AGENDA

City Council Joint Study Session with Planning Commission

6:30 PM - Monday, April 30, 2018
City Hall Council Chambers, Sammamish, WA

Page		Estimated Time
	CALL TO ORDER	**6:30 pm**
	EXECUTIVE SESSION – IF NECESSARY	
	TOPICS	
2 - 204	1. **Discussion:** Emergency Comprehensive Plan Amendment to Transportation Element View Agenda Item	
	ADJOURNMENT	**8:30 pm**

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Agenda Bill

City Council Study Session
April 30, 2018

SUBJECT:	Emergency Comprehensive Plan Amendment to Transportation Element
DATE SUBMITTED:	April 24, 2018
DEPARTMENT:	Public Works
NEEDED FROM COUNCIL:	☐ Action ☐ Direction ☑ Informational
RECOMMENDATION:	Review Draft Emergency Comprehensive Plan Amendment to Transportation Element.
EXHIBITS:	1. Exhibit 1 - Draft Transportation Element Policies (clean version) 2. Exhibit 2 - Draft Transportation Element Policies (redlined version) 3. Exhibit 3 - Draft Transportation Element Background (clean version) 4. Exhibit 4 - Draft Transportation Element Background (redlined version) 5. Exhibit 5 - Comp Plan Updates Presentation

BUDGET:

Total dollar amount N/A

Fund(s)

☐ **Approved in budget**
☐ **Budget reallocation required**
☑ **No budgetary impact**

WORK PLAN FOCUS AREAS:

☑ Transportation
☐ Community Safety
☐ Communication & Engagement
☑ Community Livability
☐ High Performing Government
☐ Culture & Recreation
☐ Environmental Health & Protection
☐ Financial Sustainability

ISSUE BEFORE COUNCIL:

Review Draft Emergency Comprehensive Plan Amendment to the Transportation Element.

KEY FACTS AND INFORMATION SUMMARY:

During development of the Transportation Master Plan and annual amendment of the Transportation Element of the Comprehensive Plan last year, the Council expressed great concern about the pace and impacts of development and growth in the City, particularly on its transportation system. Council

directed staff to shift its focus and resources to revise the City's transportation concurrency and level of service (LOS) policies. Council decided to establish a six-month moratorium on accepting certain land use applications on October 3, 2017 by adopting O2017-445 in order to allow time for staff to update the concurrency program and consider amendments to the Comprehensive Plan and related regulations. The ordinance was subsequently amended on November 21, 2017 (O2017-445A), and again on December 5, 2017 (O2017-445B), both of which modified the list of categorical exemptions to the moratorium. The Council extended the moratorium on April 3, 2018 for another six months by adopting (O2018-458). Given the links between the concerns about growth, traffic, and the enactment of a moratorium, the City Attorney advised that the Council could amend the concurrency and LOS policies in the Transportation Element of the Comprehensive Plan as an emergency action.

The project team held a number of meetings and workshops with the Council to discuss options for revising the policies over the past eight months. As a result, the Council passed R2018-782, and then revised it (R2018-789) in which they affirmed their preferred concurrency policy is an intersection-wide, volume weighted average delay approach with an LOS of C for minor and collector arterials, LOS of D for principal arterials with allowance for LOS E where LOS D cannot be achieved with three approach lanes per direction.

On April 30th, City staff and Fehr & Peers will present proposed draft amendments to the Comprehensive Plan Transportation Element Policy and Background chapters. The scope of the edits is limited to only those items that relate to the emergency action on the City's transportation level of service and concurrency. This means that the latter part of the background chapter that discusses the long range travel demand forecasts and projected needs will be updated once the Transportation Master Plan is completed next year.

The following is a summary of the key revisions made to the policy and background chapters. The page numbers refer to the clean copies of Exhibit 1 Transportation Policy Chapter, and Exhibit 3 Transportation Background Chapter.

<u>Transportation Element Policy chapter:</u>

Entire chapter:

Page number references are updated to reflect updates to the Transportation Element – Background Information document.

Page 84:

Functional classification map updated to show 218th Ave SE as a collector arterial south of Inglewood Hill Road. Also, collector title revised to state “collector arterial” in legend.

Page 85:

- Policy T.1.1: Concurrency policy edited to focus on AM and PM peak hour intersection operations only.
- Policy T.1.2: Eliminates mention of concurrency policy.

Page 86:

- Policy T.1.3: Eliminated since it related to Arterial Corridor Level of Service (LOS).
- Policy T.1.4: Renumbered to become T.1.3 and updated to reference both AM and PM peak hour conditions in the intersection LOS calculations. The side bar note references the specific times when AM and PM peak hour LOS is measured.

- Policy T.1.5: Renumbered to become T.1.4.
- Policy T.1.6: Renumbered to become T.1.5.

Transportation Element – Background Information chapter

Entire chapter:

Edits made for readability including reformatting.

Pages T.9 – T.14

Background Figure T-1, Background Table T-1, and text under Roadway Inventory. Updated to reflect revised functional classification and corrections to street names.

Pages T.14 – T.16

- Traffic Signal and Roundabout Intersection Inventory text and Background Figures T-2 and T-3. Updated to reflect current inventory.
- Roadway Design Standards text: revised to reference 2016 Public Works Standards (PWS), removed standalone Background Figure T-4 which showed example ROW cross sections. Those cross sections are in the PWS.

Page T.17

Created new section called Traffic Counts, which describes 2016 daily and peak hour counts. Intended to describe segment counts without including them in level of service discussion.

Pages T.20-T.22

Background Table T-2 and Background Figure T-6. Updated to include 2016 counts.

Pages T.23-T.27

- Traffic Level of Service Analysis Section. Updated to remove discussion of segment analysis and focus on intersection LOS.
- Background Table T-5 and Background Figure T-7. Updated to reflect 2016 counts and level of service analysis, to reflect AM and PM peak hour conditions, and to focus on the 43 in-city concurrency intersections.

Pages T.28-T.29

- Moved up Concurrency discussion from end of Background document for clarity. Included separate discussion of key intersections outside of City.

Pages T.37-T.67

- The remainder of the chapter relates to the long range plans through 2035 and will be updated in 2019, as part of the Transportation Master Plan. Other than figure and table number references, no changes have been made to these sections.

FINANCIAL IMPACT:

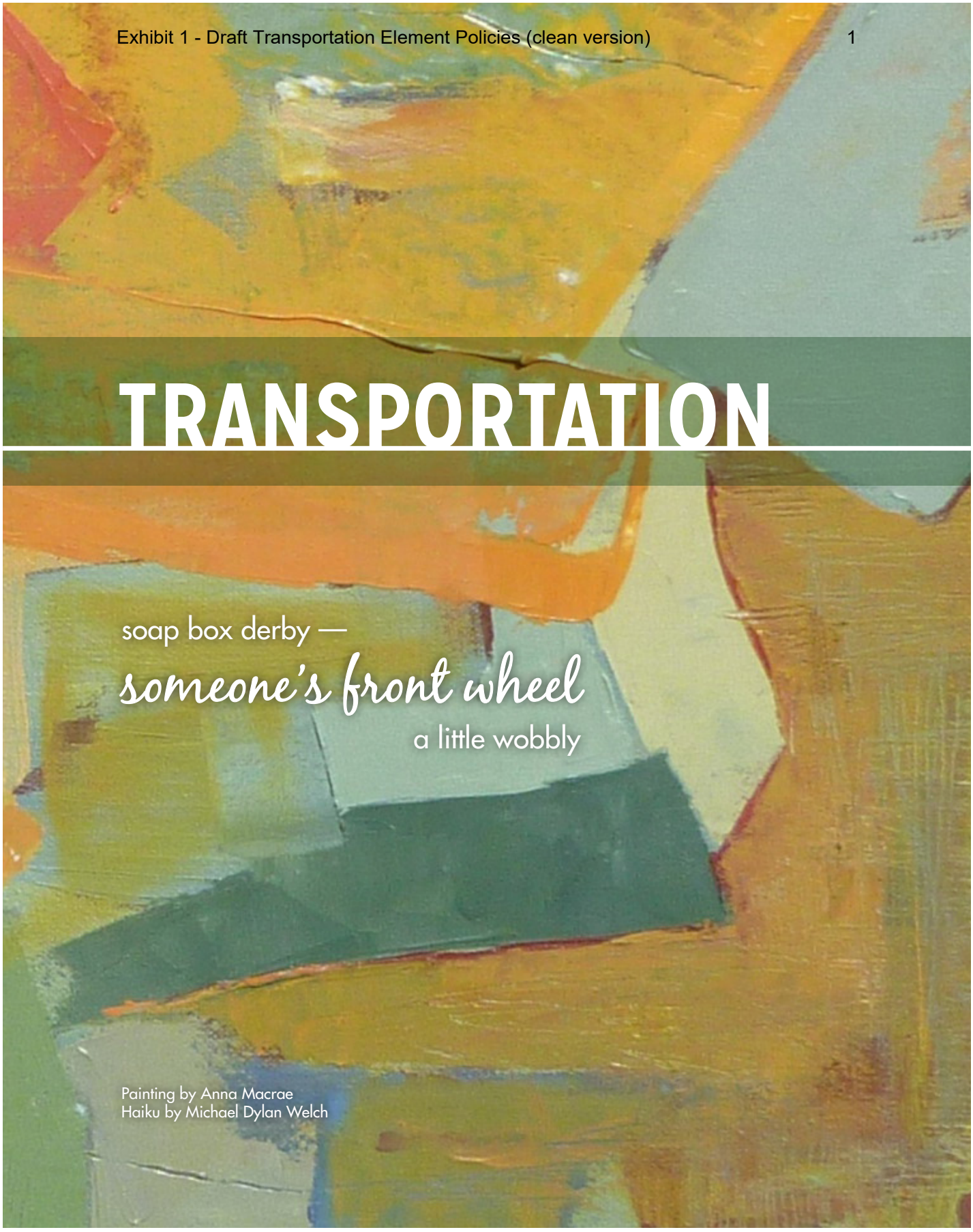
N/A

OTHER ALTERNATIVES CONSIDERED:

No other alternatives were considered. This implements the Council's direction as described in R2018-789.

RELATED CITY GOALS, POLICIES, AND MASTER PLANS:

Comprehensive Plan Transportation Element


TRANSPORTATION
soap box derby —
someone's front wheel
a little wobbly
Painting by Anna Macrae
Haiku by Michael Dylan Welch

Transportation Goals

Goal T.1 **Supporting Growth**
Support the city's and region's growth strategy by focusing on moving people and goods within the city and beyond with a highly efficient multimodal transportation network.

Goal T.2 **Greater Options and Mobility**
Invest in transportation systems that offer greater options, mobility, and access in support of the city's growth strategy.

Goal T.3 **Operations, Maintenance, Management and Safety**
As a high priority, maintain, preserve, and operate the city's transportation system in a safe and functional state.

Goal T.4 **Sustainability**
Design and manage the city's transportation system to minimize the negative impacts of transportation on the natural environment, to promote public health and safety, and to achieve optimum efficiency.

