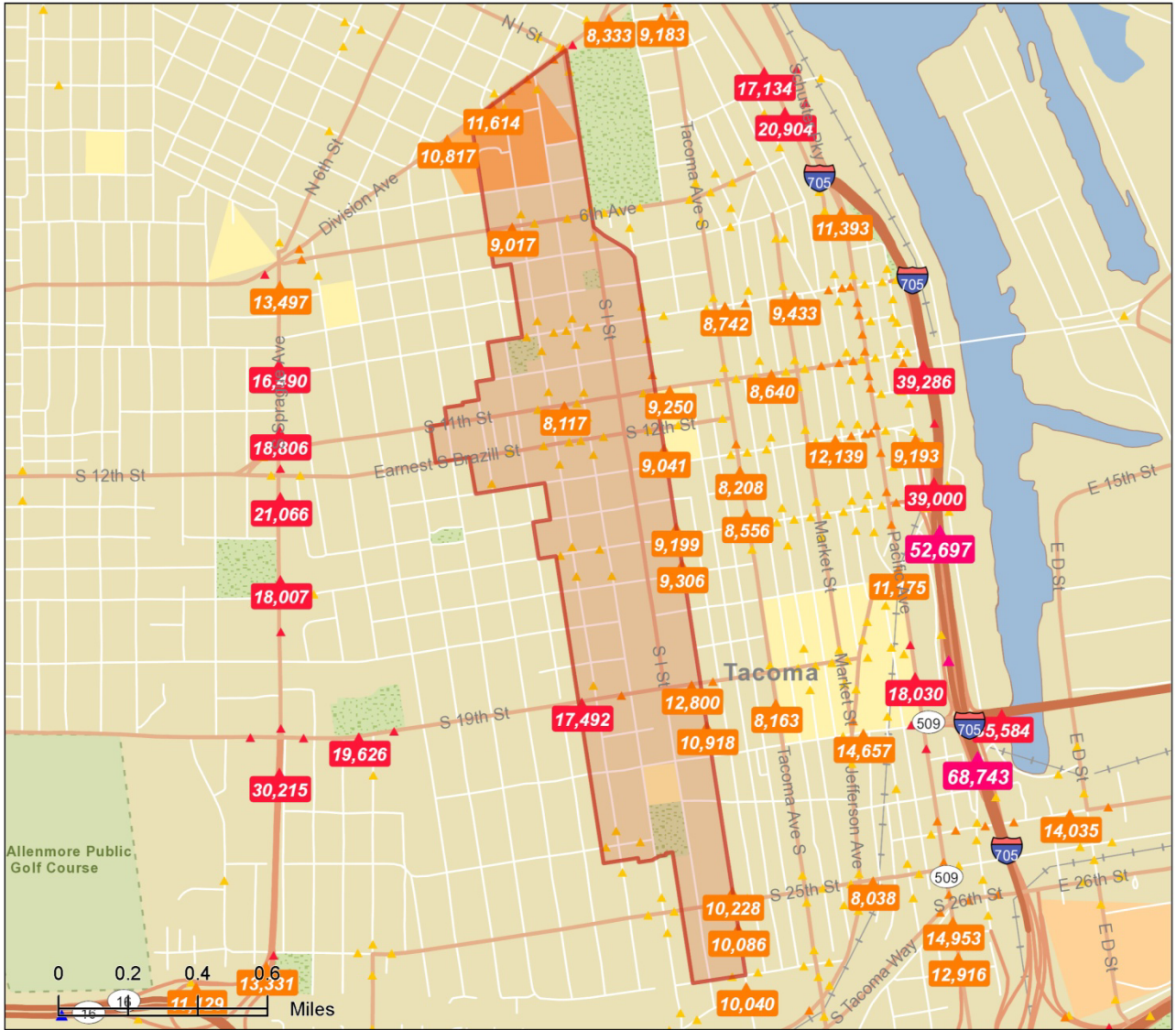
Road	ADT	Capacity	%
Pacific Ave - north of 21st	18,030	@24,000	75%
Pacific Ave - south of 17th	11,175	@24,000	47%
Pacific Ave - south of 7th	11,393	@24,000	47%
Tacoma Ave - north of 21st	8,163	@18,000	45%
Tacoma Ave - south of 14th	8,556	@18,000	48%
Tacoma Ave - @ Division	9,183	@18,000	51%
Yakima Ave - north of 25th	10,228	@18,000	57%
Yakima Ave - south of 19th	10,918	@18,000	61%
Yakima Ave - south of 12th	9,041	@18,000	50%
6th Ave - at MLK	9,017	@18,000	50%
11th Street - east of MLK	8,117	@18,000	45%
19th Street - west of MLK	17,942	@18,000	99%
19th Street - east of MLK	12,800	@18,000	71%

Capacity - assumes maximum effective through control of curb cuts, on-street parking, and signal phasing.

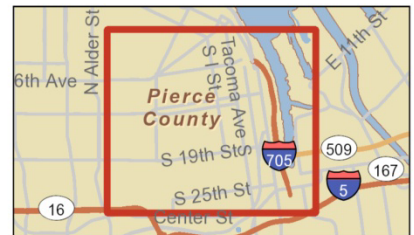
Source: Tacoma Public Works Department

A roadway's capacity is affected by the number of lanes and whether:

- separate lane turning pockets are provided at key intersections,
- key intersections are provided roundabouts or signals,
- signals are phased to allow continuous travel,
- median lanes are provided to allow cross traffic turns into businesses or
- medians are channelized to prevent cross traffic or roadway turns into businesses,



Average Daily Traffic Volume
 ▲ Up to 6,000 vehicles per day
 ▲ 6,001 - 15,000
 ▲ 15,001 - 30,000
 ▲ 30,001 - 50,000
 ▲ 50,001 - 100,000
 ▲ More than 100,000 per day



Source: ©2011 MPSI (Market Planning Solutions Inc.) Systems Inc. d.b.a. DataMetrix®

- curb cuts or restricted or consolidated to frontage businesses,
- parking is provided or restricted on-street, and
- the extent of truck route traffic and in-roadway loading or unloading.

Under ideal operating conditions and management controls, a 2-lane road can accommodate upwards of 12,000 vehicles, a 3-lane (2 lanes with turning pockets) upwards of 18,000 vehicles, and a 4-lane upwards of 24,000 vehicles.

Under less than ideal operating conditions and management controls, all roads can deteriorate to the point where they can handle less than 50% or even 25% of design capacity.

Very few downtown or MLK subarea streets, with the exception of South 19th Street east of MLK Jr Way, would appear to be generating traffic close to presumed ADT capacity based on the number of moving and turning lanes.

Level-of-service (LOS) - intersections

The quality and performance of transportation facilities is evaluated with a level-of-service (LOS) definition that measures the degree of congestion and conflict created under different traffic volume-to-capacity ratios at key intersections.

LOS	volume/capacity	condition
LOS A	0.30 v/c	Free-flow condition with travel speeds at or near the speed limit and little to no delay of 0-10 seconds at signalized and un-signalized intersections.
LOS B	0.50 v/c	Stable flow where drivers still have reasonable freedom to select travel speeds and minor delays of 10-20 seconds at signalized and 10-15 seconds at un-signalized intersections.
LOS C	0.75 v/c	Stable flows but under controlled travel speeds and maneuvers with delays from 20-35 seconds at signalized and 15-25 seconds at un-signalized intersections.
LOS D	0.90 v/c	Approaching unstable flows with restricted speed and maneuvering and delays from 35-55 seconds at signalized and 25-35 seconds at un-signalized intersections.

LOS E	1.00 v/c	Operating conditions at or near roadway capacity with speeds 50% of normal and delays of 55- 80 seconds at signalized and 35-50 seconds at un-signalized intersections.
LOS F	1.00 v/c	Forced flow operation at very low speeds with stop-and-go traffic and long average delays of more than 80 seconds per vehicle at signalized and more than 50 seconds at un-signalized intersections.

Source: Tacoma Comprehensive Plan

Level-of-service (LOS) - roadway corridors

The quality and performance of transportation facilities is also evaluated with a level-of-service (LOS) definition that measures the carrying capacity of the roadway compared with average daily traffic volumes.

The analysis projects the amount of time that all vehicles are delayed while traveling in platoons due to the inability to pass. The methodology accounts for urban versus rural setting, number and width of lanes, pavement types, traffic controls, percentage of truck traffic, peak hour factors, directional distribution, shoulder and lane widths, design speeds, and other operating characteristics.

LOS	volume/capacity	condition
LOS A	0.60 v/c	Free-flow condition with average speed 60 mph, no platoons or 3 or more vehicles, delays occur no more than 30% of the time due to slow moving vehicles.
LOS B	0.61 v/c	Stable flow with average speed 55 mph, passing demands become significant, delays occur up to 45% of the time.
LOS C	0.71 v/c	Stable flows with average speed 52 mph, noticeable increase in platoon formation, platoon size, and frequency of passing impediments.
LOS D	0.81 v/c	Approaching unstable flows with speed 50 mph, passing demand high and extremely difficult with mean platoon sizes of 5-10 vehicles common.
LOS E	0.91 v/c	Operating conditions at or near roadway capacity with

		speed below 50 mph, sometimes below 25 mph on sustained upgrades, passing virtually impossible, and platoons become intense when encountering with slower vehicles or other interruptions.
LOS F	1.00 v/c	Forced flow operation at very low speeds with stop-and-go traffic.

Source: Tacoma Comprehensive Plan, Transportation Element

Concurrency assessments

Tacoma conducts concurrency tests of the city's transportation network on a periodic basis, using the EMME/2 computerized transportation model. The latest assessment was conducted in 2002 to determine if the existing road system would be sufficient to meet the city's transportation needs for the immediate (6 years) and long-term (20 years) future.

2002 Concurrency evaluation

	LOS standard	% ALM	Concurrent
Arterial corridors	85% ALM at 0.99	96.5	Yes

2025 Concurrency evaluation

	LOS standard	% ALM	Concurrent
Arterial corridors	85% ALM at 0.99	88.3	Yes

**Source: Tacoma Comprehensive Plan, Transportation Element
ALM - Arterial Lane Miles**

Considering this and other analysis, Tacoma does not anticipate a problem maintaining current LOS for the transportation system. However, should future analysis show a degradation of the transportation system, the city's land use assumptions would have to be reviewed to determine if they should be modified to bring the transportation system back into concurrency status.

Travel demand forecasting

Concurrency assessments are part of the on-going travel demand forecasting process that incorporates the following elements:

- **Trip Generation** - which estimates the trips produced by and attracted to each transportation analysis zone (TAZ);
- **Trip Distribution** - which link the trip ends from trip generation to form matrices of zone-to-zone travel demand;

- **Traffic Assignment** - which determines zone-to-zone travel routes over the transportation network and accumulates the zone-to-zone travel demand (by mode) using each network segment; and
- **Mode Split** - which estimates how much of the total zone-to-zone travel demand uses each mode of travel available.

The forecasting is conducted using the EMME/2 model, in cooperation and coordination with the models used by Pierce County and the Puget Sound Regional Council (PSRC). In addition to travel demand forecasting, EMME/2 is also used in traffic impact analyses for specific projects or development proposals, in order to determine the need for mitigation and maintain the concurrency requirements.

Designated centers and connecting corridors

The primary mission of the transportation system is to accommodate the mobility and accessibility needs of designated mixed use and manufacturing-industrial centers and connecting corridors. Designated mixed use centers are intended to be walkable places with a mix of housing, jobs, shopping and other activities close together, and served by excellent transit service. Manufacturing-industrial centers are areas primarily for intensive manufacturing, industrial, and related uses.

Connecting corridors are major transportation routes consisting of freeways, highways, principal arterial streets, and transit routes that provide access into and out of the city, act as travelways connecting centers, both local and regional, and/or support high levels of transit service.