TRANSPORTATION

Introduction

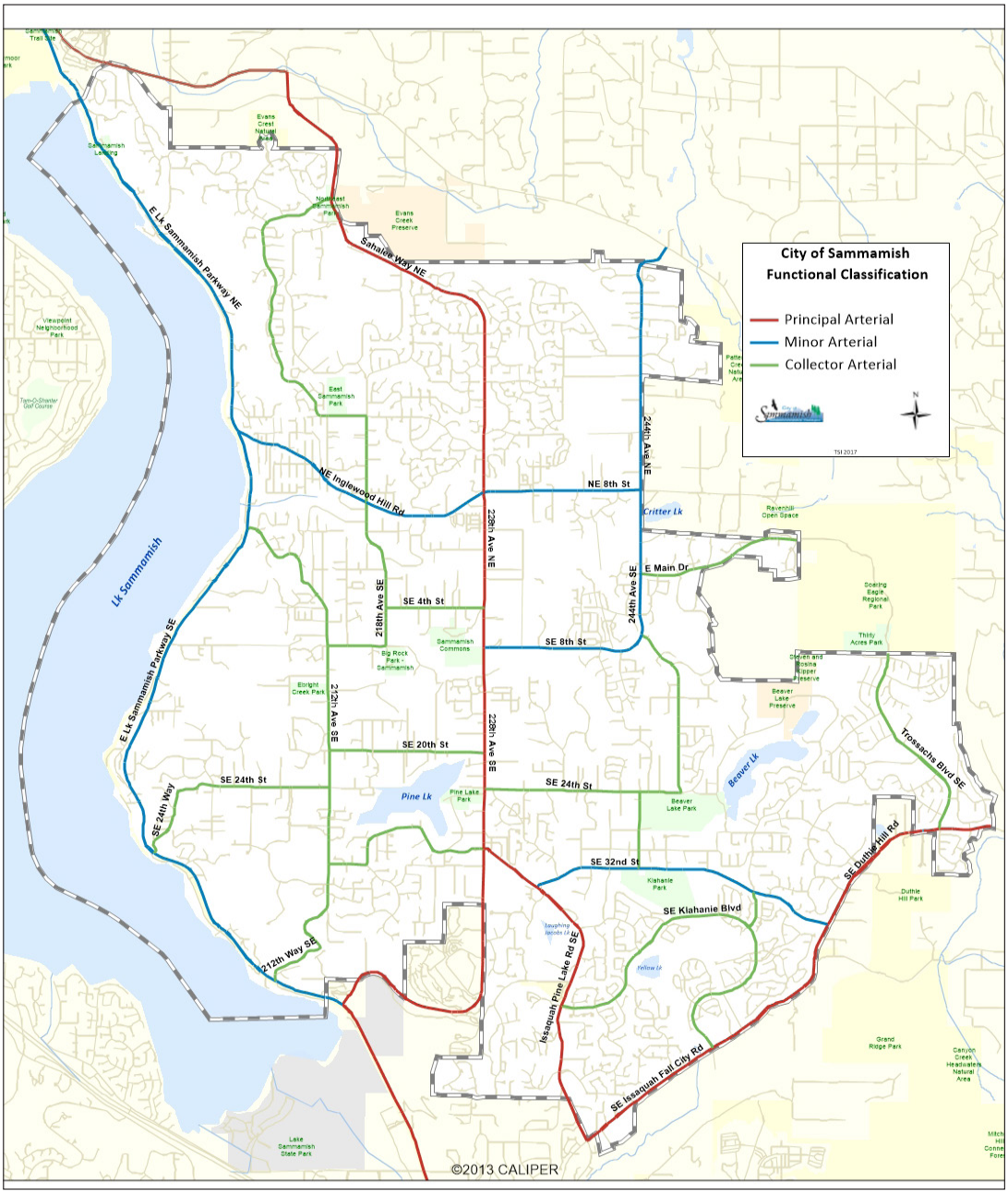
The Transportation Element ensures that the City's transportation system supports land uses envisioned by the Comprehensive Plan. Current challenges faced by the City include a relatively unconnected street system, limited transit service, and a hilly topography that makes active modes of transportation difficult for many users. These factors combine to create a car-centric transportation system that funnels drivers onto only a few streets (see Figure T–1). In order to address these challenges, goals and policies in this element are intended to promote more efficient use of existing roads, a shift of traffic to other modes, and a shift to other times of day.

228th Ave NE

The Transportation Element is supported by and inter-connected with many other elements of the Comprehensive Plan. In particular, the transportation system needs to be designed and sized appropriately to support the planned densities described in the Land Use Element. Consistent with the Plan's framework goals and emphasis on sustainability and healthy communities, transportation goals and policies include measures to help reduce air pollution, and promote active transportation. As part of promoting active transportation and mobility, the Transportation Element supports goals and policies in the Parks Element that address the public trail system. Goals and policies related to non-motorized transportation are also consistent with guidance in the Sammamish *Parks, Recreation and Open Space (PROS) Plan*.

Please look for this icon for goals and policies that focus specifically on sustainability and healthy communities.

Figure T–1
Street Classification Map



As required by the Growth Management Act, the Transportation Element must demonstrate that there is enough transportation system capacity to serve the land uses that are planned, and to serve them at the level of service established in the goals and policies. This element also needs to include a financing plan to show how planned transportation improvements will be funded. This Transportation Element satisfies these requirements.

The Transportation Element Supporting Analysis contains the background data and analysis that provide the foundation for the Transportation Element goals and policies.

Based on the assumptions described in the Land Use Element, the City has development capacity to meet the adopted 2035 targets of 4,640 houses and 2,088 jobs.

***Concurrency** is a land use planning and implementation tool, introduced in the Washington State Growth Management Act (GMA), which is designed to ensure that necessary public facilities and services to support new development are available and adequate (based on adopted Level of Service standards) at the time the impacts of new development occur.*

Goals and Policies

Goal T.1 Supporting Growth

Support the city's and region's growth strategy by focusing on moving people and goods within the city and beyond with a highly efficient multimodal transportation network.

The discussion of concurrency is integrated throughout Volume II.T, Transportation. For a summary, please see page T.63.

Concurrency

Policy T.1.1 *Maintain a concurrency management system that monitors the impacts of growth and development on the transportation system and ensures that level-of-service standards are met within required timeframes. Focus level-of-service standards for transportation on the performance of key intersections during the AM and PM peak periods.*

Policy T.1.2 *Address non-motorized, pedestrian, and other multimodal types of transportation options.*

Bike lane on SE 8th Street

Intersection Level of Service (LOS)

For more information, see the Intersection Level of Service Criteria Section in Volume II.T, page T.24.

Policy T.1.3 *Calculate intersection LOS using traffic volumes during the AM and PM peak hour.*

Intersection LOS measures average peak hour delay for vehicles at key intersections. AM peak hour is defined as 7:00 to 8:00 am and PM peak hour is defined as 4:45 to 5:45 pm.

Coordination

Policy T.1.4 *Coordinate planning efforts for all transportation issues and problems directly with adjacent jurisdictions and through regional transportation planning organizations to develop and operate a highly efficient transportation system that addresses all city transportation needs.*

Freight

For more information, see the Freight Routes Section in Volume II.T, page T.14.

Policy T.1.5 *Ensure the freight system meets the needs of local distribution.*

Level of Service (LOS) *is a qualitative measurement which describes traffic conditions based on service measures such as speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service is expressed qualitatively using letters A through F, with A representing very good operations and F representing undesirable operations.*

Congestion *results when traffic demand approaches or exceeds the available capacity of the system. While this is a simple concept, it is not constant. Traffic demands vary significantly depending on the season of the year, the day of the week, and even the time of day. Also, the capacity, often mistaken as constant, can change because of weather, work zones, traffic incidents, or other non-recurring events.*

Goal T.2 Greater Options and Mobility

Invest in transportation systems that offer greater options, mobility and access in support of the city's growth strategy.

Multimodal travel options

Mobility Options

Policy T.2.1 *Encourage an increase in the proportion of trips made by transportation modes other than driving alone.*

Policy T.2.2 *Encourage the integration of transportation systems to make it easy for people to move from one mode or technology to another.*

Policy T.2.3 *Encourage the promotion of the mobility of people and goods through a multi-modal transportation system consistent with regional priorities and Vision 2040.*

Policy T.2.4 *Address the needs of non-driving populations in the development and management of local and regional transportation systems.*

Policy T.2.5 *Encourage siting and designing transit facilities to enable access for pedestrian and bicycle patrons, where appropriate.*

Policy T.2.6 *Encourage local street connections between existing developments and new developments to provide an efficient network of travel route options for pedestrians, bicycles, autos and emergency vehicles.*

Policy T.2.7 *Support regional efforts to effectively manage regional air, marine and rail transportation capacity and address future capacity needs in cooperation with responsible agencies, affected communities and users.*

Sammamish youth walking to the bus stop after school

Transportation Demand Management

Policy T.2.8 *Reduce the need for new capital improvements through investments in operations, demand management strategies, and system management activities, including: broadband communication systems, providing for flexible work schedules, public and private transit, vanpool systems and public transit subsidies.*

Bike parking at Sammamish Highlands

For more information, see the Transportation Demand Management Section in Volume II.T, page T.59.

Policy T.2.9 *Support local transportation demand management programs (education and/or local regulations) to reduce the impacts of high traffic generators not addressed by the Washington State Commute Trip Reduction Act including: city offices, recreational facilities, schools, and other high traffic generating uses. The City of Sammamish should serve as a model to the community by striving to comply with the requirements of the State Commute Trip Reduction Act, CTR. The City should work with schools to reduce vehicular traffic.*

Policy T.2.10 *Support the reduction of vehicle dependence in the city by supporting "ride share" and on demand car/bike services.*

Design

Policy T.2.11 *Promote developments that are designed in a way that improves overall mobility and accessibility to and within such development.*

Policy T.2.12 *Design, construct, operate, and maintain transportation facilities to serve all users safely and conveniently, including motorists, pedestrians, bicyclists and transit users. Pedestrian crossings should be consistent with the citizens' desire to develop and maintain a pedestrian-friendly, walkable community.*

Policy T.2.13 *Consider paving materials that are safe and quiet for all users (pedestrians, bicycle riders, wheelchairs, etc.) when mixed use of the pavement is expected.*

Policy T.2.14 *Encourage noise reduction on roadways in innovative ways other than the use of noise walls.*

For more information on non-motorized transportation, see Volume II.T, T.32, the Non-Motorized Plan Section in Volume II.T, page T.61, the Non-Motorized Plan Section in Volume II.T, page T.61, and Background Figure T–9 on page T.34, Background Figure T–12 on page T.43.

Transit

Policy T.2.15 *Work with public and private employer based transit service providers to expand local transit service designed to connect to adjacent jurisdictions and to serve employment centers and local activity patterns.*

Policy T.2.16 *Encourage transit oriented development in the town center, commercial use centers and joint-use park-and-ride facilities, where appropriate.*

Policy T.2.17 *Park-and-ride facilities should include safe and convenient access for automobiles, buses, pedestrians and bicycles.*

Policy T.2.18 *New development and redevelopment in the city should be designed to provide and encourage non-motorized access to transit where appropriate. The location of bus stops and shelters should be incorporated into a project's development design.*

Policy T.2.19 *Where appropriate, adopt road design standards, site-access guidelines, and land use regulations that support transit.*

Policy T.2.20 *Through cooperation with other jurisdictions, work regionally to promote transit services that are dependable, maintain regular schedules and provide an adequate LOS throughout the day, weekends and holidays.*

King County Metro Route 216

Policy T.2.21 *Encourage a transit system that can serve mixed use centers with frequent, regular transit service.*

Policy T.2.22 *Explore options for expanding both intracity and intercity transportation services, such as expanded King County Metro service, city-sponsored shuttle or other private/public partnership options.*

For more information, see the Transit Service and Facilities Section in Volume II.T, page T.59.

King County METRO SOUNDTRANSIT

Goal T.3 Operations, Maintenance, Management and Safety

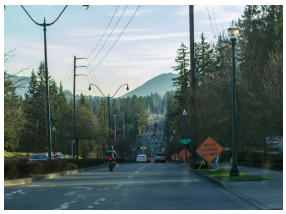
As a high priority, maintain, preserve, and operate the city's transportation system in a safe and functional state.

South Sammamish Park-and-Ride

Maintenance and Preservation

Policy T.3.1 *Maintain and operate the city's transportation systems to minimize impacts to mobility from maintenance activities and provide continuous safe, efficient, and reliable movement of people, goods, and services.*

Construction on Pine Lake Transit Access Road



Construction on 228th Ave SE

For more information, see the discussion of monitoring on page T.66.

For more information, see the Roadway Design Standards Section in Volume II.T, page T.14 and Background Figure T–5 on page T.19.

Policy T.3.2 *Prioritize safety improvements to the existing transportation system to protect mobility and lower overall life-cycle costs.*

Transportation Systems Management

Policy T.3.3 *Maintain a citywide traffic monitoring system to collect AM, PM and daily traffic volumes periodically to determine how transportation investments are performing over time.*

Policy T.3.4 *Design or redesign arterial and connector streets, including retrofit projects, to improve traffic flow, accommodate a range of motorized and non-motorized travel modes in order to reduce injuries and fatalities and to encourage non-motorized travel. The design should include well-defined, safe and appealing spaces for pedestrians and bicyclists.*

Policy T.3.5 *Apply technologies, programs and other strategies that optimize the use of existing infrastructure in order to improve mobility, reduce congestion, increase energy-efficiency, reduce maintenance requirements, and reduce the need for new infrastructure.*

Policy T.3.6 *Strive to increase the efficiency of the current transportation system to move goods, services, and people to, from and within the city by means such as expanded left and right turn lanes and bus turnouts where suitable before adding additional capacity.*

Policy T.3.7 *Protect the transportation system against major disruptions by third party infrastructure projects and maintenance.*

Policy T.3.8 *Develop disaster response plans, which include strategies to prevent damage to transportation facilities as a result of disaster and plans for repairing, reopening, and operating transportation facilities after disasters.*

Traffic circle at NE 16th St and 220th Pl NE

Safety

Policy T.3.9 *Continue to improve the safety of the transportation system to achieve the state's goal of zero deaths and disabling injuries.*

Policy T.3.10 *Provide education on safe non-motorized travel.*

Policy T.3.11 *Enforce motorized and non-motorized safety laws.*

Policy T.3.12 *Create and support a multi-modal traffic safety and management plan specific to Sammamish's location and geography as a long term strategy to reduce traffic accidents and potential fatalities using street designs that emphasize safety, predictability, and the potential for human error, along with targeted education and data-driven enforcement.*

For more information, see the Utilities Element, Policy UT.2.1.

For more information, see the Collision Analysis Section in Volume II.T, page T.29 and Background Figure T–8 on page T.30.

Financial

Policy T.3.13 *Consider transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within commercial and mixed use areas and along corridors served by transit.*

For more information, see the Financing Section in Volume II.T, page T.66.

228th Ave NE

Policy T.3.14 *Consider prioritizing investments in transportation facilities and services that support compact, pedestrian- and transit-oriented development.*

Policy T.3.15 *Focus on investments that produce the greatest net benefits to people and minimize the environmental impacts of transportation.*

Policy T.3.16 *Encourage public and private sector partnerships to identify and implement improvements to personal mobility.*

Policy T.3.17 *Utilize transportation financing methods that sustain maintenance, preservation, and operation of facilities.*

Policy T.3.18 *Consider transportation impact fees for the expansion of multi-modal transportation capital facilities necessary to support growth.*

Policy T.3.19 *Consider city financing methods that sustain or expand local transit service.*

Policy T.3.20 *Maintain a balance between available revenue and needed capital facilities. If funding is inadequate, to finance needed capital facilities, seek to identify additional funding, adjust the level-of-service standards, and, lastly, adjust land use assumptions.*

For more information, see the Contingency Plans in the Event of Revenue Shortfall Section in Volume II.T, page T.67.

Policy T.3.21 *A multiyear financing plan should serve as the basis for the six-year transportation improvement program and should be coordinated with the state's six-year transportation improvement program.*

Goal T.4 Sustainability

Design and manage the city's transportation system to minimize the negative impacts of transportation on the natural environment, to promote public health and safety, and to achieve optimum efficiency.

Sustainability and Natural Environment

Policy T.4.1 *Foster a less polluting system that reduces the negative effects of transportation infrastructure and operation on the climate, natural environment and residents.*

Policy T.4.2 *Require where feasible the use of rain gardens and other techniques to reduce pollutants in storm drains.*

Policy T.4.3 *Seek the development and implementation of transportation modes and technologies that are energy-efficient, reduce vehicular emissions, support regional and national efforts and improve vehicular traffic flow, and overall system flow and performance.*

240th Ave NE

Policy T.4.4 *Encourage transportation system development that minimizes existing tree canopy removal and replaces any necessary tree removal along traffic rights of way.*

Policy T.4.5 *Design and operate transportation facilities in a manner that is compatible with and integrated into the natural and built environment including features, such as natural drainage, native plantings, and local design themes.*

Policy T.4.6 *Where financially feasible, promote the expanded use of alternative fuel vehicles by converting public fleets, applying public incentive programs, and encouraging the establishment of electric vehicle charging stations throughout the city where appropriate.*

Electric vehicle charging station at City Hall

Policy T.4.7 *Plan and develop a transportation system that reduces greenhouse gas emissions by shortening average trip length by encouraging trip consolidation and improving arterial traffic flows. Where practical, encourage replacement of vehicle trips with other modes of transportation to decrease vehicle miles traveled.*

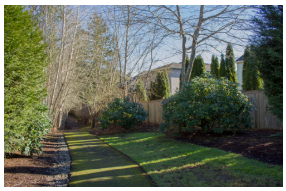
Residents walking in northwest Sammamish

Human Health and Safety

Policy T.4.8 *Integrate the needs of pedestrians and bicyclists in the local and regional transportation plans and systems.*

Policy T.4.9 *Develop a transportation system that minimizes negative impacts to human health, including exposure to environmental toxins generated by vehicle emissions, noise, or a lack of non-motorized options.*

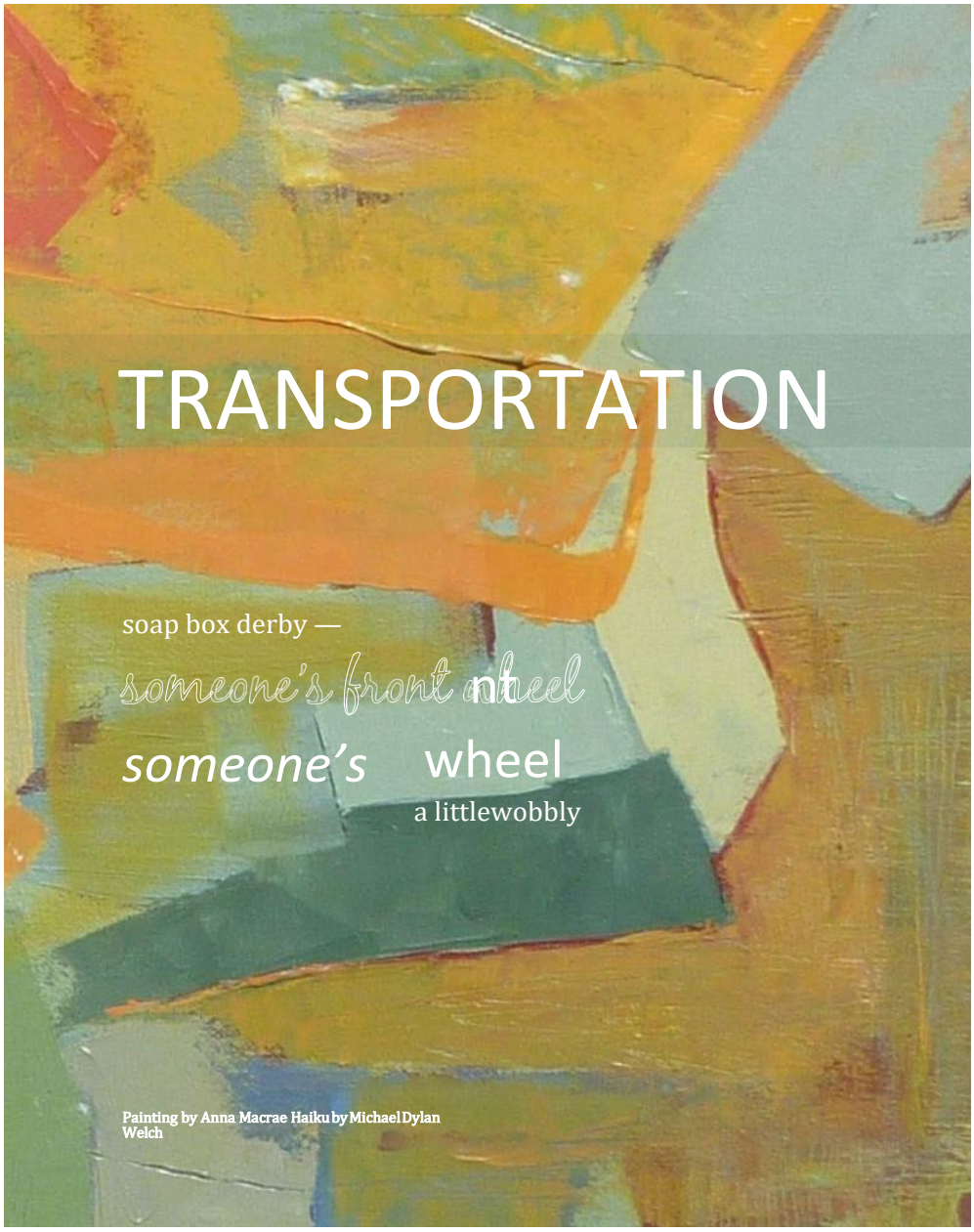
Policy T.4.10 *Ensure continued maintenance and preservation of existing equestrian/pedestrian trails in Sammamish.*



Trails connect neighborhoods to local parks throughout Sammamish

Balancing Costs and Human Impacts of Transportation

Policy T.4.11 *Ensure mobility choices for people with special transportation needs, including persons with disabilities, the elderly and the young, and low-income populations.*


TRANSPORTATION
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Transportation Goals

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TRANSPORTATION

Introduction

The Transportation Element ensures that the City's transportation system supports land uses envisioned by the Comprehensive Plan. Current challenges faced by the City include a relatively unconnected street system, limited transit service, and a hilly topography that makes active modes of transportation difficult for many users. These factors combine to create a car-centric transportation system that funnels drivers onto only a few streets (see Figure T–1). In order to address these challenges, goals and policies in this element are intended to promote more efficient use of existing roads, a shift of traffic to other modes, and a shift to other times of day.

The Transportation Element is supported by and inter-connected with many other elements of the Comprehensive Plan. In particular, the transportation system needs to be designed and sized appropriately to support the planned densities described in the Land Use Element. Consistent with the Plan's framework goals and emphasis on sustainability and healthy communities, transportation goals and policies include measures to help reduce air pollution, and promote active transportation. As part of promoting active transportation and mobility, the Transportation Element supports goals and policies in the Parks Element that address the public trail system. Goals and policies related to non-motorized transportation are also consistent with guidance in the Sammamish *Parks, Recreation, and Open Space (PROS) Plan* ~~*Trails, Bikeways and Paths Master Plan*~~.

228th Ave NE

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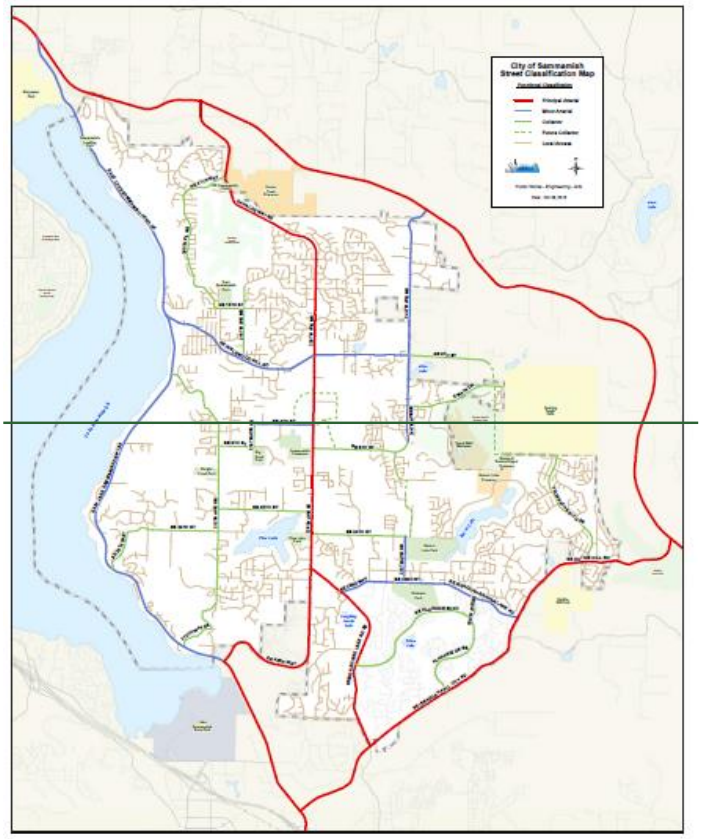
Figure T-1
Street Classification Map



As required by the Growth Management Act, the Transportation Element must demonstrate that there is enough transportation system capacity to serve the land uses that are planned, and to serve them at the level of service established in the goals and policies. This element also needs to include a financing plan to show how planned transportation improvements will be funded. This Transportation Element satisfies these requirements.

The Transportation Element Supporting Analysis contains the background data and analysis that provide the foundation for the Transportation Element goals and policies.