The MLK subarea is a designated mixed-use center, with the Hilltop business district at its core. 6th Avenue, South 12th and South 19th Streets, and some key collectors including MLK Jr Way, Yakima Avenue, and South 11th Street are the designated collector arterials.

Public transit

Transit refers to all existing and proposed transit vehicles and types provided by Pierce Transit and Sound Transit. Existing transit service is provided by bus, the Sounder commuter rail, and the LINK light rail. Future transit service may also include streetcars.

Sound Transit

Since voters approved a regional mass transit system in 1996, Sound Transit has been planning, building and operating express buses, light rail and commuter train services serving the urban areas of King, Pierce and Snohomish counties. Sound Transit is governed by an 18-member Board of Directors who are mostly local mayors and city and county council members.

The Sound Transit district includes the most populated urban areas of King, Pierce and Snohomish counties. The district boundary generally follows the urban growth boundaries created by each county in accordance with the state Growth Management Act (GMA).

The law that created Sound Transit also authorized the agency to levy and collect voter-approved local option taxes to pay for building and operating a regional mass transit system. These taxes could include an employer tax, a special motor vehicle excise tax (the tax on license plate tabs) and a sales and use tax. Taxes are only levied within the Sound Transit district.

The RTA tax is a 0.3% motor vehicle excise tax (MVET) and a 0.9% sales tax approved by voters of central Puget Sound. Taxpayers who live within the RTA district boundaries pay the RTA tax.

A 15-member volunteer Citizen Oversight Panel oversees and monitors the implementation of Sound Transit's voter-approved regional transit plan and provides ongoing review and oversight.

An independent 15-member Diversity Oversight Committee was established by the Sound Transit Board in 2006 to ensure that the agency complies with its guiding principles for employment and contracting.

Oversight also includes the US Department of Transportation, which monitors the progress of Sound Transit projects that receive federal grant funding.

In 2008, voters approved a new expansion plan (ST II) that adds ST Express bus and Sounder service and will build 36 new miles of Link light rail to form a 55-mile regional system. This package included resources to fund an expansion of Link light rail service in Tacoma.

Each year, Sound Transit planners propose a new plan to guide the delivery of ST Express bus, Sounder commuter rail and Link light rail services. This Service Implementation Plan (SIP) describes service and revisions proposed for the

upcoming budget year, together with preliminary proposals and financial estimates for the subsequent 5-year period.

Sound Transit updated its Long Range Plan in 2005, using public input to fine tune the overall roadmap to mass transit's future in the region. The Long Range Plan informed the identification of the Sound Transit 2 Plan and provides the foundation for expanding the regional transit system.

Sounder trains - travel between Lakewood and Seattle (making stops in South Tacoma, Tacoma, Puyallup, Sumner, Auburn, Kent and Tukwila) and between Everett and Seattle (making stops in Mukilteo and Edmonds). The Sounder's main Tacoma station is located on the rail tracks adjacent to Freighthouse Square in the Dome District.

Sounder regularly runs weekday mornings and afternoons only. Sounder also serves select major weekend events such as Mariners and Seahawks games. Adult fares are between \$2.75 and \$5.25 depending on how far the travel.

ST Express buses - travel between major cities in King, Snohomish and Pierce counties. Sound Transit buses make limited stops along the way to get to and from work quickly. Some routes run only during the busiest commute times, while others run 20 hours a day. Adult fares are between \$2.50 and \$3.50 depending on how far the travel.

Route 586 - runs 9 schedules from a station at the Tacoma Dome to arrive at multiple stops at the University of Washington in Seattle and culminate at a station at NE Pacific Street & NE Pacific Place.

Route 590 - runs 25 schedules from a station in downtown Tacoma at 10th and Commerce then to the Tacoma Dome station then on to multiple stops in downtown Seattle to culminate at a station at Eastlake & Stewart.

Route 594 - runs 29 schedules from Lakewood through multiple stops in downtown Tacoma including the SR-512 park-and-ride, 10th & Commerce, and Tacoma Dome, then on to arrive at multiple stops in downtown Seattle to culminate at the Eastlake & Stewart station.

Transit routes in and around the MLK district



Link light rail - currently consists of 19 miles of commuter rail service on two routes:

Central Link light rail - travels between Westlake Station in downtown Seattle and Sea-Tac Airport, making 11 stops along the way. Link trains run every 7.5, 10 or 15 minutes depending on the time of day. Service is available from 5 a.m. to 1 a.m. Monday through Saturday and from 6 a.m. to midnight on Sunday and holidays. Adult fares range from \$2.00 to \$2.75 depending on how far the travel.

Tacoma Link light rail - travels 1.6 miles through downtown Tacoma, making five stops along the way. Link trains run every 12 to 24 minutes depending on the time of day. Service is available from 5:30 a.m. to 10 p.m. Monday through Friday, from 8 a.m. to 10 p.m. Saturday, and from 10 a.m. to 6 p.m. on Sunday and holidays. Riding Tacoma Link is free.

Streetcars

Streetcars operate on rails on city roadways and often share a travel lane with automobiles. Streetcars were a basic mode of travel in Tacoma from 1888 to 1938 and helped spur the development of many of Tacoma's commercial and residential districts. The streetcar network linked neighborhoods and business districts to downtown and other noteworthy destinations including Pt. Defiance Park.

The network also included a cable car system that looped up and down the steep slopes of downtown to the MLK district and back on South 11th and South 13th Streets so people could avoid the strenuous hill climb on foot.

By 1912 Tacoma had developed a comprehensive streetcar line with 125 miles of track in the city and additional electric rail connecting Tacoma to Seattle. But as automobiles began to dominate the streets, streetcars became less financially feasible and the streetcar system's final line closed in 1938.

Tacoma hopes to regain some of the efficiency of its historic rail system with a new streetcar line. Tacoma's 1.6 mile LINK light rail opened in 2003 and connects the Tacoma Dome area to the downtown theater district. The City of Tacoma and Sound Transit are currently planning for expansion of the LINK. Tacoma envisions an efficient and sustainable streetcar network that will serve to enhance both the non-motorized and motorized transportation systems and support economic growth along the transit lines.

As the streetcar line is developed and designed, access for pedestrians and bicycles will be evaluated and planned simultaneously so users have many mode options for arriving at the station and their destination. Streetcars will be pivotal in creating a more fully integrated multimodal transportation system for Tacoma's future.

Pierce Transit

The Pierce Transit Public Transportation Benefit Area (PTBA) was founded in 1979 and is a nationally recognized leader in the public transportation industry. Pierce Transit covers 292 square miles of Pierce County with roughly 70% of the county population. Pierce Transit is governed by a 10-member Board of Commissioners. The Board is made up of elected officials representing 13 jurisdictions, Pierce County and 1 non-voting Union Representative.

Serving Washington's second largest county, Pierce Transit provides 3 types of service, Fixed Route, SHUTTLE paratransit and Vanpools that help get passengers to jobs, schools and appointments.

Local and Express Bus Service - includes 37 Pierce Transit Routes, 11 Sound Transit Routes
Shuttle - is a specialized transportation for customers who are unable to use the fixed route bus system due to their disabilities.

Vanpool & Rideshare - ridesharing services include vanpools, Park & Ride lots, and efficient commute programs for more than 100 employers.

Pierce Transit's 2011 ridership statistics include:

Bus (local routes)

- 12,149,044 boardings
- 39,679 rides per weekday
- 6,413,864 service miles

Vanpool & rideshare

- 859,624 vanpool trips
- 2,548 Vanpool customers
- Partnerships with 117 employers
- Partner regionally with over 786 ORCA Passport agreements
- 16,000 customers in regional ridematch database, RideshareOnline.com

Shuttle

- 437,021 trips
- 6,948 eligible users

Sound Transit Routes (operated by Pierce Transit)

- 3.5 million boardings
- 11,868 rides per weekday
- 6.7 million service miles per year

Fleet Data

- 272 Buses - (includes 101 Sound Transit Buses)100 Shuttle vehicles
- 326 Vanpool vehicles

Pierce Transit serves as a vital link in our regional transportation system by connecting with: Intercity Transit in Pierce County, King County Metro, Pierce County Ferries at Steilacoom, Washington State Ferries at Pt. Defiance, Amtrak in Downtown Tacoma, Greyhound, Sound Transit express buses, Tacoma Link light rail and Sounder trains from the Tacoma Dome Station.

Six Pierce Transit routes travel from downtown Tacoma through MLK to outlying destinations including Tacoma Community College (TCC), Walmart, Lakewood, Parkland, Tacoma Mall, and Purdy on the Gig Harbor Peninsula.

Route 1 - runs from the Tacoma Community College (TCC) station through the MLK subarea on 6th Avenue, then through the downtown and out to SR-7 and the Walmart at 200th and Mountain Highway.

Route 2 - runs from downtown Tacoma through MLK on South 19th Avenue to Tacoma Community College (TCC) and then Lakewood Transit Center.

Route 28 - runs from downtown Tacoma through the MLK subarea on South 11th and 12th Streets to Tacoma Community College (TCC) Transit Center.

Route 45 - runs from downtown Tacoma through the MLK subarea on Yakima Avenue to the Parkland Transit Center.

Route 57 - runs from downtown Tacoma through the MLK subarea on South 9th Street, MLK Way, South J Street, and South 25th Street to the Tacoma Mall Transit Center.

Route 102 - runs from the Purdy park-and-ridge on the Gig Harbor Peninsula through the MLK subarea on MLK Way to downtown Tacoma.

Proposition 1- Pierce Transit depends on sales tax revenues for 71% of its operations. Sales tax proceeds have declined drastically during the recession. As a result, over the past few years Pierce Transit has made the following cuts to its operating services:

- 31% reduction in management
- 43% reduction in bus and paratransit services
- 2 fare increases in 2 years
- 3 rounds of layoffs
- Eliminated community event service to the Puyallup Fair, Fourth of July Freedom Fair, and others

- Freeze on cost of living and wages for management and non-union employees
- Non-union employees pay more medical and dental costs
- Capital facility projects eliminated or delayed

Without additional funding Pierce Transit will have to further cut service. As a result, Pierce Transit placed Proposition 1 on the 2012 November ballot to authorize a 3/10th of 1% increase (equal to \$0.03 on a \$10 taxable purchase or an estimated average of \$3.33 a month).

In a very close vote, Proposition 1 was defeated on the November 2012 ballot. Therefore, unless alternative funding sources can be identified, Pierce Transit will likely be looking at:

- 53% Service Reduction by 2014
- Elimination of Saturday and Sunday service for buses and paratransit service for people with disabilities
- No service on holidays
- No service past 7pm
- Longer wait times - buses arrive less often
- No restoration of special express service to events like the Puyallup Fair and the Fourth of July Freedom Fair

If Pierce Transit winds up squeezing its runs that radically, its usefulness as a regional transit agency will be radically diminished. Many people depend on need bus and shuttles to get to work, school, stores and medical appointments. The need doesn't always conform to weekday hours.

Low-income workers, in particular, rely on buses in the evening and on weekends; many juggle multiple part-time jobs and have no other way to get around. For the elderly and many with physical impairments, shuttle service is an essential lifeline to the outside world.

If the economy bounces back strongly, providing more revenue for Pierce Transit's existing 0.6% sales tax, the agency could be able to avert some of these projected cuts. The estimated cutbacks were based on a very slow economic recovery; so far, the recovery has been outpacing the assumptions.

Non-motorized transportation

The City of Tacoma is committed to creating a full service multi-modal transportation system that supports all modes and supports all users. Expansion of non-motorized transportation

facilities, such as for pedestrians and bicycles, is key to this effort.

Non-motorized transportation systems include parallel and on and off-road bicycling routes, sidewalks, pedestrian trails, and other walkway improvements. Some portions of non-motorized routes can be used for commuting purposes to reduce potential vehicular traffic volumes.

Federal and state legislation now requires that bicycling and pedestrian planning to be included in a complete transportation-planning package.