Goals and Policies

Based on the assumptions described in the Land Use Element, the City has development capacity to meet the adopted 2035 targets of 4,640 houses and 2,088 jobs.

***Concurrency** is a land use planning and implementation tool, introduced in the Washington State Growth Management Act (GMA), which is designed to ensure that necessary public facilities and services to support new development are available and adequate (based on adopted Level of Service standards) at the time the impacts of new development occur.*

Goal T.1 **Supporting Growth**

Support the city's and region's growth strategy by focusing on moving people and goods within the city and beyond with a highly efficient multimodal transportation network.

Concurrency

Policy T.1.1 *Maintain a concurrency management system that monitors the impacts of growth and development on the transportation system and ensures that level-of-service standards are met within required timeframes. Focus level-of-service standards for transportation on the performance of key intersections during the AM and PM peak periods. ~~movement of people and goods instead of only on the movement of vehicles.~~*

Policy T.1.2 *Address non-motorized, pedestrian, and other multimodal types of transportation options. ~~in the city's concurrency program – both in assessment and mitigation of transportation impacts.~~*

Bike lane on SE 8th Street

The discussion of concurrency is integrated throughout Volume II.T, Transportation. For a summary, please see page T.69–T.72

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For more information, see the Traffic Level-of- Service Analysis Section in Volume II.T, page T.18.

~~Arterial Corridor Level of Service (LOS)~~

~~Policy T.1.3 Arterial capacity is based upon the number and size of travel lanes, turning lanes shoulders and/ or bike lanes and sidewalks. Fully improved streets that provide for all modes have a higher capacity than streets that do not. Key arterial corridors are defined according to functional classification. The longer corridors are divided into segments that reflect likely improvement limits and similar operations conditions. The LOS arterial corridors is determined by averaging the forecast traffic volume over the arterial capacity (v/c) ratios of the segments within each corridor. This provides an average LOS for the corridor. This has the effect of tolerating some congestion in a segment or more within a corridor while resulting in the ultimate completion of the corridor improvements. The average v/c of the segments comprising a corridor must be 1.00 or less for the corridor to be considered adequate. All corridors must pass the Corridor LOS standard for the transportation system to be considered adequate. Corridors comprised of just one concurrency segment must have a v/c of 1.0 or less to be considered adequate. Segments at or near capacity should be reviewed closely and innovative localized solutions should be considered and encouraged.~~

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Level of Service (LOS) *is a qualitative measurement which describes traffic conditions based on service measures such as speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Level of Service is expressed qualitatively using letters A through F, with A representing very good operations and F representing undesirable operations.*

Congestion *results when traffic demand approaches or exceeds the available capacity of the system. While this is a simple concept, it is not constant. Traffic demands vary significantly depending on the season of the year, the day of the week, and even the time of day. Also, the capacity, often mistaken as constant, can change because of weather, work zones, traffic incidents, or other non-recurring events.*

~~*The provision of* **non-motorized facilities on arterial roadways** *is a key element of the city's roadway segment LOS methodology. The roadway segment allowable AWDT volume thresholds are based upon providing facilities for all users and recognizes that if sidewalks or bike lanes are absent; vehicle capacity is reduced and non-motorized capacity and safety are affected. While non-motorized demand and capacity are not explicitly measured; allowable vehicle volumes are constrained until facilities for all modes are present. This has the effect of prioritizing multi-modal projects on all classifications of roadways, and encourages provision of non-motorized facilities to increase capacity rather than additional travel lanes.*~~

Intersection Level of Service (LOS)

Policy T.1.~~4~~3 *Calculate ~~iOn a case by case basis calculate i~~ntersection LOS ~~is calculated~~ using traffic volumes during the AM peak hour and PM peak hour. ~~Alternatives may be considered and utilized on a case by case basis.~~*

This measures average peak hour delay for vehicles at key intersections. AM peak hour is defined from 7:00 to 8:00 am and PM peak hour is defined as 4:45 to 5:45 pm.

For more information, see the Intersection Level of Service Criteria Section in Volume II.T, page T.23.

Coordination

Policy T.1.~~5~~4 *Coordinate planning efforts for all transportation issues and problems directly with adjacent jurisdictions and through regional transportation*

planning organizations to develop and operate a highly efficient transportation system that addresses

all city transportation needs.

Multimodal travel options

Freight

Policy T.1.~~6~~5 *Ensure the freight system meets the needs of local distribution.*

For more information, see the Freight Routes Section in Volume II.T, page T.14 and Background Figure T–3 on page T.16.

Goal T.2 **Greater Options and Mobility**

Invest in transportation systems that offer greater options, mobility and access in support of the city's growth strategy.

Mobility Options

Policy T.2.1 *Encourage an increase in the proportion of trips made by transportation modes other than driving alone.*

Policy T.2.2 *Encourage the integration of transportation systems to make it easy for people to move from one mode or technology to another.*

Policy T.2.3 *Encourage the promotion of the mobility of people and goods through a multi-modal transportation system consistent with regional priorities and Vision 2040.*

Policy T.2.4 *Address the needs of non-driving populations in the development and management of local and regional transportation systems.*

Policy T.2.5 *Encourage siting and designing transit facilities to enable access for pedestrian and bicycle patrons, where appropriate.*

Sammamish youth walking to the bus stop after school

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Bike parking at Sammamish Highlands

Policy T.2.6 *Encourage local street connections between existing developments and new developments to provide an efficient network of travel route options for pedestrians, bicycles, autos and emergency vehicles.*

Policy T.2.7 *Support regional efforts to effectively manage regional air, marine and rail transportation capacity and address future capacity needs in cooperation with responsible agencies, affected communities and users.*

Transportation Demand Management

For more information, see the Transportation Demand Management Section in Volume II.T, page T.65.

Policy T.2.8 *Reduce the need for new capital improvements through investments in operations, demand management strategies, and system management activities, including: broadband communication systems, providing for flexible work schedules, public and private transit, vanpool systems and public transit subsidies.*

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Policy T.2.9 *Support local transportation demand management programs (education and/or local regulations) to reduce the impacts of high traffic generators not addressed by the Washington State Commute Trip Reduction Act including: city offices, recreational facilities, schools, and other high traffic generating uses. The City of Sammamish should serve as a model to the community by striving to comply with the requirements of the State Commute Trip Reduction Act, CTR. The City should work with schools to reduce vehicular traffic.*

Policy T.2.10 *Support the reduction of vehicle dependence in the city by supporting "ride share" and on demand car/bike services.*

Design

For more information on non-motorized transportation, see Volume II.T, T.31, the Existing Non-Motorized Conditions Section in Volume II.T, page T.38, the Non-Motorized Plan Section in Volume II.T, page T.67, Background Figure T–11 on page T.40 and Background Figure T–14 on page T.49.

Policy T.2.11 *Promote developments that are designed in a way that improves overall mobility and accessibility to and within such development.*

Policy T.2.12 *Design, construct, operate, and maintain transportation facilities to serve all users safely and conveniently, including motorists, pedestrians, bicyclists and transit users. Pedestrian crossings should be consistent with the citizens' desire to develop and maintain a pedestrian-friendly, walkable community.*

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Policy T.2.13 *Consider paving materials that are safe and quiet for all users (pedestrians, bicycle riders, wheelchairs, etc.) when mixed use of the pavement is expected.*

Policy T.2.14 *Encourage noise reduction on roadways in innovative ways other than the use of noise walls.*

Transit

Policy T.2.15 *Work with public and private employer based transit service providers to expand local transit service designed to connect to adjacent jurisdictions and to serve employment centers and local activity patterns.*

Policy T.2.16 *Encourage transit oriented development in the town center, commercial use centers and joint-use park- and-ride facilities, where appropriate.*

Policy T.2.17 *Park-and-ride facilities should include safe and convenient access for automobiles, buses, pedestrians and bicycles.*

Policy T.2.18 *New development and redevelopment in the city should be designed to provide and encourage non-motorized access to transit where appropriate. The location of bus stops and shelters should be incorporated into a project's development design.*

Policy T.2.19 *Where appropriate, adopt road design standards, site-access guidelines, and land use regulations that support transit.*

Policy T.2.20 *Through cooperation with other jurisdictions, work regionally to promote transit services that are dependable, maintain regular schedules and provide an adequate LOS throughout the day, weekends and holidays.*

Policy T.2.21 *Encourage a transit system that can serve mixed use centers with frequent, regular transit service.*

Policy T.2.22 *Explore options for expanding both intracity and intercity transportation services, such as expanded King County Metro service, city-sponsored shuttle or other private/public partnership options.*

King County Metro Route 216

For more information, see the Transit Service and Facilities Section in Volume II.T, page T.65.

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South Sammamish Park-and-Ride

Construction on Pine Lake Transit Access Road

For more information, see the discussion of monitoring on page T.71.

For more information, see the Roadway Design Standards Section in Volume II.T, page T.14 and Background Figure T–4 on page T.17.

Goal T.3 **Operations, Maintenance, Management and Safety**

As a high priority, maintain, preserve, and operate the city's transportation system in a safe and functionalstate.

Maintenance and Preservation

Policy T.3.1 *Maintain and operate the city's transportation systems to minimize impacts to mobility from maintenance activities and provide continuous safe, efficient, and reliable movement of people, goods, and services.*

Policy T.3.2 *Prioritize safety improvements to the existing transportation system to protect mobility and lower overall life-cycle costs.*

Transportation Systems Management

Policy T.3.3 *Maintain a citywide traffic monitoring system to collect AM, PM and daily traffic volumes periodically to determine how transportation investments are performing over time.*

Policy T.3.4 *Design or redesign arterial and connector streets, including retrofit projects, to improve traffic flow, accommodate a range of motorized and non-motorized travel modes in order to reduce injuries and fatalities and to encourage non-motorized travel. The design should include well-defined, safe and appealing spaces for pedestrians and bicyclists.*

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Policy T.3.5 *Apply technologies, programs and other strategies that optimize the use of existing infrastructure in order to improve mobility, reduce congestion, increase energy-efficiency, reduce maintenance requirements, and reduce the need for new infrastructure.*

Policy T.3.6 *Strive to increase the efficiency of the current transportation system to move goods, services, and people to, from and within the city by means such as expanded left and right turn lanes and bus turnouts where suitable before adding additional capacity.*

Traffic circle at NE 16th St and 220th Pl NE

Policy T.3.7 *Protect the transportation system against major disruptions by third party infrastructure projects and maintenance.*

For more information, see the Utilities Element, Policy UT.2.1.

Policy T.3.8 *Develop disaster response plans, which include strategies to prevent damage to transportation facilities as a result of disaster and plans for repairing, reopening, and operating transportation facilities after disasters.*

Safety

Policy T.3.9 *Continue to improve the safety of the transportation system to achieve the state's goal of zero deaths and disabling injuries.*

For more information, see the Collision Analysis Section in Volume II.T, page T.35 and Background Figure T–10 on page T.36.

Policy T.3.10 *Provide education on safe non-motorized travel.*

Policy T.3.11 *Enforce motorized and non-motorized safety laws.*

Policy T.3.12 *Create and support a multi-modal traffic safety and management plan specific to Sammamish's location and geography as a long term strategy to reduce traffic accidents and potential fatalities using street designs that emphasize safety, predictability, and the potential for human error, along with targeted education and data-driven enforcement.*

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Financial

For more information, see the Financing Section in Volume II.T, page T.72.

Policy T.3.13 *Consider transportation investments that provide and encourage alternatives to single-occupancy vehicle travel and increase travel options, especially to and within commercial and mixed use areas and along corridors served by transit.*

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228th Ave NE

Policy T.3.14 *Consider prioritizing investments in transportation facilities and services that support compact, pedestrian- and transit-oriented development.*

Policy T.3.15 *Focus on investments that produce the greatest net benefits to people and minimize the environmental impacts of transportation.*

Policy T.3.16 *Encourage public and private sector partnerships to identify and implement improvements to personal mobility.*

Policy T.3.17 *Utilize transportation financing methods that sustain maintenance, preservation, and operation of facilities.*

Policy T.3.18 *Consider transportation impact fees for the expansion of multi-modal transportation capital facilities necessary to support growth.*

Policy T.3.19 *Consider city financing methods that sustain or expand local transit service.*

For more information, see the Contingency Plans in the Event of Revenue Shortfall Section in Volume II.T, page T.73.

Policy T.3.20 *Maintain a balance between available revenue and needed capital facilities. If funding is inadequate, to finance needed capital facilities, seek to identify additional funding, adjust the level-of-service standards, and, lastly, adjust land use assumptions.*

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Policy T.3.21 *A multiyear financing plan should serve as the basis for the six-year transportation improvement program and should be coordinated with the state's six-year transportation improvement program.*

Goal T.4 **Sustainability**

Design and manage the city's transportation system to minimize the negative impacts of transportation on the natural environment, to promote public health and safety, and to achieve optimum efficiency.

Sustainability and Natural Environment

Policy T.4.1 *Foster a less polluting system that reduces the negative effects of transportation infrastructure and operation on the climate, natural environment and residents.*

Policy T.4.2 *Require where feasible the use of rain gardens and other techniques to reduce pollutants in storm drains.*

Policy T.4.3 *Seek the development and implementation of transportation modes and technologies that are energy-efficient, reduce vehicular emissions, support regional and national efforts and improve vehicular traffic flow, and overall system flow and performance.*

Policy T.4.4 *Encourage transportation system development that minimizes existing tree canopy removal and replaces any necessary tree removal along traffic rights of way.*

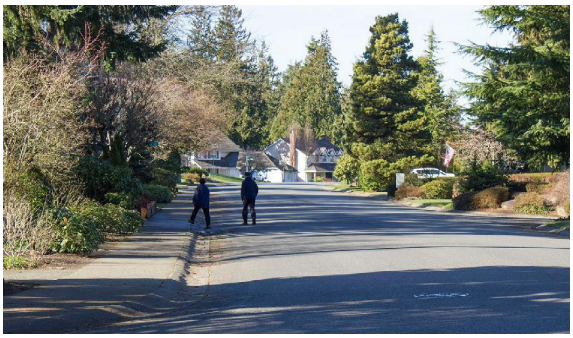
Policy T.4.5 *Design and operate transportation facilities in a manner that is compatible with and integrated into the natural and built environment including features, such as natural drainage, native plantings, and local design themes.*

Policy T.4.6 *Where financially feasible, promote the expanded use of alternative fuel vehicles by converting public fleets, applying public incentive programs, and encouraging the establishment of electric vehicle charging stations throughout the city where appropriate.*

Policy T.4.7 *Plan and develop a transportation system that reduces greenhouse gas emissions by shortening average trip length by encouraging trip consolidation and improving arterial traffic flows. Where practical, encourage replacement of vehicle trips with other modes of transportation to decrease vehicle miles traveled.*

240th Ave NE

Electric vehicle charging station at City Hall



Residents walking in northwest Sammamish

Trails connect neighborhoods to local parks throughout Sammamish

Human Health and Safety

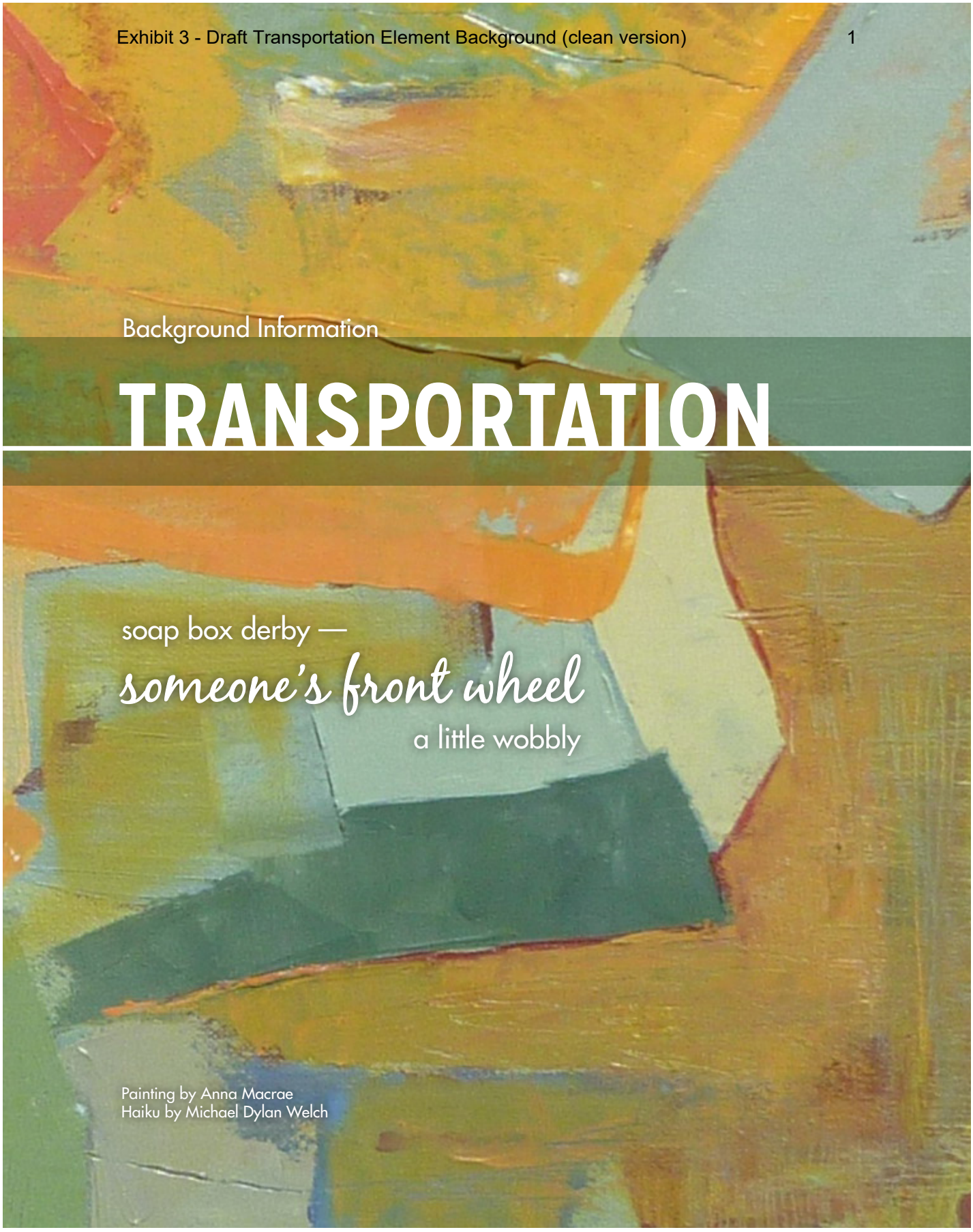
Policy T.4.8 *Integrate the needs of pedestrians and bicyclists in the local and regional transportation plans and systems.*

Policy T.4.9 *Develop a transportation system that minimizes negative impacts to human health, including exposure to environmental toxins generated by vehicle emissions, noise, or a lack of non-motorized options.*

Policy T.4.10 *Ensure continued maintenance and preservation of existing equestrian/pedestrian trails in Sammamish.*

Balancing Costs and Human Impacts of Transportation

Policy T.4.11 *Ensure mobility choices for people with special transportation needs, including persons with disabilities, the elderly and the young, and low-income populations.*


Background Information
TRANSPORTATION
soap box derby —
someone's front wheel
a little wobbly
Painting by Anna Macrae
Haiku by Michael Dylan Welch

The purpose of the Transportation Element is to establish goals and policies that will guide the development of surface transportation in the City of Sammamish, in a manner consistent with the overall goals of the Comprehensive Plan. Based upon existing and projected land use and travel patterns, the Transportation Element Background Information addresses roadway classifications, levels of service, transit and non-motorized modes, future travel forecasts, transportation system improvements, financing strategies, and concurrency management. It establishes the technical basis for transportation system development, and for existing and future improvement of transportation programs and facilities guided by the Transportation Polices of the Comprehensive Plan.

Planning Context

The Plan's Transportation Element has been developed to be consistent with transportation policy and plans that have been adopted at the State and local levels, as described in the following sections.

State of Washington

Growth Management Act

Transportation planning at the State, County and local levels is mandated by the State of Washington Growth Management Act (GMA) [RCW 36.70A]. The GMA contains many requirements for the preparation of a Comprehensive Plan's Transportation Element. In addition to requiring consistency with the land use element, specific GMA requirements for a Transportation Element include [RCW 36.70A.070(6)]:

- Inventory of facilities by mode of transport.
- Level-of-service standards to aid in determining the existing and future operating conditions of the facilities.
- Proposed actions to bring deficient facilities into compliance with adopted level-of-service standards.
- Traffic forecasts, based upon land use.
- Identification of transportation infrastructure needs to meet current and future demands.
- Funding analysis for needed improvements, as well as possible additional funding sources.
- Identification of intergovernmental coordination efforts.
- Identification of transportation demand management strategies as available.
- Identification of improvements for pedestrian and bicycle facilities and corridors.

In addition to these elements, GMA mandates that development cannot occur unless infrastructure exists, infrastructure improvements or strategies are concurrent with development, or a financial commitment is in place to complete the improvements or strategies within six years. In addition to construction of new capital facilities, infrastructure may include transit service, ride share programs, transportation demand management (TDM) strategies, or transportation system management (TSM) strategies.

Washington Transportation Plan

The Washington Transportation Plan (WTP) 2030 presents the State of Washington's strategy for implementation programs and budget development over a 20-year planning horizon. The WTP contains an overview of the current conditions of the statewide transportation system, as well as an assessment of the State's future transportation investment needs. The WTP policy framework sets the course for meeting those future needs. The WTP is based on the following six transportation policy goals:

- Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- Safety: To provide for and improve the safety and security of transportation customers and the transportation system;
- Mobility: To improve the predictable movement of goods and people throughout Washington state;
- Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

The WTP addresses the essential and interconnected roles of the Regional Planning Organizations and their local jurisdictions, and the important transportation issues of tribal governments in Washington State. It highlights the role of the Washington State Department of Transportation (WSDOT) to maintain, preserve and improve the transportation system while meeting the other societal goals defined above.

Puget Sound Region

Puget Sound Regional Council—*Transportation 2040*

Transportation 2040 is a 30-year action plan for transportation in the central Puget Sound Region (King, Pierce, Snohomish, and Kitsap Counties). The plan identifies investments to support growth and improve transportation services to people and businesses, provides a financing plan for funding transportation improvements, and proposes strategies for reducing environmental impacts. *Transportation 2040* establishes three integrated and sustainable strategies: congestion and mobility; environment; and funding. These three strategies are then broken into four major investment categories that pertain to maintaining existing services; enhancing safety and security; improving system efficiency through travel demand management (TDM); and implementing strategic capacity investments for all travel modes and facilities.

Transportation 2040 is an offshoot of the *Vision 2040* plan whose fundamental goal is to focus growth in urban areas to maintain and promote the well-being of people and communities, economic vitality, and a healthy environment (PSRC 2014).

King County

2012 King County Planning Policies

Supporting Growth

An effective transportation system is critical to achieving the Regional Growth Strategy and ensuring that centers are functional and appealing to the residents and businesses they are designed to attract.

> *Goal Statement: Local and regional development of the transportation system is consistent with and furthers realization of the Regional Growth Strategy.*

Mobility

Mobility is necessary to sustain personal quality of life and the regional economy. For individuals, mobility requires an effective transportation system that provides safe, reliable, and affordable travel options for people of all ages, incomes and abilities. While the majority of people continue to travel by personal automobile, there are growing segments of the population (e.g. urban, elderly, teens, low income, minorities, and persons with disabilities) that rely on other modes of travel such as walking, bicycling, and public transportation to access employment, education and training, goods and services.

The movement of goods is also of vital importance to the local and regional economy. International trade is a significant source of employment and economic activity in terms of transporting freight, local consumption, and exporting of goods.

> *Goal Statement: A well-integrated, multi-modal transportation system transports people and goods effectively and efficiently to destinations within the region and beyond.*

System Operations

The design, management and operation of the transportation system are major factors that influence the region's growth and mobility.