	Bicycles	Pedestrians
Benefits	Efficient, uses no fossil fuels, uses little physical space, good exercise, equipment relatively inexpensive.	Efficient, uses no fossil fuels, requires little physical space, good exercise, inexpensive.
Trip barriers	Distance, safety, inadequate facilities, weather, time, and aesthetics.	Distance (generally not more than 0.5 miles), safety, lack of sidewalks, lack of connectivity of sidewalks, weather, time, and aesthetics.
Destination barriers	Security, facilities, lack of employer support, status.	Coordinate with public transportation, security, and status.

Properly located, designed and maintained - non-motorized trails can accommodate a significant portion of local resident travel between residential areas and shopping centers, schools, and places of employment. Separated or off-road commuting and recreational hike and bike trails can also satisfy local access needs between residential areas and parks, schools, commercial and employment areas, depending on the trail locations.

Bicycle users

The following are general types of bicycle facility users:

Children - riding on their own or with parents, may not travel as fast as the adult counterparts but still require access to key destinations in the community including schools, convenience stores, and recreational facilities.

Residential streets with low motor vehicle speeds, linked with shared use paths, and busier streets with well-defined pavement markings between bicycles and vehicles can accommodate children without encouraging them to ride in the travel lane of major arterials.

Basic - or less confident adult riders may use bicycles for transportation purposes, e.g., to get to the store or to visit friends, but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample roadway with to allow easy overtaking by faster motor vehicles.

Basic riders are comfortable riding on neighborhood streets and shared use paths and prefer designated facilities such as bike lanes or wide shoulder lanes on busier streets.

Advanced - or experienced riders are generally using bicycles as they would motor vehicles riding for convenience and speed with direct access to destinations with a minimum of detour or delay.

Advanced riders are typically comfortable riding with motor vehicle traffic; however, they need sufficient operating space on the traveled way or shoulder to eliminate the need to shift position when passed by a motor vehicle.

Bicycle systems

Depending on their location and context, the recommended facility types for Tacoma’s bicycle network would include the following facilities:

Bicycle Boulevards - are shared roadways that use a combination of traffic calming measures and other streetscape treatments to slow vehicle traffic while facilitating safe and convenient bicycle travel. Bicycle boulevards provide safe, efficient, and pleasant travel for bicyclists by using engineering techniques that reduce vehicular traffic speeds and facilitate bicycle travel through intersections (e.g. stop signs for cross-traffic or bicycle-actuated signals at arterial streets).

Appropriate treatments depend on several factors including traffic volumes, vehicle and bicycle circulation patterns, street connectivity, street width, physical constraints, and other parameters. Treatments include pavement markings, signage, traffic calming (e.g. speed bumps, chicanes, curb extensions, etc.), and traffic diversion.

Currently, there are no bicycle boulevards improved for this purpose in Tacoma. Within

the MLK subarea, J Street is designated to become a bicycle boulevard. The recently adopted Mobility Master Plan (MoMaP), which is a component of the Comprehensive Plan's Transportation Element, lays out the policies, strategies and implementation measures to achieve this system.

Bike Lanes - are designated exclusively for bicycle travel and are separated from vehicle travel lanes with striping and also include pavement stencils and signage. Bike lanes are appropriate on streets where traffic volumes and speeds indicate a need for modal separation, rather than on roadways where bicyclists can comfortably share the lane with drivers, due to lower vehicle speeds and volumes that allow drivers to safely pass cyclists.

Currently, there are numerous bike lanes designated and improved for this purpose at scattered locations throughout Tacoma, and in the MLK subarea on South 15th Street from MLK Jr Way west into the neighborhoods.

Shared Lane Markings - (also known as "sharrows") are high-visibility pavement markings that help position bicyclists within a shared vehicle/bicycle travel lane. These markings are typically used on streets where dedicated bike lanes are desirable but are not possible due to physical or other constraints.

Currently, there are only a few shared lane markings or sharrows installed in Tacoma, but none are located within the MLK subarea.

Cycle Tracks - are a hybrid bicycle facility combining the experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks provide exclusive space for bicycles that is physically separated from pedestrians and cars. Cycle tracks are appropriate on streets with higher traffic volumes where greater separation is needed, and where cross-traffic is limited.

Currently, there are no improved cycle tracks in Tacoma.

Shared Use Paths - the Revised Code of Washington defines shared-use paths as "a facility physically separated from motorized vehicular traffic within the highway right of way or on an exclusive right of way with minimal crossflow by motor vehicles.

Shared use paths are designed and built primarily for use by bicycles, but are also used by pedestrians, joggers, skaters, wheelchair

users (both non-motorized and motorized), equestrians, and other non-motorized users" (RCW 1020.03). Shared-use paths provide additional width over a standard sidewalk and, when constructed next to the road, shared-use paths must have some type of vertical (e.g., curb or barrier) or horizontal (e.g., landscaped strip) buffer separating the path area from adjacent vehicle travel lanes.

Currently, there are a number of shared use paths in Tacoma including the Ruston Way Trail, Water Ditch Trail, Scott Pierson Trail, and the Esplanade and South 19th Street Trail along Thea Foss Waterway and into the University of Washington Tacoma campus.

Note - bicycles are permitted on all public roads in the State of Washington - except where specifically prohibited, such as on interstates in urban areas like Tacoma.

As such, Tacoma's entire street network is effectively a bicycle network, regardless of whether or not a bikeway stripe, stencil, or sign is present on a given street. The designation of certain roads as bike routes is not intended to imply that these are the only roadways intended for bicycle use, or that bicyclists should not be riding on other streets.

Rather, the designation of a network of on-street bikeways recognizes that certain roadways are preferred bicycle routes for most users, for reasons such as directness or access to significant destinations, and allows Tacoma to then focus resources on building and maintaining a primary network.

On and off-road biking standards

Washington State Department of Transportation (WSDOT), the US Forest Service (USFS), and the American Association of State Highway & Transportation Officials (AASHTO) have developed standards for on and off-road biking routes including grade, shoulder clearing, width, path tread, and surface depending on the walking volume, skill, location, and other characteristics.

Grade	On-road			Off-road		
	1	2	3	4	5	6
Slope - sustained				5%	10%	15%
Length in feet				100'	300'	500'
Slope - maximum	11%	11%	11%	10%	30%	30%+
Cross	2%	2%	2%	5%	5%	5%

slope						
Clearing						
Shoulder width				1'	1'	1'
Height in feet	8'	8'	8'	8'	8'	8'
Tread						
Width 2-way	5-6'	4-5'	0**	2'	1.5'	1'
Turns						
Radius in feet				6'	3'	2'
Surface						
Asphalt	yes	yes	yes			
Coarse gravel				yes	yes	yes
Sand				yes	yes	yes
Compact dirt				yes	yes	yes

* 14-foot minimum width vehicular travel lane
Sources: Pedestrian Facilities Guidebook WSDOT/PSRC 1997, WSDOT Design Manual, Chapter 1020 - Bicycle Facilities May 2001, US Forest Service Handbook, Washington 1987, and American Association of State Highway & Transportation Officials (AASHTO) Guide for Development of Bicycle Facilities 1999.

Pedestrian systems

Pedestrians include individuals using assistive devices for mobility and sensory disabilities including walkers, wheelchairs, scooters, service animals, and canes. The term “pedestrian” refers to a person moving from place to place, on foot and/or with the use of an assistive mobility device (when that person has a disability and/or medical condition). “Walking” or “to walk” are the terms used to describe the movement of a pedestrian.

On and off-road walking/hiking standards

Washington State Department of Transportation (WSDOT), the US Forest Service (USFS), and the American Association of State Highway & Transportation Officials (AASHTO) have developed standards for on and off-road walking routes including grade, shoulder clearing, width, path tread, and surface depending on the walking volume, skill, location, and other characteristics.

Grade	Board/sidewalk			Barrier-free		
	1	2	3	4	5	6
Slope-sustain	5%	5%	8.3%	5%	8.3%	12.5%
Length-ft	80	80	160	80	160	160
Slope-max	8.3%	8.3%	8.3%	8.3%	14%	20%
Length-ft	30	30	30	30	50	50
Cross slope	2%	2%	2%	2%	3%	5%
Clearing						
Shoulder width	1-2'	2-0'	3-0'	4-2'	5-2'	6-1'
Road separation	10'	0-5'	0-5'			
Height-ft	8'	8'	8'	8'	8'	8'
Path read						
Width 2-way	10-15'	6'	5'	8'	8'	4'
Width 1-way				4'	4'	3'
Surface						
Concrete	yes	yes	yes	yes	yes	yes
Asphalt	yes	yes	yes	yes	yes	yes
Wood planking				yes	yes	yes
Crushed rock					yes	yes
Pea gravel						yes
Bound wood chips						yes
Coarse gravel						yes
Sand						
Compact dirt					yes	

Sources: Pedestrian Facilities Guidebook WSDOT/PSRC 1997, WSDOT Design Manual, Chapter 1020 - Bicycle Facilities May 2001, US Forest Service Handbook, Washington 1987, and American Association of State Highway & Transportation Officials (AASHTO) Guide for Development of Bicycle Facilities 1999.

Sidewalk conditions

The MLK subarea has been improved with sidewalks and curbs and gutters on most all public rights-of-way. In most areas, the sidewalks are 4 to 5 feet, which is sufficient to accommodate most pedestrian users. Within the business district core, such as along MLK Jr Way and South 11th Street, sidewalks wider to promote pedestrian and retail activity.

Tacoma locations identified as high priority for sidewalk development and pedestrian intersection treatments are areas with higher densities of pedestrian attracting land uses,

particularly schools, employment centers, parks and transit centers.

Tacoma recently completed 3.55 miles of sidewalk improvements in high priority areas in the city, though none were located in MLK. MLK sidewalks are not proposed to be improved under the city's short and medium term sidewalk improvements program.

The MLK subarea has been improved with marked crosswalks on principal arterial corridors including MLK Way and Yakima Avenue, and 6th Avenue and South 9th, 11th, 15th, 17th, 19th, 21st, and 25th Streets. Midblock crossings have also been provided on MLK Way and South J Street within the MultiCare and Franciscan Health Systems hospital campuses.

Tacoma intersection improvements are generally recommended for locations that previously experienced pedestrian crashes or that were identified by members of the public as needing improvement. Intersection improvements include high-visibility crossings, curb extensions, ADA-compliant curb ramps, and other treatments.

Tacoma recently completed intersection improvements on 5 priority intersections, though none were in the MLK subarea. The short term intersection improvement program proposes to improve South I Street and Division Avenue, South J Street and South 19th Street based on prioritization criteria.

Multipurpose off-road trail standards

Washington State Department of Transportation (WSDOT), the US Forest Service (USFS), and the American Association of State Highway & Transportation Officials (AASHTO) have also developed standards for multipurpose bike/hike/horse trails including grade, shoulder clearing, width, and surface depending on the user volume, skill, location, and other characteristics.

Grade	1	2	3	4
Slope - sustained	5%	5%	5%	5%
Length in feet	80'	80'	80'	80'
Slope -maximum	8.3%	8.3%	8.3%	11%
Length in feet	30'	30'	30'	50'
Cross slope	2%	2%	2%	2%

Clearing - each shoulder

Shoulder width	2'	2'	2'	2'
Road separation	5'	5'	5'	5'
Height in feet	10'	10'	10'	10'

Path tread - width

Width 2-way	14'	12'	10'	8'
-------------	-----	-----	-----	----

Surface

Asphalt	yes	yes	yes	
Wood planking	yes	yes	yes	yes
Crushed rock	yes	yes	yes	yes
Compact dirt			yes	yes

Sources: Pedestrian Facilities Guidebook WSDOT/PSRC 1997, WSDOT Design Manual, Chapter 1020 - Bicycle Facilities May 2001, US Forest Service Handbook, Washington 1987, and American Association of State Highway & Transportation Officials (AASHTO) Guide for Development of Bicycle Facilities 1999.

Existing multipurpose trails

Tacoma has a number of low-impact trails that provide recreational opportunities for pedestrians and in some cases serve as pedestrian as well as bicycle routes through open space corridors. These trails include:

- Garfield Gulch
- Julia's Gulch
- Puget Gulch

4.9.2: Impacts

Both alternatives will allow development and redevelopment in the MLK subarea for urban uses and activities to various intensities. An increase in urban development and thereby the overall employee and resident population will in turn increase traffic volumes, particularly if local employees and residents continue to commute to places of employment outside of the MLK area in private vehicles.

An increase in urban development and thereby the overall population will also create increased traffic congestion, particularly on the city's arterial roadway grid and at major intersections and connections on MLK Way, Yakima Avenue, 6th Avenue, South 11th and 19th Streets.

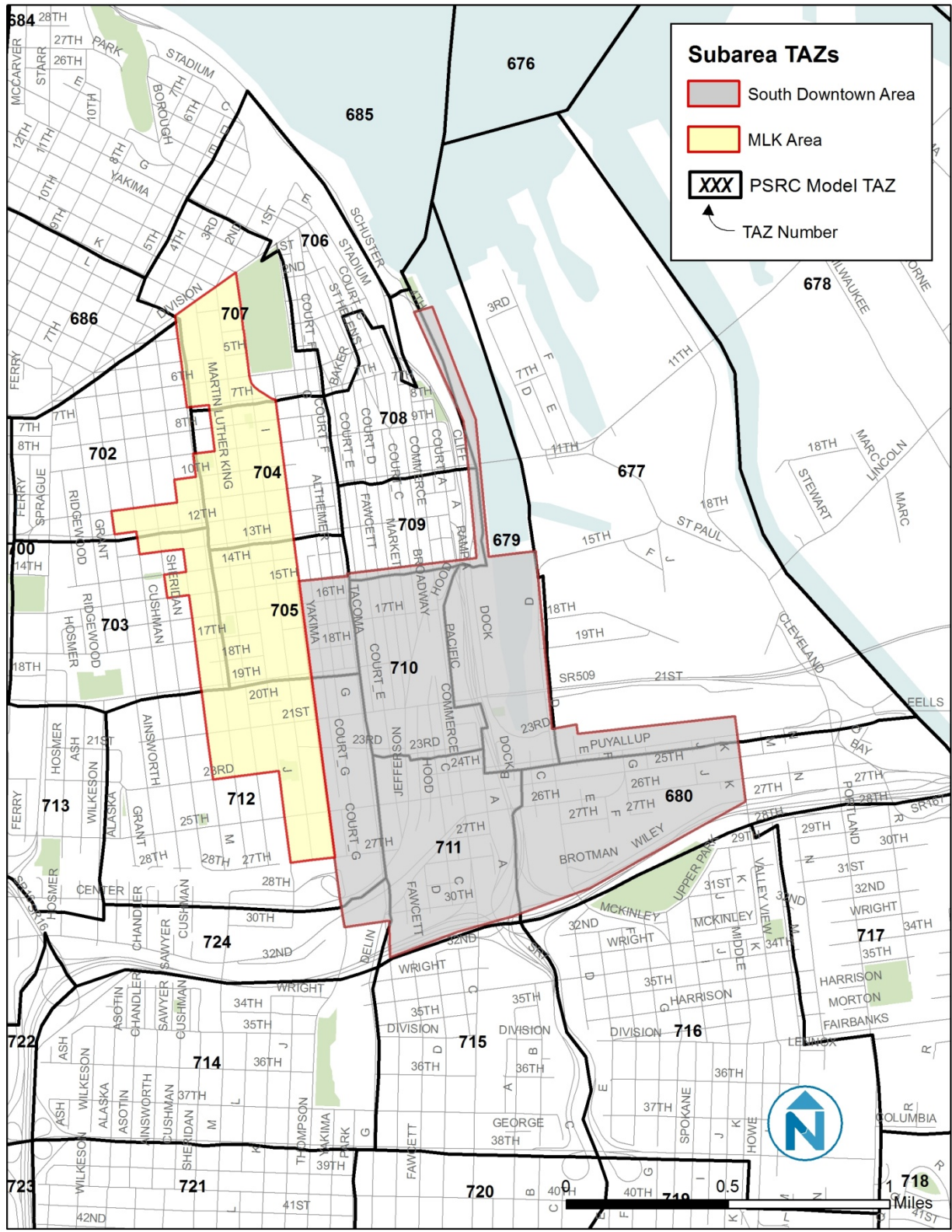
Increased urban development could also lead to a higher number of potential traffic accidents between vehicles, bicyclists, and pedestrians - if the local MLK bicycle and pedestrian networks are not improved.

Traffic congestion will increase if the road network is not balanced with other modal improvements including transit and non-motorized trail systems.

Projections

In January 2012, Tacoma requested the Puget Sound Regional Council (PSRC) assist with the

Tacoma Study Areas and TAZs



Data Sources: PSRC, Esri, Pierce County

evaluation of local and regional transportation impacts of alternatives for the South Downtown and MLK Subarea Plans by forecasting travel patterns utilizing the PSRC's travel demand model. (Grant funding that the city received from PSRC for the subarea plans was not sufficient to accomplish this type of analysis).

Regional travel demand analysis is essential to consider the impacts of redistributing growth allocated to Tacoma through Vision 2040 into the South Downtown and MLK subareas, a change that would be expected to have a substantial impact on local and regional trip making.

2030 and 2040 baselines

For the purpose of projecting South Downtown and MLK subarea traffic volumes, Pierce County Council's (PCC) 2030 population, households, and employment growth allocations for Tacoma (which are based on PSRC's Vision 2040) were extrapolated into traffic analysis zones (TAZs) used to project traffic volumes. (The MLK subarea partially extends into 6 TAZs - 702, 703, 704, 705, 707, and 712 - making exact correlations of MLK subarea traffic impacts difficult.)

The resulting 2030 TAZ projections were extrapolated in the same proportions to determine 2040 TAZ allocations since the PCC has not yet developed 2040 projections for Pierce County.

The 2030 and 2040 baseline projections for the MLK subarea TAZ's are in turn being correlated to correspond with the moderate growth and build-out capacity projections used throughout this DEIS.

This detailed transportation modeling is being done in conjunction with the South Downtown Subarea Plan and EIS project. This work will cover the entire Downtown, including the MLK District. There will be a separate opportunity to comment on this transportation modeling as part of the South Downtown Draft EIS in January-February 2013. Comments submitted during that period will be considered as input to the Final EIS for the MLK Subarea Plan.

4.9.3: Mitigation measures

Both alternatives

Tacoma Comprehensive Plan general goals and policies

Land use and transportation

Tacoma's Comprehensive Plan Transportation Element states that accommodating a large percentage of future growth through transit-oriented development (TOD) will help create a safer, more comfortable pedestrian environment, encourage alternative transportation, promote active living, and can enhance the quality of life of residents.

Elements of TOD generally include:

- A mix of land uses, including residential and commercial development;
- Moderate to high density housing;
- Pedestrian orientation/connectivity;
- Convenient access to transportation choices, including transit, bike, and pedestrian facilities;
- Reduced size of surface parking facilities; and
- High quality design.

TOD development can also incorporate specific strategies and innovative techniques such as:

- Transit ride-free areas;
- Neighborhood collector or shuttle transit service;
- Transit marketing;
- Car-sharing; and
- Location efficient mortgages.

T-LUT-1 Land Use Considerations

Development, expansion, or improvement of transportation facilities should be coordinated with existing and future land use patterns and types of development.

T-LUT-2 Land Use Patterns

Encourage land use patterns and developments, especially in mixed-use centers, that support non-single occupancy vehicle travel, increase community access, improve intermodal connectivity, and encourage short trips easily made by walking or bicycling for recreation and commuting.

T-LUT-3 Centers and Corridors

Give high priority to improvement of transportation facilities and services within designated centers and along identified corridors connecting the centers. Examine parallel low traffic roadways for potential pedestrian and bicycle movement and improvements.

T-LUT-4 Support Economic Bases

Give high priority to those transportation facilities that provide the greatest opportunity to serve and support the existing economic bases and will aid the city in attracting new investments.

T-LUT-5 Accessibility

Situate new transportation facilities in a manner that will assure reasonable access for all modes to places of employment and attraction in the city.

T-LUT-6 Concurrency

Ensure that the City’s transportation network adequately serves the existing and projected land use developments. 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.

T-LUT-7 Street Rights-of-Way

Establish procedures to implement the authority granted to the city by RCW 35.79 to inventory, evaluate, and preserve right-of-way needs for future transportation or recreational purposes, and wherever possible, make advanced acquisition in order to minimize inconvenience to affected property owners and to safeguard the general public interest.

T-LUT-8 Partner with Transit

Partner with Pierce Transit and Sound Transit to coordinate land use and transportation planning and to promote transit-oriented development.

T-LUT-9 Transit Oriented Development

Encourage and promote transit-oriented development (TOD) and provide incentives for development that includes specific TOD features.

Multimodal System

An efficient multimodal system is designed to accommodate the safe and efficient movement of people and goods. The city recognizes that freight mobility and access are critical to Tacoma’s economic development.

Additionally, the city recognizes that transportation needs and travel choices change over time as alternatives to car travel become available. It is the intent of these policies to reduce car use; minimize intermodal conflicts; enhance freight mobility; and accommodate the mobility needs of Tacoma residents and visitors.

T-MS-1 Transportation Demand Management

Support and promote Travel Demand Management (TDM) strategies aimed at reducing the number and length of car trips and increasing the efficiency of the transportation system.

T-MS-2 Roadway Capacity

Assess roadway capacity on the basis of a facility’s total people-carrying capacity in addition to its vehicle-carrying capacity.

T-MS-3 Inter-Modal Conflict

Support programs, regulations, and design standards that separate at-grade crossing conflicts to increase safety and to increase the capacity and timeliness of both over-land and rail freight.

T-MS-4 Transit Planning

Support future transit planning among local and regional governmental agencies to improve the reliability, availability, and convenience of transit options.

T-MS-5 Transit Operational Efficiency

Allow sidewalks to extend up to the travel lane on certain arterial streets to serve as passenger loading platforms to improve transit operational efficiency and safety by avoiding merging and weaving maneuvers into traffic by buses. In principle, such sidewalk extensions may be located along arterial streets on transit routes, with minimum of two travel lanes in each direction and posted speed limit of 35 mph or less. Dimensions must be in compliance with established standards for roadway and traffic engineering and transit facilities.

T-MS-7 Special Transportation Needs

Recognize and accommodate the special transportation needs of the elderly, children, the disabled and the socio-economically disadvantaged in all aspects of transportation planning, programming and implementation. Use local, state or Federal, design standards that satisfy the communities desire for a high level of accommodation for the disabled.

T-MS-8 Partner with Pierce Transit

Partner with Pierce Transit so that resources may be combined and an efficient multimodal transit system may be created.

T-MS-9 Car-Sharing

Explore car-sharing programs and public-private partnerships with car-sharing businesses to reduce auto-ownership dependence.

T-MS-12 Complete Streets

Apply the Complete Streets guiding principle[1], where appropriate, in the planning and design for new construction, reconstruction and major transportation improvement projects[2], to appropriately accommodate all users, moving by car, truck, transit, bicycle, wheelchair, or foot to move along and across streets. The Complete Streets guiding principle shall also be used to evaluate potential transportation projects, and to amend and revise design manuals, regulations, standards and programs as appropriate to create over time an integrated and connected network of complete streets that meets user needs while recognizing the function and context of each street.

[1] The Complete Streets guiding principle is to design, operate and maintain streets 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 – and to foster a sense of place in the public realm.

[2] Major transportation improvement projects include but are not limited to street and sidewalk construction; street and sidewalk lighting; street trees and landscaping; street amenities; drainage, pedestrian and bicycle safety improvements; access improvements for freight; access improvements, including compliance with the Americans with Disabilities Act; and public transit facilities accommodation including, but not limited to, pedestrian access improvements to transit stops and stations.