> *Goal Statement: The regional transportation system is well-designed and managed to protect public investments, promote public health and safety, and achieve optimum efficiency.*

King County Metro Strategic Plan for Public Transportation 2011–2021

The King County Strategic Plan for Public Transportation 2011–2021 describes a vision for the county's future transportation system and sets objectives, goals, and strategies for getting there. The plan is consistent with other regional and countywide policies and plans, such as *Vision 2040*. Strategies to achieve Metro's goals are as follows:

- Increase safety and security in public transportation operations and facilities.
- Increase travel opportunities and public transportation products to serve appropriate markets (including low-income, elderly, and students) and mobility needs.
- Provide travel options and alternatives to regular fixed route-transit, such as ridesharing and other alternative or "right-sized" services.
- Expand services to account for the region's growing population and serve new transit markets.
- Support CTR and TDM strategies for employers, local jurisdictions, and other agencies.
- Enhanced service to and within jurisdictions that aggressively implement local land use plans, growth management strategies, and transit-oriented development.
- Design and modification of services and infrastructure to be more efficient and effective.
- Coordinate with Sound Transit, Community Transit, Pierce Transit, and the Washington State Ferry System to provide integrated efficient service to major destinations throughout the region.
- Improve access for pedestrians (with and without disabilities) and bicyclists, as well as the waiting environment at transit facilities with the highest use.
- Provide service that is easy to understand and use and promote. (King County Metro 2013)

Sound Transit

Sound Transit 2 expands mass transit with the addition of more regional express transit and link light rail and commuter rail service. This second mass transit phase builds onto the Sound Move strategic program, approved by voters in 1996. Sound Transit 2 expands the link light rail system to include link light rail from North Seattle into Snohomish County (Sound Transit 2008).

Inventory and Existing Conditions

The primary objective of this section of the report is to assess existing traffic conditions within and adjacent to the City of Sammamish. In order to identify existing traffic conditions, a comprehensive data collection process has been undertaken. The data was primarily collected from the City of Sammamish, King County, and WSDOT. The assessment of existing conditions serves as a baseline for measurement of capacity for future land use and transportation planning.

The following categories are included in this section:

- Identification of State Highways;
- Roadway Inventory;
- Traffic Signal Inventory;
- Roadway Design Standards;
- Traffic Level-of-Service Analysis;
- Analysis of Access to the city;
- Traffic Calming;
- Current Six-Year Transportation Improvement Program (TIP);
- Existing Transit Service; and
- Existing Non-Motorized Conditions.

Identification of State Highways

Identification of State Highways

No state highways are located within Sammamish city limits. However, three State-controlled highways, Interstate 90 (I-90), State Route 520 (SR 520), and State Route 202 (SR 202) provide the primary means of access into and out of the city. Improvements on these facilities will highly impact traffic conditions in Sammamish and in turn, conditions on the highways will be impacted by transportation conditions and improvements in Sammamish.

I-90 is a limited-access freeway that consists of three lanes in each direction and runs east-west, approximately one mile south of the southern Sammamish city limits. From just west of Issaquah to Seattle, I-90 also has an HOV lane in each direction. I-90 serves as the primary east-west freeway for regional travel within and beyond western Washington. To the west, it provides direct connection to the Cities of Bellevue, Mercer Island, and Seattle. To the east, it serves as the major east-west freeway across the State

of Washington, connecting to Spokane at the eastern state border, and running beyond to the eastern coast of the United States.

SR 520 is a limited access freeway that consists primarily of two to three lanes in each direction and runs east west between the Cities of Redmond, Bellevue and Seattle. There are HOV lanes present along various stretches of this highway, but these lanes are not continuous.

SR 202, which runs adjacent to the northern Sammamish city limits, connects to SR 520 west of the city. SR 202 (also called Redmond-Fall City Road in the area adjacent to Sammamish) consists of one lane in each direction, widening to two lanes in each direction west of Sahalee Way. SR 520/SR 202 is the primary east-west highway alternative to I-90. This highway corridor provides direct connection to the Cities of Redmond, Bellevue, Kirkland, and Seattle to the west, and to the Cities of Snoqualmie and North Bend to the east.

Both I-90 and SR 520 connect directly to Interstate 405 (I-405) and Interstate 5 (I-5) to the west, which are the primary north-south freeways within the region.

Highways of Statewide Significance

In 1998, Highways of Statewide Significance (HSS) legislation was passed by the Washington State Legislature and codified as RCW 47.06.140. Highways of Statewide Significance are those facilities deemed to provide and support transportation functions that promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant facilities should be planned from a statewide perspective (WSDOT 2004). Thus, level-of-service requirements for HSS highways are established by WSDOT, not by local standards.

Adjacent to the City of Sammamish, I-90 carries the HSS designation (Washington State Transportation Commission 2004) and thus is controlled by State level-of-service requirements. Additionally, SR 520 is also identified as an HSS.

Roadway Inventory

Roadway Functional Classification and Inventory

Transportation roadway systems consist of a hierarchy of streets that provide the dual functions of access to land and development, and through movement for travelers. Streets are classified based upon

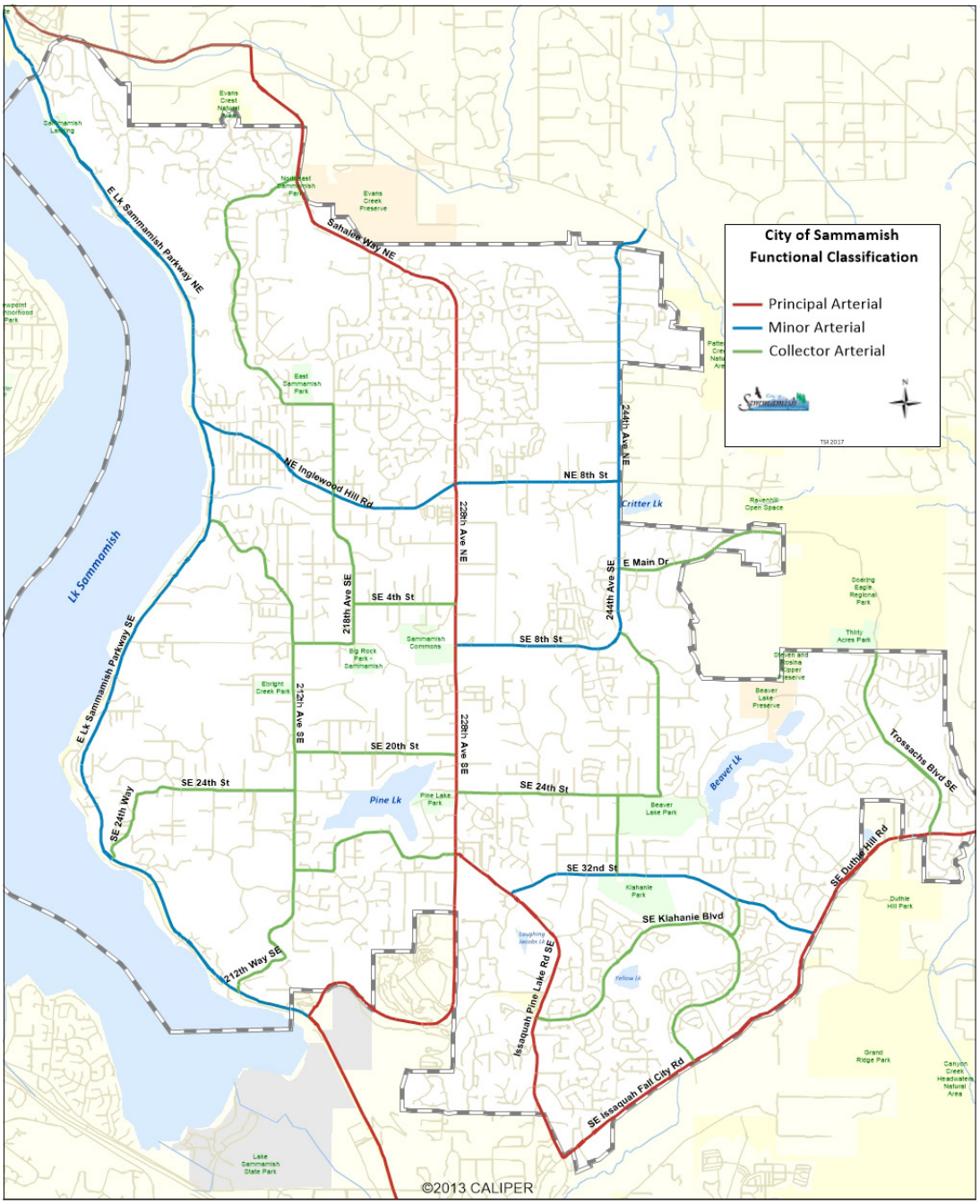
the relative degree to which they provide these functions. Land use policies and street standards typically vary according to the street function. For example, most jurisdictions designate minimum right-of-way requirements, stopping and entering sight distances, roadway width, design speed, design traffic volumes, access control, and sidewalk requirements in accordance with an adopted classification system. These requirements are usually codified in the jurisdiction's municipal code and/or adopted as street standards.

Based on state law, cities and counties are required to adopt a street classification system that is consistent with state and federal guidelines. In the State of Washington, these requirements are codified in RCW 35.78.010 and RCW 47.26.090. Each local jurisdiction is responsible for defining its transportation system into the following functional classifications: freeway, principal arterial, minor arterial, and collector. All other roadways are assumed to be local access streets.

Background Figure T–1 shows the existing classification of roadways for the City of Sammamish. The classifications are summarized as follows:

- **Freeways/Interstates** are multi-lane, high-speed, high-capacity roadways intended exclusively for motorized traffic. All access is controlled by interchanges and bridges separate road crossings. While I-90 to the south and SR 520 to the northwest are classified as freeways, no roadways of this designation exist within the city limits.
- **Principal Arterials** are roadways connecting between major community centers and facilities, and are often constructed with limited direct access to abutting land uses. Principal arterials serve high-volume corridors, carrying the greatest portion of through or long-distance traffic within a city. The selected routes should provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering the urban area. There is an estimated 11 miles of principal arterial roads in the city. The following is a list of roadways currently designated as principal arterials in the City of Sammamish:
  - Sahalee Way NE, between 228th Ave NE and the north city limits;
  - 228th Ave, between SE 43rd Way and Sahalee Way NE;
  - SE 43rd Way, between the south city limits and 228th Ave SE;
  - Issaquah-Pine Lake Rd SE, between city limits and 228th Ave SE;
  - SE Issaquah-Fall City Rd, between city limits and SE

Background Figure T–1
Existing Roadway Inventory and Functional Classifications



Duthie Hill Rd; and
  - SE Duthie Hill Rd, between Issaquah-Fall City Rd and the east city limits.

- **Minor Arterials** are roadways connecting centers and facilities within the community and serving some through traffic, while providing a greater level of access to abutting properties. Minor arterials connect with other arterial and collector roads extending into the urban area, and serve less concentrated traffic-generating areas, such as neighborhood shopping centers and schools. These road also serve as boundaries to neighborhoods and collect traffic from collector streets. Although the predominant function of minor arterial streets is the movement of through traffic, they also provide for considerable local traffic with origins or destinations at points along the corridor. The following is a list of roadways currently designated as minor arterials in the City of Sammamish:
  - E Lake Sammamish Pkwy, between the south city limits and the north city limits;
  - NE Inglewood Hill Rd, between E Lake Sammamish Pkwy and 228th Ave NE;
  - NE 8th St, between 228th Ave NE and 244th Ave NE;
  - SE 8th St, between 228th Ave SE and 244th Ave SE;
  - 244th Ave NE, between E Main Dr and the north city limits;
  - 244th Ave SE, between SE 8th St and E Main Dr;
  - SE 32nd Way/SE 32nd St-SE Issaquah Beaver Lk Rd, between Issaquah-Pine Lake Rd SE and SE Issaquah-Fall City Rd/SE Duthie Hill Rd.

- **Collector Arterials** are roadways that connect two or more neighborhoods or commercial areas, while also providing a high degree of property access within a localized area. These roadways "collect" traffic from local neighborhoods and carry it to the arterial roadways. Additionally, collector arterials provide direct access to services and residential areas, local parks, churches and areas with similar uses of the land. Collector arterials may be separated into principal and minor designations according to the degree of travel between areas and the expected traffic volumes. The following is a list of roadways currently designated as collector arterials in the City of Sammamish:

- NE 37th Way-205th Pl NE/NE 16th St, between Sahalee Way NE and 216th Ave NE;
- 216th Ave NE, between NE Inglewood Hill Rd and NE 16th St;
- Louis Thomson Rd, between 212th Ave SE and East Lake Sammamish Pkwy NE;
- 212th Ave, between E Lk Sammamish Pkwy SE and Louis Thomson Rd;
- SE 8th St, between 212th Ave SE and 218th Ave SE;
- 218th Ave SE, between SE 8th St and SE 4th St;
- SE 4th St, between 218th Ave SE and 228th Ave SE;
- 248th Ave SE, between SE 24th St and SE 14th St;
- E Main Dr, between 244th Ave SE and the east city limits;
- SE 20th St, between 212th Ave SE and 228th Ave SE;
- SE 24th Way/SE 24th St, between E Lk Sammamish Pkwy SE and 212th Ave SE;
- SE 24th St, between 228th Ave SE and 248th Ave SE;
- Trossachs Boulevard SE, between SE Duthie Hill Rd and the north city limits;
- SE Windsor Blvd, between SE 8th St and SE 14th St;
- South Pine Lake Route (SE 32nd St-216th Ave SE-SE 28th St-222nd Pl SE-SE 30th St), between 212th Ave SE and 228th Ave SE;
- 244th Ave SE, between SE 24th St and SE 32nd St;
- SE Klahanie Blvd/Klahanie Dr SE, between Issaquah-Pine Lake Rd SE and SE Issaquah-Fall City Rd;
- 256th Ave SE, between SE Issaquah-Beaver Lake Rd and SE Klahanie Blvd; and
- 218th Ave SE-217th Ave NE-216th Ave NE, between SE 4th St to Inglewood Hill Rd.

Background Table T–1 provides a comparison of the City of Sammamish arterial and collector roadway miles to Federal Highway Administration (FHWA) guidelines (FHWA 1989), which must be followed to qualify the City of Sammamish streets for State and Federal grant programs.

The topography and development patterns within the City of Sammamish limit opportunities to add Principal or Minor Arterial routes. Some additional Collector mileage could be added and the totals would still remain within the FHWA guidelines.

Background Table T–1
Miles of Roadway by Functional Classification

FUNCTIONAL CLASSIFICATION	EXISTING MILES OF ROADWAY IN SAMMAMISH[1]	TYPICAL RANGE OF PERCENTAGE OF TOTAL ROADWAY[2]	TYPICAL RANGE OF MILES BASED UPON FHWA GUIDELINES
Freeway & Principal Arterial	14	5%–10%	10–20
Minor Arterial	16	10%–15%	16–24
Collector Arterial	21	5%–10%	8–16
Non-Arterial Street	157	—	135–167
TOTAL	208	—	207

Traffic Signal and Roundabout Intersection Inventory

An inventory of the signalized and roundabout intersections, and those with four way flashers within and nearby the City of Sammamish was conducted. The locations are illustrated in Background Figure T–2, and are the intersections that most directly affect City of Sammamish residents' travel patterns.

Freight Routes

See Volume I, Transportation Element Policy T.1.5 on page 86.

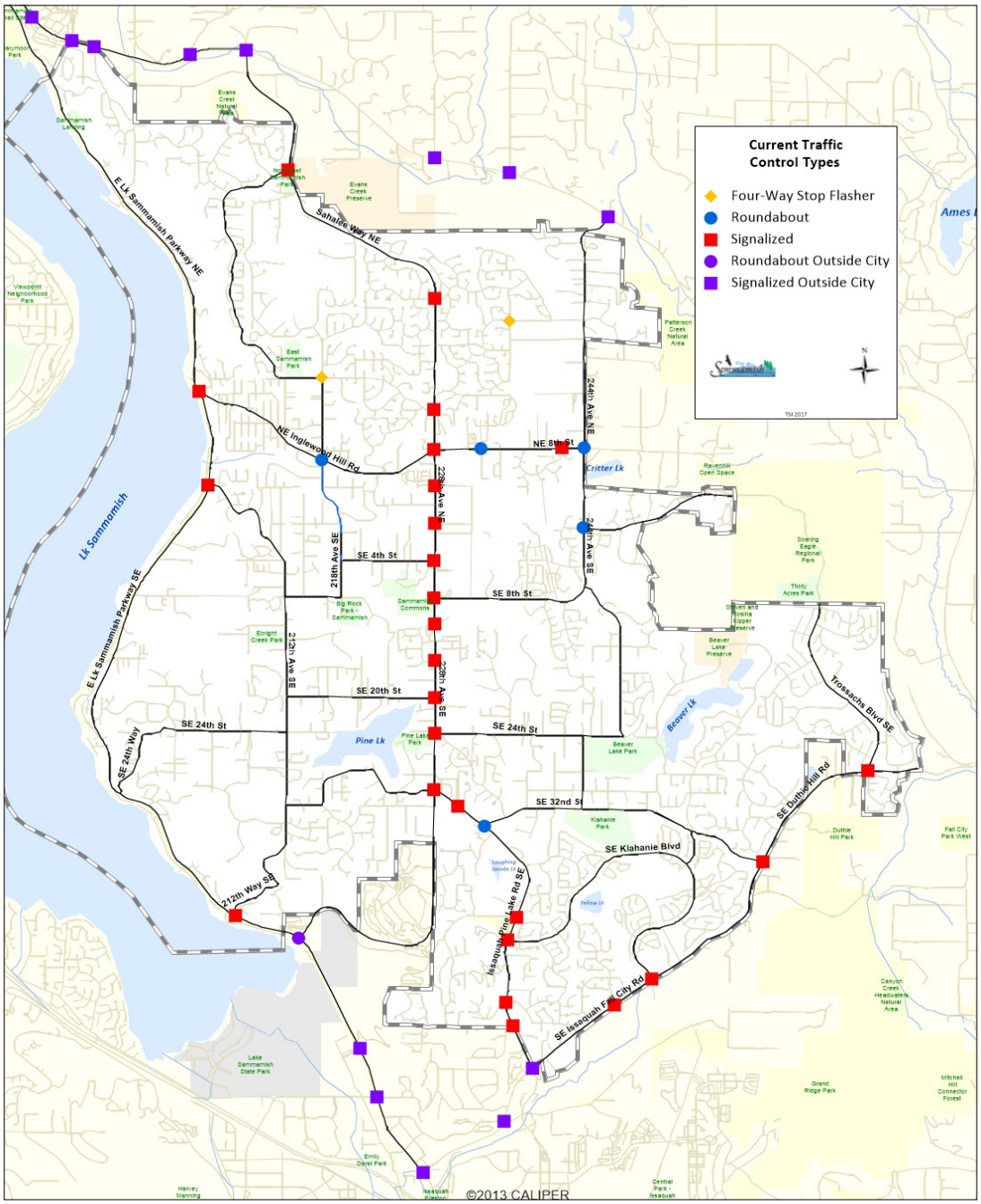
Freight destined to and from Sammamish is associated primarily with retail oriented commercial developments in the city. There are no significant industrial, manufacturing, or import/export freight generators in the city. Limited through freight associated with FedEx sorting facilities in Issaquah to the south and UPS sorting facilities in Redmond to the north travel through the city. Freight traffic uses two corridors. Through freight typically uses East Lake Sammamish Parkway and local freight traffic uses Sahalee Way/228th Ave. Background Figure T–3 shows these routes.

See Volume I, Transportation Element Policy T.3.4 on page 90.

Roadway Design Standards

The City has adopted standards for development of City streets, as documented in the *2016 Public Works Standards* (December 31, 2016). As the city reconstructs roadways to improve vehicular capacity and safety, they will become more urban in nature. The Goals, Objectives and Policies of the Transportation Element relate street design to the desires of the local community, and advise that design be at a scale commensurate with the function that the street serves. Guidelines are therefore important to provide designers with essential elements of street design as desired by the community.

Background Figure T–2
Current Signal, Roundabout, and Four-Way Flasher Locations



Background Figure T–3
Freight Routes

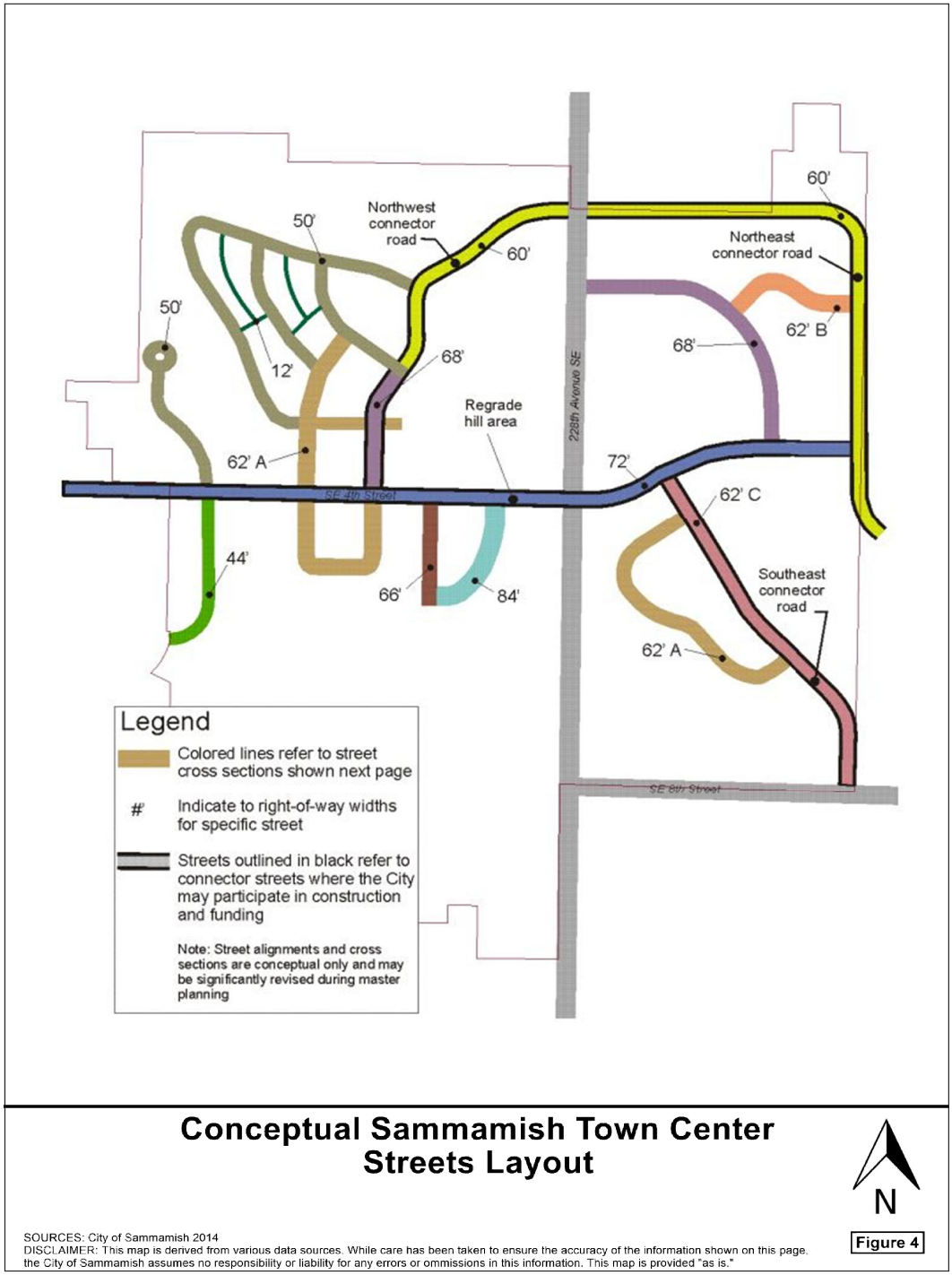
In June 2008, the City of Sammamish adopted the Sammamish Town Center Plan. The Town Center Plan established policy direction that amends the previous Comprehensive Plan. The Town Center provides a central area for the increased residential and commercial densities. Transportation improvements associated with the Town Center are intended to provide safe, efficient and attractive connections to central uses and amenities, minimize congestion impacts within the Town Center and surrounding areas, and promote alternative travel modes. To support the Town Center Plan improvement concepts including roadway cross-sections specific to roadways supporting the Town Center were developed. Background Figure T–4 and Background Figure T–5 illustrate the conceptual Sammamish Town Center street cross-sections (Sammamish Town Center Plan June 2008).