T-MS-13 Walkability

Provide height bonuses and other incentives to developments that promote walkability through pedestrian orientation, providing amenities such as weather protection and seating, and improving pedestrian connectivity.

Commute Trip Reduction

As required by the Commute Trip Reduction Efficiency Act of 2006 and the associated Washington Administrative Code, the Tacoma City Council adopted the Commute Trip Reduction Plan in 2007 and adopted the Commute Trip Reduction (CTR) Ordinance into the Tacoma Municipal Code Chapter 13.15 in 2008.

The CTR Plan provides guidelines for the city and major employers affected by the state law to implement effective strategies to achieve the goals of 10% reduction in drive-alone trips and 13% reduction in vehicle miles traveled by 2011.

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 Transportation Demand Management (TDM).

In addition to the mandated program activity, Tacoma is also participating in a voluntary, pilot program encouraged and funded by the State, whereby downtown Tacoma is designated as a Growth and Transportation Efficiency Center

(GTEC). More aggressive CTR strategies will be implemented within the GTEC, involving selected target audiences besides the CTR-affected employers. Expected outcomes of the pilot program are the reduction of auto-dependent trips and the alleviation of the burdens on state highway facilities.

The following policies are intended to provide additional tools to ensure the successful implementation of the CTR Plan and Ordinance, and contribute to accomplishing the city's strategic goals of healthy environment, sustainable economy and livable community.

T-CTR-1 Comprehensive Planning and CTR

Incorporate Commute Trip Reduction 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 CTR related and supportive policy aspects, such as those listed below:

- Promote transit-oriented development;
- Encourage maximum parking requirements for new development;
- Require non-motorized connections between retail, living and work places;
- Evaluate land use changes to the Comprehensive Plan and determine how the development furthers the goals of CTR;
- Realize the Complete Street concept;
- Strive for job-housing balance;
- Support an integrated, regional high capacity transit system;
- Enhance walking and bicycling environment;
- Require parking for bicycles where applicable; and
- Ensure that connectivity, accessibility and transferability among multiple modes of transportation are adequate, efficient, safe and friendly for pedestrians and bicyclists.

Environmental Stewardship

Tacoma complies with the Washington Clean Air Act, the Commute Trip Reduction Law, the National Environmental Policy Act, and the State Environmental Policy Act. It also supports the city's interest in reducing stormwater and air pollution by lessening the use of petroleum fuel vehicles.

Policies that reduce car use and encourage transit, walking and bicycling are keys to reducing transportation-related environmental impacts and can be found throughout Tacoma's Comprehensive Plan. In addition, the city's

Climate Action Plan guides the city toward reductions in greenhouse gas (GHG) emissions by such measures as decreasing use of the conventional internal combustion engine automobile.

Transportation contributes to more than 50% of Tacoma's GHG emissions. In an effort to achieve the GHG reductions laid out in its Climate Action Plan, the city encourages the use of a variety of vehicles and devices for transportation that are free of emissions. These vehicles and devices include Low Speed Electric Vehicles (LSV), bicycles, skateboards, and other forms of active transportation.

The intent of the following policies is to encourage the use of emission-free vehicles and devices and to plan and implement transportation projects that will not negatively impact the quality of the environment and will contribute to the city's overall efforts in addressing issues associated with global warming and climate change.

T-ES-2 Noise and Air Pollution

Encourage the reduction of noise and air pollution from various modes of transportation; promote the use of alternative fuels for vehicles; and ensure Tacoma meets ambient air quality standards.

T-ES-3 Congestion Management

Encourage the use of alternative modes, and thereby slow the increase in the use of single occupant vehicles and the increase of environmental degradation associated with their use.

T-ES-5 Urban Design

Give maximum consideration to aesthetics and beautification while insuring compatibility with safety standards in the design and location of both local and state owned transportation facilities to ensure a positive contribution to the appearance and form of the city.

T-ES-7 Electric Vehicles

Encourage and promote the use of electric vehicles as they are developed in all automobile, truck and commercial vehicle classes. Neighborhood Electric Vehicles and Medium Speed Electric Vehicles 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.

Mobility Master Plan

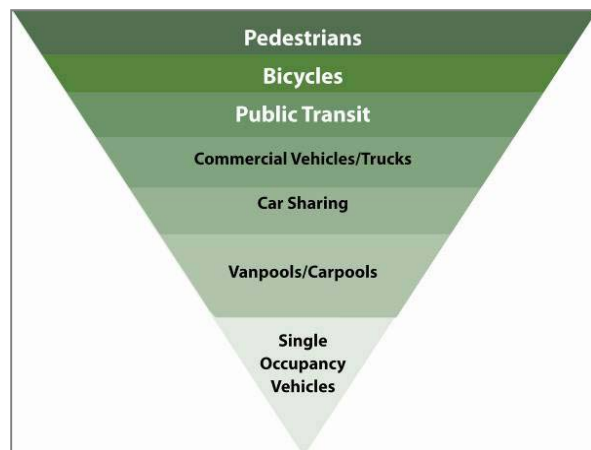
The 2010 Mobility Master Plan provides a vision, policies and an implementation plan for how Tacoma can improve conditions for pedestrians and bicyclists citywide over the next 15 years.

The plan moves the city towards social, economic and environmental sustainability and serves as a cornerstone for Tacoma's climate action diminution strategies. A sustainable non-motorized transportation network is vital for Tacoma to achieve a substantial reduction in carbon emissions, as well as to provide a healthier environment for its residents.

The Mobility Master Plan envisions an interconnected bicycle and pedestrian network that provides safe routes to neighborhoods, schools, transit, business districts recreational facilities, and other destinations.

The Mobility Master Plan is consistent with Tacoma's Complete Streets policy and its associated design guidelines. The Mobility Master Plan Design Guidelines provide a comprehensive set of tools for designing and implementing pedestrian and bicycle infrastructure. Tacoma's streets vary significantly in width, speed and usage and the Design Guidelines provide a wide array of options to make them more user-friendly.

Prioritizing transportation investment - the 'Green Transportation Hierarchy' is a recent movement that recognizes transportation modes that have the least environmental impact and greatest contribution to livability. Intended as a prioritization strategy, 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 level of service standards focused on vehicle movement.



The hierarchy gives precedence to pedestrians, then to bicyclists and public transit. Commercial vehicles and trucks are also recognized as having priority over passenger vehicles.

Tacoma is using this model as a conceptual tool for elevating pedestrians, bicycles and public transit in the planning and design of streets in a manner that is consistent with the City's Complete Streets policy and Climate Action Plan. It gives recognition to the most vulnerable users of the streets: pedestrians and bicyclists of all ages and abilities.

Guiding Principles - were established to serve as a statement of values and to convey the impact the plan will have on Tacoma's future. The principles stand as a guide for policy, development and implementation of the plan.

- **Accessibility** - incorporate the needs of people with disabilities into planning, design, construction and maintenance of the transportation system.
- **Connectivity** - prioritize projects that connect multi-use residential centers, transportation hubs and activity districts and downtown.
- **People** - prioritize movement of people as a measure of mobility over movement of cars.
- **Equity** - establish geographic and modal equity across Tacoma.
- **Safety** - prioritize the safety and comfort of pedestrians and bicyclists on all Tacoma streets
- **Sustainability** - develop a comprehensive pedestrian and bicycle network as a critical step in realizing a sustainable and livable Tacoma.
- **Multimodal** - make multiple travel modes safe and available to all users.

Vision and Goals - Tacoma is a world-class walking and biking community in which pedestrians and bicyclists are top priorities in transportation planning. Tacoma's transportation system is useable and welcoming to people of all abilities. Streets accommodate bicyclists in large numbers, sidewalks are user-friendly, and residents share the road safely and are fully mobile without an automobile.

Goals

- Achieve "Bicycle Friendly Community" status as designated by the League of American Bicyclists by 2015 by developing and enhancing the five Es: Engineering, Education, Evaluation, Enforcement, and Encouragement.
- Complete a safe and comfortable bicycling system that connects all parts of the city (north to south/east to west) and accommodates all types of cyclists by 2025.
- Complete an accessible network of pedestrian supportive infrastructure, including sidewalks, curb ramps, accessible pedestrian signals and shared-use paths, in high-priority pedestrian areas.

- Create a safer street environment that reduces intermodal crashes involving bicyclists, pedestrians and motor vehicles by at least 10% from 2010 rates by 2015 and work to meet Washington State's Target Zero goal of eliminating fatal and serious injuries by 2030.
- Increase the non-motorized mode split to 5% by 2015 and continue gains thereafter in order to achieve the Climate Action Plan goal of reducing greenhouse gases emissions from transportation sources.
- Increase transit use by enhancing pedestrian access and bicycle support facilities through the development of bikeways and walkways that serve transit hubs.
- Implement a benchmarking and measurement system to gauge success for pedestrian and bicycle infrastructure improvements and usage.
- Apply implementation and maintenance strategies that expand and sustain Tacoma's pedestrian and bicycle infrastructure.
- Promote healthy lifestyles by offering improved opportunities for active living for people of all abilities through the development of a robust non-motorized network, including bikeways, sidewalks, and linear parks.

Implementation - recommended pedestrian and bicycle network improvements were developed with a thorough analysis of existing conditions utilizing a variety of methodologies, including the Pedestrian Zone Analysis, Pedestrian Crash Analysis, Bikeway Quality Index and Cycle Zone Analysis. The recommended pedestrian network improvements are consistent with Tacoma's 2008 ADA Transition Plan which outlines the city's strategic priorities for curb ramp and sidewalk improvements.

The following criteria are used to evaluate potential projects for the pedestrian and bicycle networks. These criteria, listed in the order of importance, were developed with input from public workshops and the Steering Committee.

Enhances system connectivity/Closure of critical gap

To what degree does the project fill a missing gap in the bicycle and/or pedestrian system?
How well does the project overcome a barrier in the current bicycle and pedestrian network?

Interface with other transportation modes (e.g., transit)

To what degree does the project connect to transit facilities?

Geographic distribution of City coverage

To what degree does the project offer potential benefits to the wider, regional community by offering opportunities for increased connectivity to surrounding communities, other regional walkways/bikeways etc.?

Cost Effectiveness

How difficult will it be to implement the project? This criterion takes into account constraints like topography, existing development, presence or lack of available right-of-way, and environmental and political issues.

Suitability for bicycling and/or walking with improvements

Does the route have potential to be safe and/or comfortable for bicycling after improvements have been made?

Destinations served

Does the project provide connectivity to key destinations, including schools, parks, employment, commercial centers, and civic centers?

Improvement that serves an immediate safety need

Can the project potentially improve bicycling and walking at locations with perceived or documented safety issues? This criterion takes into account available crash data as well as feedback from the Steering Committee and Tacoma residents.

Integration into the existing local and regional bikeway/walkway system

How many user generators does the project connect to within reasonable walking or bicycling distance, such as schools, parks, Downtown, colleges and universities, etc.?

Projected reduction in vehicle trips and vehicle miles traveled

To what degree will the project likely generate transportation or recreational usage based on population, corridor aesthetics, etc.? Does the project serve transportation needs, reducing the need for drive-alone trips, and promoting bicycling as a viable alternative to driving?

Tacoma has completed or initiated construction of over 21.13 miles of the proposed bicycle and pedestrian system, with plans to complete construction of 193.98 miles within the next 11-15 years.

Facility type	2012	%	Total	%
Bicycle boulevards	10.61	50%	51.12	26%
Bike lanes	5.23	25%	76.43	39%
Sharrows	0.10	0%	6.38	3%
Cycle tracks	0.00	0%	3.84	2%
Sidewalks	3.30	16%	15.96	8%
Shared use paths	1.89	9%	40.25	21%
Total	21.13	100%	193.98	100%

Source: Tacoma Comprehensive Plan, Transportation Element

The short term (1-5 year) bicycle project priority list includes 31 projects with 65.13 miles of improvements including the following projects in the MLK subarea:

Project	miles
South 11th Street bike lane - Ferry to Pacific Avenue	1.25
6th Avenue bike lane - Ainsworth to Broadway	0.87
Sheridan Ave bike boulevard - 6th Street to South 25th Street	1.37
South 25th Street bike lane - State to Sheridan Ave	0.21
Prairie Line Trail share use path - Pacific Ave to Water Ditch Trail	0.80

The short term (1-5 year) and medium term (6-11 year) pedestrian project priority list include 15 projects with 12.66 miles of improvement projects. The list, however, does not include any improvements for the MLK subarea.

The short term (1-5 year) and medium term (6-11 year) intersection project priority list include 24 projects including improvements in the MLK subarea for:

Project

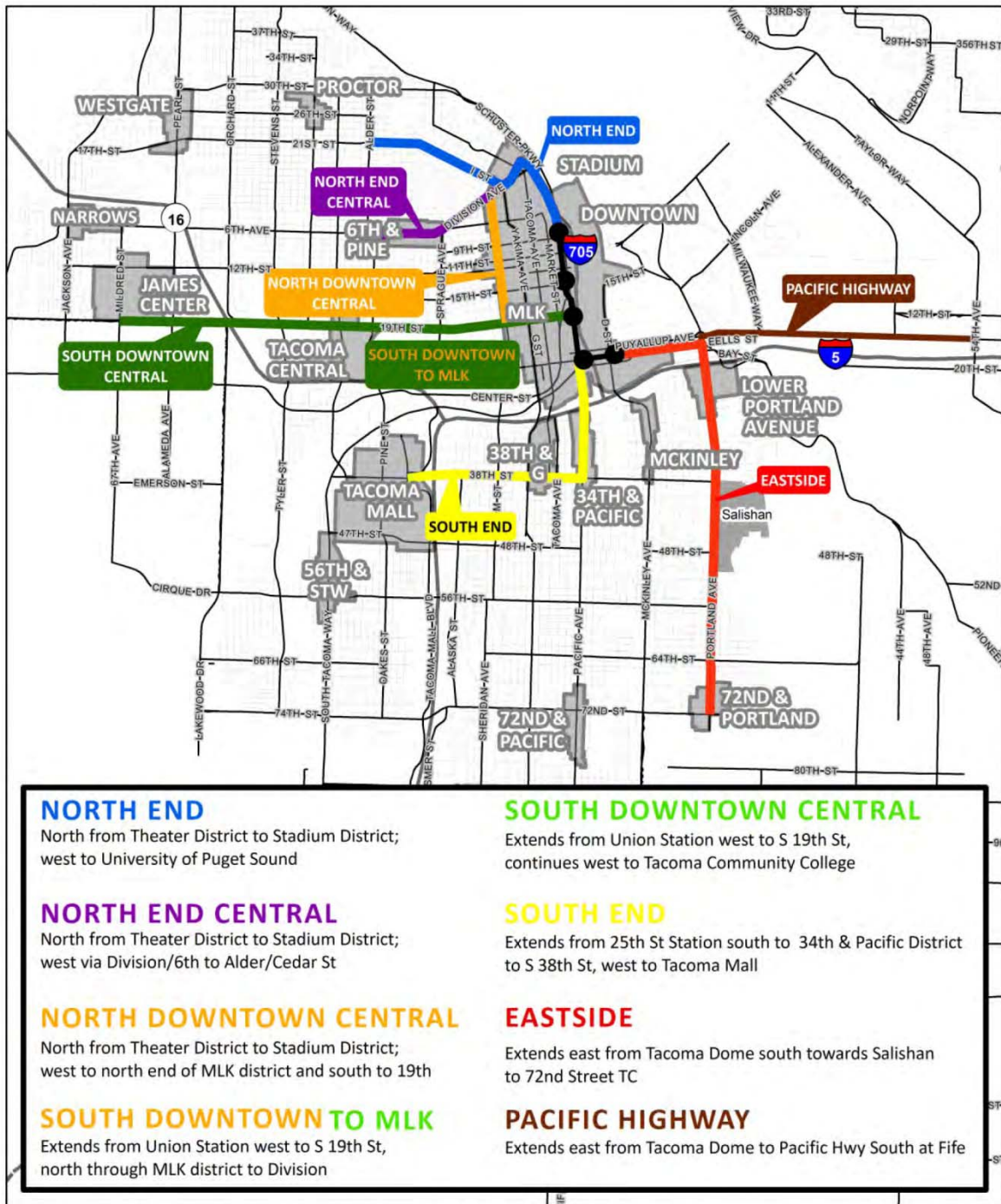
South I Street & Division Avenue

South J Street & South 19th Street

Sound Transit - LINK expansion

The Tacoma Link Expansion Project will extend the Tacoma Link light rail route. Sound Transit is working with stakeholders in the Tacoma community to plan the expansion of the line.

The 1.6 mile Tacoma Link light rail line currently serves 6 stations from the Theater District to the Tacoma Dome Station. Trains run every 12 minutes during the day and served nearly a 1,000,000 riders in 2011.



Tacoma Link Expansion: Corridor Alternative Alignments

Existing Tacoma LINK
 Link Stations
 Mixed Use Center/
Regional Center
 Other Area of Interest

0 0.5 1 Miles

Voters in 2008 approved an expansion of Tacoma Link as part of the Sound Transit 2 ballot measure. Sound Transit's Tacoma Link Expansion Alternatives Analysis project will identify and study alternative travel corridors for expansion of the Tacoma Link light rail system.

Over the next 12 months, Sound Transit in cooperation with the City of Tacoma and Pierce Transit will engage the wider community to help identify a range of alternatives, study these alternatives, and determine a preferred corridor alternative for the expansion. The study will also produce a project financing plan that will identify committed and potential funding sources.

Tacoma Link Expansion Stakeholder Group Final Report 2011

From July 2010 through January 2011 Sound Transit, the City of Tacoma, and Pierce Transit convened a group of community stakeholders, including neighborhood and business leaders, to begin looking at possible routes and station locations to expand Tacoma Link.

The 2011 report document details the work of the Tacoma Link Expansion stakeholder group and its recommendations on potential corridor alternatives for expanding Tacoma Link. The group's mission was to provide commentary and feedback on potential corridor alternatives using their expertise as representatives of diverse constituencies. The qualitative, community-focused report should help guide decision-makers during further technical planning.

Pre-Alternatives Analysis Report

Concurrent with the work conducted by the Tacoma Link Expansion Stakeholder Group, Sound Transit prepared a technical report providing an initial analysis of the alternative corridors identified by the Stakeholder Group and 2 additional alternatives.

The purpose of the Pre-Alternatives Analysis was to determine if the alternative corridors could meet community and Sound Transit objectives.

The Pre-Alternatives Analysis built upon work completed in 2004, 2005, and 2008 for extending the Tacoma Link streetcar and evaluated 8 potential extensions of the Tacoma Link system. The evaluation included an assessment of potential benefits and impacts of each corridor, engineering constraints, design assumptions, preliminary cost estimates, and potential funding sources.

- **The Eastside Corridor** - extends east from Tacoma Dome Station on 25th Street and continues south along Portland Avenue to 72nd Street.
- **The North Downtown Central Corridor** - extends north from the 9th/Theater District Station via Stadium Way; continues northwest and west via North E Street, North First Street, and Division Avenue; and continues south on MLK Way to South 19th Street.
- **The North End Corridor** - extends north from 9th/Theater District Station via Stadium Way; continues northwest and west via North E Street, North First Street, and Division Avenue; and continues west to Alder Street via I Street/North 21st Street.
- **The North End Central Corridor** - extends north from 9th/Theater District Station via Stadium Way; continues northwest and west via North E Street, North 1st Street, and Division Avenue; and continues southwest and west via Division Avenue to South 6th Avenue to Alder/Cedar Streets.
- **The Pacific Highway Corridor** - extends east from the Tacoma Dome Station to Pacific Highway South to Fife, at 54th Avenue East.
- **The South Downtown Central Corridor** - extends west from Union Station on South 19th Street and continues west on South 19th Street to Mildred Street.
- **The South Downtown to MLK Corridor** - extends west from Union Station on South 19th Street, continues north on MLK Way to Division Avenue, and potentially could loop back to the 9th/Theater District Station.
- **The South End Corridor** - extends from South 25th Street Station south via Pacific Avenue and continues west on 38th Street to Tacoma Mall Boulevard.

The major conclusions reached during the Pre-Alternatives Analysis are that there appear to be several alternative corridors that meet community and Sound Transit objectives and are feasible to construct.

However, of all 8 corridors, the North Downtown Central Corridor (MLK subarea) would serve the largest population in 2040. It would also serve a high number of existing and forecast jobs, as well as a high percentage of low-income and minority residents. This corridor would also serve a large number of community institutions. It would travel through 4 historic districts (Old City Hall, Wright Park and Seymour Conservatory, Stadium-Seminary, and North Slope).

Alternatives analysis

This project will need substantial federal grant funding to be built. A major source of federal

funding is the Federal Transit Administration's New Starts/Smart Starts program. Grants are awarded nationwide on a competitive basis following a rigorous, objective review of potential projects.

To support an application for federal funding, Sound Transit will conduct an alternatives analysis that compares reasonable alternatives that could satisfy the purpose and need for the investment. Those alternatives can include multiple routes or corridors and modes (such as bus rapid transit and rail), identified with the public's participation. The goal of the alternatives analysis process is to identify those alternatives which are most promising before beginning formal environmental review,

MLK Subarea Plan Working Group recommendation

The MLK Subarea Plan Working Group recommended Sound Transit pursue development of the North Downtown Central corridor as the number one priority alternative for the reasons originally outlined in the February 2001 Tacoma Link Expansion Stakeholder Group Final Report - namely that the North Downtown Central corridor of all the corridor options best:

1: Serves underserved communities - in that it has the greatest ability to generate economic development.

2: Serves Tacoma neighborhoods - connecting the MLK district including the MultiCare and Franciscan hospitals and Evergreen College to the downtown and other core areas.

3: Serves downtown Tacoma - potentially creating a loop opportunity between the MLK subarea, the downtown, waterfront, UWT, brewery, and dome districts - as well as providing the opportunity for future expansions into the North, North End Central, and South Downtown Central corridors.

4: Captures high ridership - attracting current and new riders from urban households bound for activities in the MLK subarea as well as downtown, waterfront, UWT, brewery, and dome district destinations.

5: Completes regional connections - including the opportunity to link the MLK subarea and eventually the North, North End Central, South Downtown Central corridors to the intermodal connections at Freighthouse Square to Sound Transit's Central Link and SeaTac as well as Amtrak.

6: At a comparatively low cost - to serve the MLK subarea as well as provide the basis for eventual expansion into the North, North End Central, and South Downtown Central corridors.

As a reflection of the above objectives and opportunities, the MLK subarea currently includes a number of catalytic projects underway at MultiCare and Franciscan Hospitals, and the development of the new Community Health Care facility on the MLK corridor that depends on and will attract additional riders.

In addition, the MLK Subarea Plan will implement a number of transit oriented developments on currently vacant and underused properties in the business district core that will generate 465 or more dwelling units for urban households most likely to utilize transit services on MLK Jr Way and between the MLK subarea and core destinations.

Therefore, for the reasons outlined above, the MLK Subarea Plan Working Group unanimously recommended Sound Transit pursue development of the North Downtown Central alternative as the number one priority.

Streetcar versus light rail

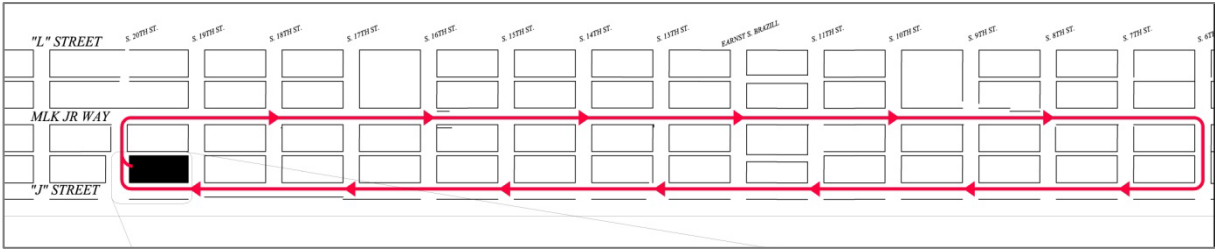
For the purpose of the Alternatives Analysis study and cost estimating purposes, it will be assumed that the Tacoma Link extensions will be configured and operate as typical modern streetcar, in existing traffic lanes shared with other traffic.

However, there may be instances where the streetcar will operate in an exclusive lane in order to by-pass congestion, pass through low-clearance underpasses or accomplish unique traffic maneuvers such as queue jumps.

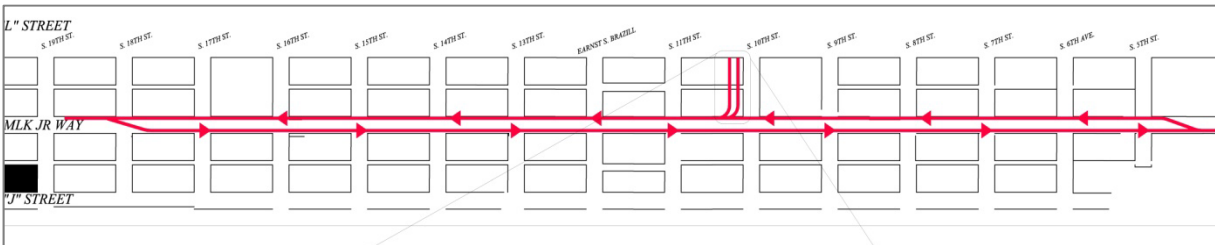
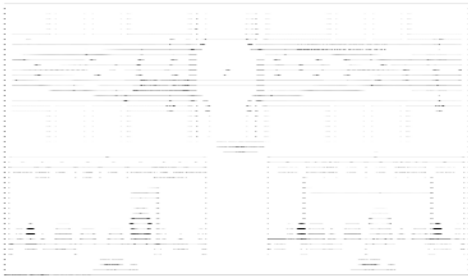
The key system configuration assumptions address the major project components that have the largest affect on the scale and cost of the streetcar project and determine the basic configuration of the project. Other design elements such as the specific track alignment will be addressed in future phases of project development.

Vehicles - streetcars are typically 65 long, 8 feet wide, double-articulated, steel wheel on steel rail and are operated as single cars. By contrast, light rail vehicles are usually about 90 feet long, 8.5 feet wide, double-articulated, and steel wheel on steel rail and operated in 2 to 4 car trains.

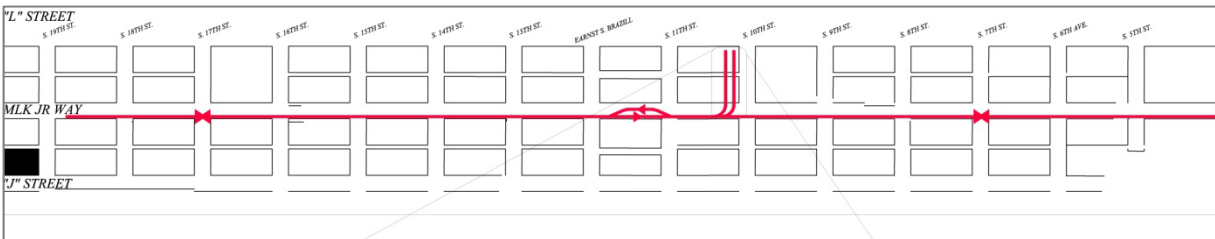
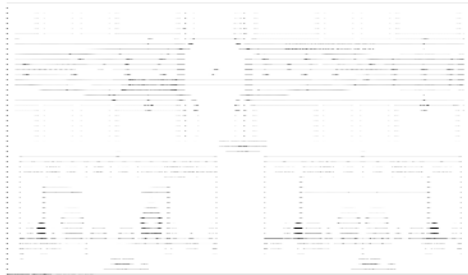
The smaller size and reduced scale of streetcars fit their intended function and allow them to



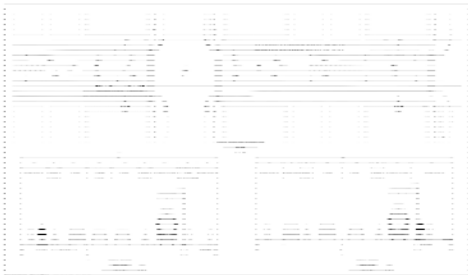
Loop System



Double Track - Pinched Loop System



Single Track with Bypass



share the road with other travel modes; accessing places and streets such as residential neighborhoods that light rail cannot, due to its much larger scale.

The larger size and scale of light rail vehicles also fits their function, as the trunk of regional transit systems typically have very high number of passengers as their ridership capture areas are large geographic areas, fed by multiple modes of transportation and traveling to and from dense urban cores.

For the purpose of the alternatives study, it is assumed that any future Tacoma Link extension will have to be designed to accommodate the existing streetcar fleet and that all future vehicles will have similar characteristics such as length, location of ADA boarding, vehicle loading (for structural design) etc.

Streetcar stops - many light rail systems have stations that cost in the \$1-3,000,000 range (or even higher for exclusive guideway systems) with large custom structural canopies, increased capacity, and multiple passenger amenities. Streetcar systems such as Seattle or Portland have taken a simplified approach and have kept costs for most stations under \$100,000. For the Tacoma Link extensions, it is assumed that a similar approach will be taken. The proposed stops would, in general, have the following features and characteristics:

- **Dimensions** - approximate length would be 45-60 feet and 8-12 feet wide depending on side or center location
- **Shelter** - stop will have a basic shelter akin to a bus shelter
- **Next "streetcar" display** - stop will have automated display indicating time until next streetcar
- **ADA boarding** - will be accommodated using vehicle-deployed bridge plates similar to the current stops/vehicles
- **Station appurtenances** - such as benches, trash receptacle, and railings as needed.

Traffic signals - streetcars typically operate in existing traffic lanes and are controlled by the same traffic signals as automobile users whereas for light rail, the need to keep other vehicles off the guideway and increased travel speeds necessitates a dedicated train control system that is interconnected with the traffic signal system.

Even with streetcars, the overhead trolley wire used to power the vehicles can create a conflict between the existing traffic signal head or mast arm. Typically a 10 foot minimum clearance

around the wire is used for all elements that will require maintenance such as traffic signal heads to comply with OSHA requirements.

In general, the approach to streetcar projects has been to minimize the amount of modifications to what is absolutely necessary and maximize the reuse of as much of the existing equipment as possible.

Guideway type - in order to contain costs and minimize impacts, the design approach to a typical streetcar is to limit construction to that which is absolutely necessary. Often, the track construction can be limited to 1 foot on either side of the track with grind and overlay to make up any minor grade differences and blend the track into the existing roadway cross slope.

By contrast, the construction of semi-exclusive guideways are major endeavors since the guideways are essentially a separate facility from the existing road yet all existing modes must still be accommodated within the road right-of-way.

Conclusion - typical modern streetcar systems serve a very specific purpose, providing increased connectivity and circulation within an urban area. The need to fit and blend into existing neighborhoods requires a transit solution that is true to the scale and character of those neighborhoods.

Streetcars serve this purpose well. Their smaller scale and shared guideway operation, results in less infrastructure, smaller construction footprints and therefore lower cost than systems that operate in a semi-exclusive guideway such as the northern/eastern portion of the existing Tacoma Link.

MLK streetcar alignment

Tacoma prepared a conceptual design of street and utility improvements for MLK Way between Division Street and South 25th Street to support the creation of a Local Improvement District (LID). The city is considering the option of adding streetcar service to the MLK subarea in the future, potentially between Division Street and South 19th Street.

The development of an electric streetcar system has the possibility of many conflicts with existing utility systems. In addition, the streetcar system may conflict with existing and proposed traffic and pedestrian flow. The conceptual design will be used by the city during the design process for street and utility improvements and utility relocations

incorporating the future location of the streetcar line.

Three alignment options with various service options were considered including:

Loop System - the streetcar travels in a clockwise loop on MLK Way, South 6th Street, South J Street, and South 20th Street. The streetcar vehicles would generally be in the automobile traffic lanes.

Double-Track Pinched-Loop System - the streetcars would travel on dual parallel tracks along MLK Way. The streetcars would generally be in the vehicle travel lanes with street traffic. At each end, the streetcar would reverse directions and cross over to the other side of the street. This system could be extended to Division Street and ultimately be connected with the proposed streetcar extension on Division Street with a relatively short extension.

Single Track with Bypass System - the streetcar travels on a single lane track system on MLK Way between South 4th Street and South 19th Street. Because of bi-directional travel, the streetcar track must be isolated from the vehicle lanes. In order to allow streetcars to travel in both directions, the track is split into a double track by-pass near the center. This system could be extended to Division Street, and ultimately be connected with the proposed streetcar extension on Division Street, also with a relatively short extension.

The city is planning a Local Improvement District (LID) redevelopment project which is expected to renovate much of the utility and street system along MLK Way between South 25th Street and Division Avenue.

The timing and financing of the LID is not anticipated to be able to support complete development of the streetcar system at the same time. If the project were to be completed in two phases, first completing the LID and second building the street car, the magnitude of the disturbances to the businesses and surrounding area would be of equal magnitude in both phases. Therefore, construction of the most invasive part of the project in one phase would minimize the impact to the residents.

For the construction of the trackway with the LID project, the concrete trackbed and rails would be installed with the utility and street construction project. The basic platforms and traffic hardscape features that are required by the streetcar would be installed.

At a later time, the platform features, power substations, overhead contact system, and controls could be installed. The complete system will also require the purchase of cars and operational certification. A local maintenance facility could be implemented, or the system may be integrated into the Tacoma Link system and maintenance, with connection at Division.

Alternative 2: MLK Subarea Plan

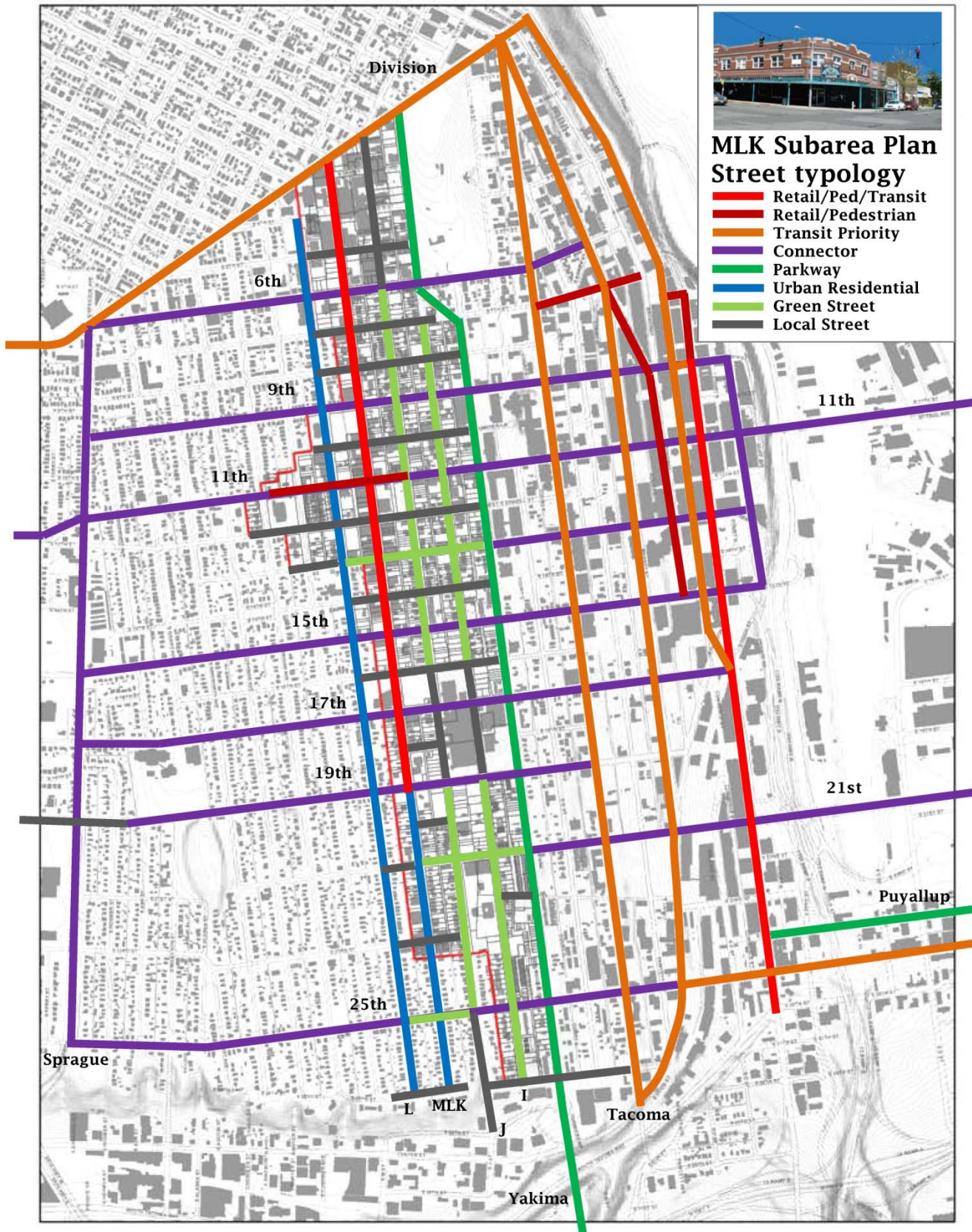
In addition to the measures listed under both alternatives, the following measures have been incorporated into Alternative 2: MLK Subarea Plan to mitigate possible adverse impacts:

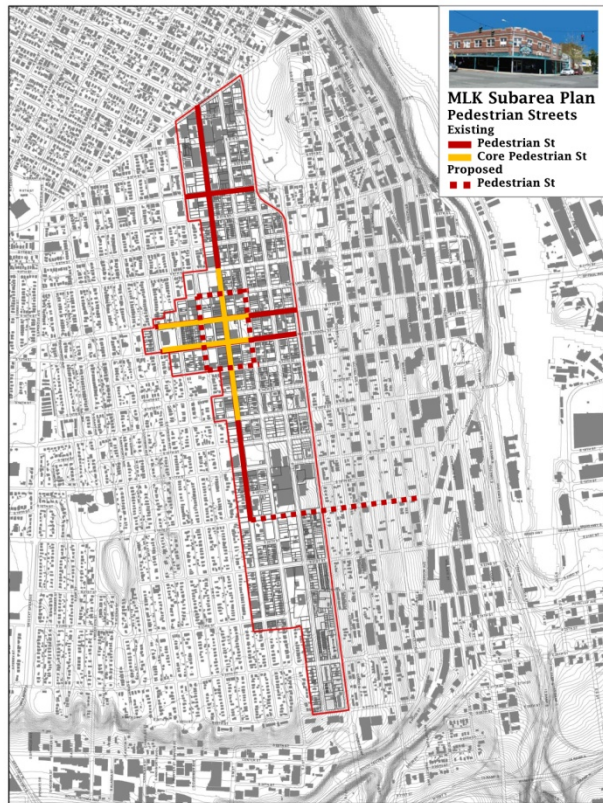
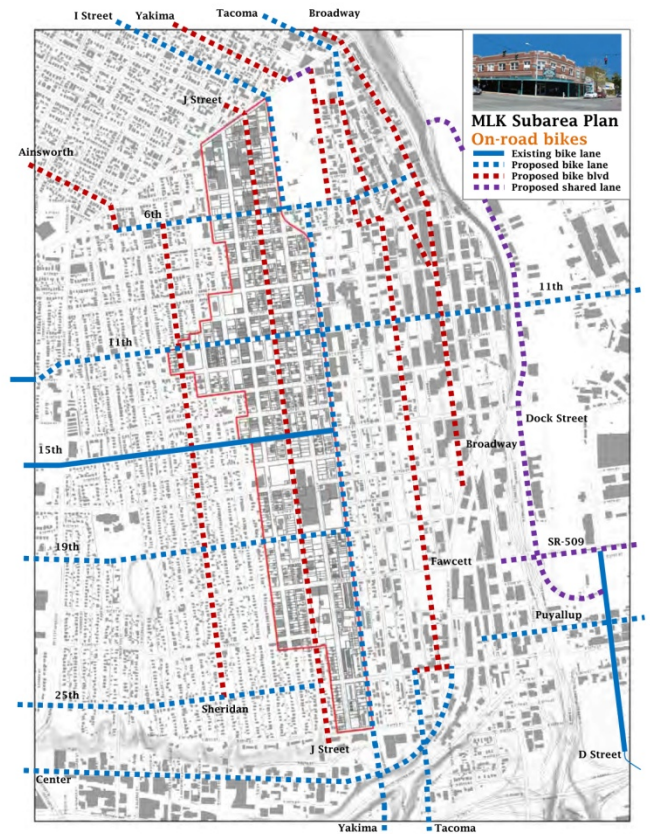
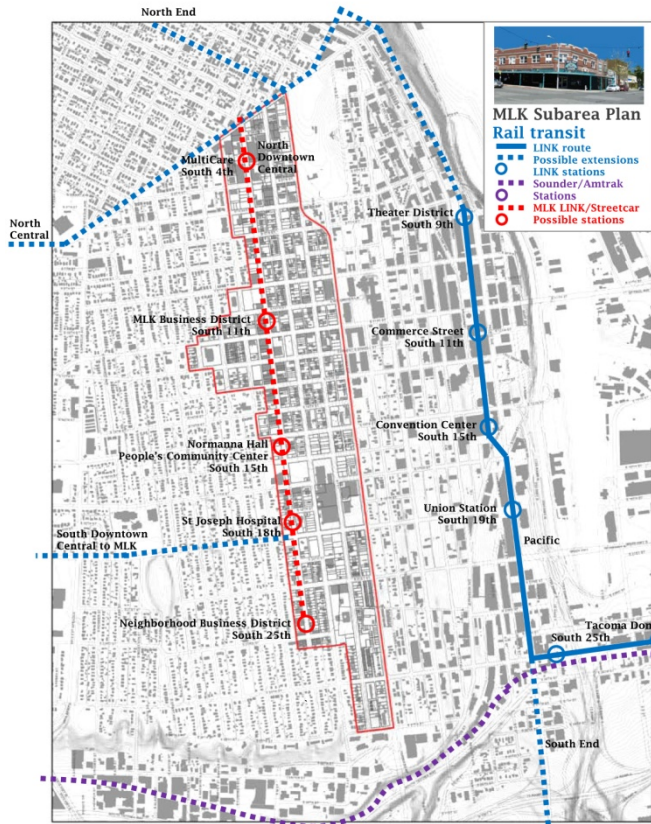
35: Walkways and sidewalks - improve and complete key connections on 11th, 15th, 19th, 25th Streets, and MLK Way from the neighborhoods to the west of the MLK subarea, and from the MLK subarea to the downtown, UW Tacoma, Thea Foss Waterway, Murray Morgan Bridge, and other major walking destinations including a Safe Routes to School program for McCarver Elementary School.

36: Crosswalks - install special paving materials, flashing light crossing strips, pedestrian activated signals, median and curb extensions to improve pedestrian safety, increase visibility, and calm traffic at major intersections throughout the MLK subarea, especially on MLK and Yakima Avenues, and South 11th and 19th Streets.

37: Trails - extend and connect the MLK subarea's walkways on South 6th, 11th, 15th, 19th, and 25th Streets to the neighborhood to the west and the downtown to the east and explore extension of the proposed UW Tacoma hillclimb into the district to provide connections to the Prairie Line Trail, UW Tacoma, South Downtown, and Thea Foss Waterway.

38: Bikeway network - institute bike lanes on 6th, 11th, 19th, and 25th Avenues, I Street and Yakima Avenue, and bike boulevard on J Street to complete key connections to and the MLK district, schools, parks, and other major commuter and recreational destinations as well as with the downtown and larger city system. Develop the J Street bike boulevard in conjunction with MultiCare and Franciscan Health Systems to account for emergency access to the hospitals.





39: Street maintenance - institute a citywide financing strategy with which to maintain life cycle pavement conditions, with a focus on MLK residential streets and roads including South I and J Streets, and South 19th, 21st, and 25th Streets east of the MLK district.

40: MLK retail/pedestrian/transit - reconfigure MLK to expand and improve sidewalks, particularly in the business district, retain on-street parking, install bulbouts and curb extensions and median turn lanes and planting strips with street trees in accordance with a retail, pedestrian, transit street designation that promotes pedestrian uses and anticipates the eventual development of a streetcar (or LINK) connection.

41: Connectors - reconfigure 6th, 9th, 11th, 15th, 17th, 19th, and 25th Streets to provide sidewalks, turn lanes, transit stops and other features to support vehicle and bus access from the neighborhoods to the west to the MLK subarea, and from MLK to the downtown.

42: Parkway - improve Yakima Avenue to remove on-street parking, install bike lanes, expand sidewalks, plant street trees next to the curbs and in the medians to create a parkway boulevard from Wright Park south. **43: Urban residential streets** - reconfigure L Street and MLK Jr. Way south of 19th Street to expand on-street parking, improve sidewalks, and plant street trees to calm traffic, improve pedestrian and bike access, and establish a character to these residential neighborhood streets.

44: Green streets - reconfigure South I and J Streets, and the wider right-of-way in 14th, 21st, and 25th Streets (historical streetcar routes) to expand on-street parking, improve sidewalks, plant street trees, and develop bio-swale rain gardens to calm traffic, improve pedestrian and bike access, and establish a “green and park-like” Green Complete Streets character to these residential neighborhood streets.

45: Streetcar (LINK) - re-install streetcar (or LINK) service on MLK Jr Way in shared lanes with vehicles or in a dedicated median lane with stops at least serving MultiCare Health System, People’s Park, the Business District core, People’s Community Center, Franciscan Health System, and 23rd Street. The streetcar (or LINK) service should connect the MLK district with local employment and residential areas and destinations, such as the Stadium District, Downtown core, UW Tacoma, Brewery District, Thea Foss Waterway, and the Dome District (where there are regional connections with Sound Transit, Greyhound, and Amtrak). The

system should also be designed to allow potential loop configurations and future expansions west into the neighborhoods and to other commercial districts, mixed-use centers, and destinations.

46: Pierce Transit - retain and expand Pierce Transit’s schedules and stops to include hours and routes that support MLK district employees and residents, particularly at MultiCare and Franciscan Health System’s Hospitals, Community Health Care and within the business district core.

4.9.4: Unavoidable adverse impacts

Under both alternatives, the undeveloped and underdeveloped lands in the MLK subarea will be redeveloped for higher intensity uses that will increase population levels, with associated increases in traffic, noise, and air pollution generated by increased travel if residents commute out of the MLK subarea by private vehicle to work, shop, or play.

Both alternatives will increase associated requirements for vehicle, transit, and non-motorized transportation system development, maintenance, and service enhancements. Both alternatives will require the funding of additional roadway, transit, and trail system capacities and projects.

The application of mitigation measures will prevent any unavoidable adverse impacts on plans and policies that have not already been accounted for.

However, Alternative 2: MLK Subarea Plan will stimulate mixed use, low-impact, green, and smart development patterns that generate local live, work play opportunities for existing and future MLK subarea residents.