Traffic Counts

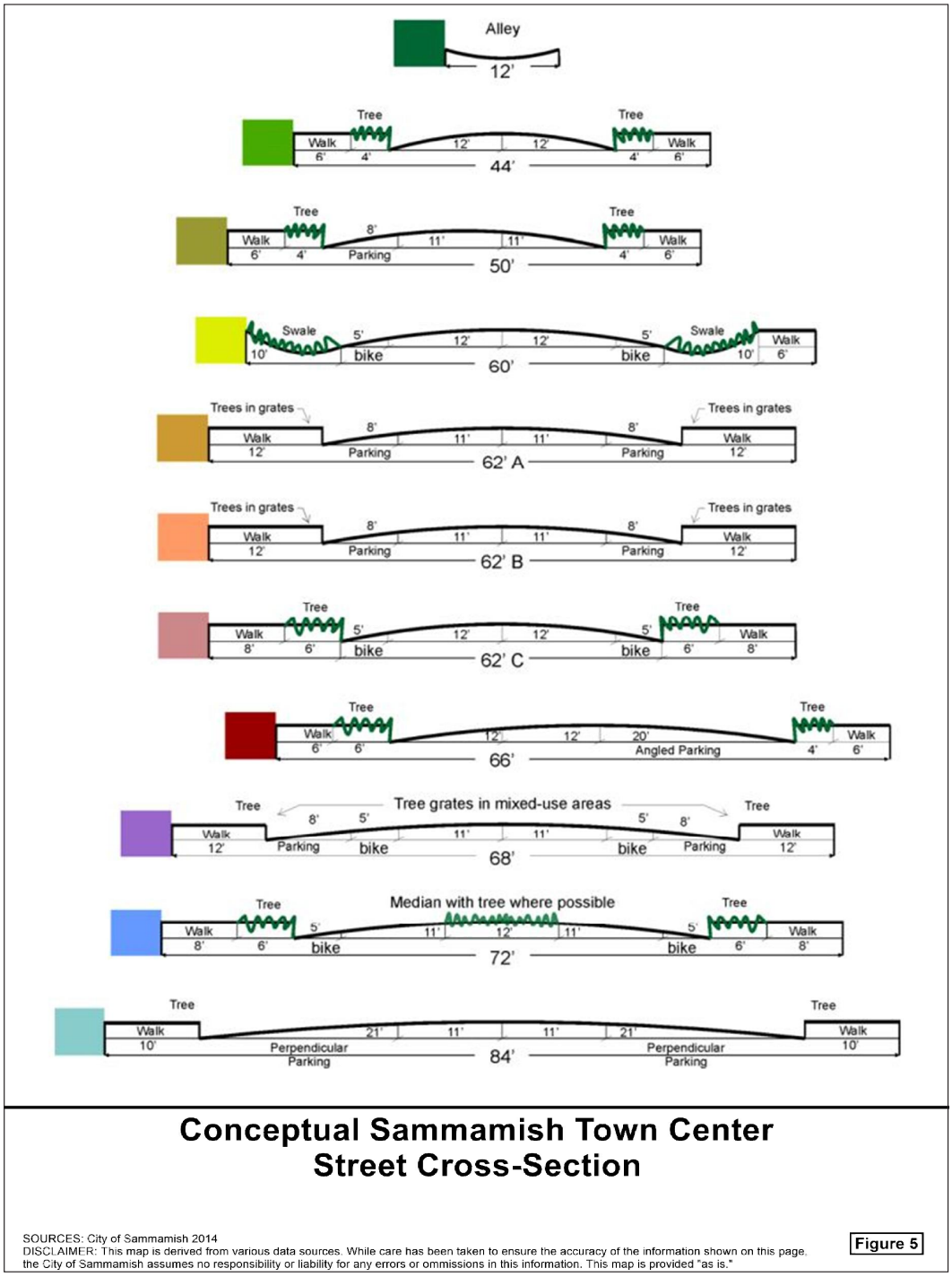
Daily traffic counts were collected in 2016 at 74 locations throughout the city. Average weekday daily traffic (AWDT) counts were calculated by averaging the daily traffic counts of Monday, Tuesday, Wednesday, Thursday, and Friday during a typical week. Locations and volumes for existing AWDTs are listed in Background Table T–2 and illustrated in Background Figure T–6. The highest traffic volumes shown occur near the high schools and City Hall on 228th Ave SE.

In addition, intersection turning movement counts were collected at 43 locations during the AM and PM peak hours within the city in 2016. These counts were collected during a Tuesday and Thursday in April and May, in order to reflect typical weekday conditions. These counts consider vehicle traffic volumes making each turn movement during the AM and PM peak hours. These counts are collected manually and are further described in the following section.

Background Figure T–4
Sammamish Town Center Plan Roadway Locations



Background Figure T–5
Sammamish Town Center Plan Roadway Standards



Conceptual Sammamish Town Center Street Cross-Section

SOURCES: City of Sammamish 2014
DISCLAIMER: This map is derived from various data sources. While care has been taken to ensure the accuracy of the information shown on this page. the City of Sammamish assumes no responsibility or liability for any errors or ommissions in this information. This map is provided "as is."

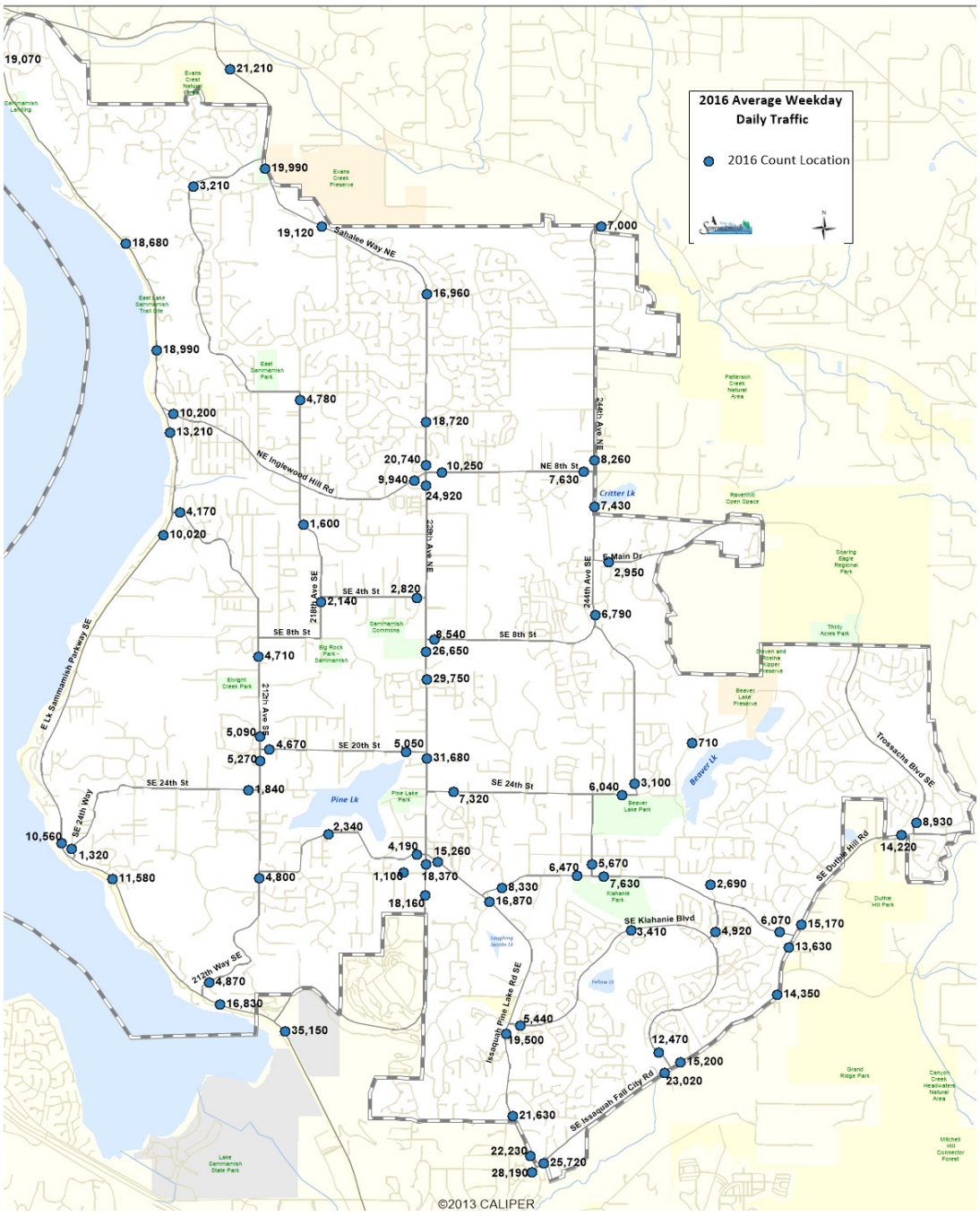
Figure 5

Background Table T–2
2016 Average Weekday Daily Traffic (AWDT)

	LOCATION	2016 AWDT
1	East Lake Sammamish Parkway NE, south of 187th Avenue NE	19,070
2	Sahalee Way SE, south of NE 50th Street	21,210
3	244th Ave NE, south of SR-202	7,000
4	East Lake Sammamish Parkway SE, south of Louis Thompson Road	10,020
5	212th Avenue SE, south of SE 8th Street	4,710
6	228th Avenue SE, south of SE 10th Street	29,750
7	East Lake Sammamish Parkway, south of 212th Avenue SE	16,830
8	228th Avenue SE, south of SE 32nd Street	18,160
9	Issaquah-Pine Lake Road, east of 228th Avenue SE	15,260
10	244th Avenue SE, north of SE 32nd Street	5,670
11	Beaver Lake Drive SE, north of Issaquah-Beaver Lake Road	2,690
12	SE Duthie Hill Road, north of Issaquah-Beaver Lake Road	15,170
13	East Lake Sammamish Parkway, south of SE 43rd Way	35,150
14	Issaquah-Fall City Road, southwest of Issaquah-Pine Lake Road	28,190
15	Issaquah-Pine Lake Road, south of SE Klahanie Boulevard	19,500
16	Trossachs Boulevard SE, north of SE Duthie Hill Road	8,930
17	East Lake Sammamish Parkway, south of NE Inglewood Hill Road	13,210
18	East Lake Sammamish Pkwy, north of NE 18th Place	18,990
19	East lake Sammamish Parkway, south of SE 32nd Street	11,580
20	NE Inglewood Hill Road, east of East Lake Sammamish Parkway	10,200
21	NE 8th Street, east of 228th Avenue NE	10,250
22	228th Avenue NE, north of NE 8th Street	20,740
23	228th Avenue NE, south of NE Inglewood Hill Road/NE 8th Street	24,920
24	228th Avenue SE, south of SE 8th Street	26,650
25	212th Avenue SE, south of SE 20th Street	5,270
26	228th Avenue SE, south of Issaquah-Pine Lake Rd	18,370
27	SE 20th Street, west of 228th Avenue SE	5,050
28	SE 28th Street, east of 218th Avenue SE (South Pine Lake Route)	2,340
29	SE 8th Street, east of 228th Ave SE	8,540
30	SE 24th Street, east of Audubon Park Drive	7,320
31	244th Avenue SE, north of SE Windsor Boulevard	6,790
32	East Main Drive, east of 244th Avenue SE	2,950
33	244th Avenue NE, north of NE 8th Street	8,260
34	NE 8th Street, west of 244th Avenue NE	7,630
35	South Pine Lake Route (Issaquah-Pine Lake Rd ext), west of 228th Ave SE	4,190
36	West Beaver Lake Drive SE, south of SE 18th Place	710
37	205th Place NE, south of NE 37th Way	3,210

	LOCATION	2016 AWDT
38	SE 4th Street, west of 228th Avenue SE	2,820
39	248th Avenue SE, north of SE 24th Street	3,100
40	244th Ave NE, north of NE 3rd Way (on bridge)	7,430
41	216th Avenue NE, south of NE 16th Street	4,780
42	217th Avenue NE, south of NE 4th Street	1,600
43	218th Avenue SE, south of SE 4th Street	2,140
44	Louis Thompson Road NE, east of East Lake Sammamish Parkway NE	4,170
45	212th Way SE, east of East Lake Sammamish Parkway SE	4,870
46	SE 32nd Street, west of 228th Avenue SE	1,100
47	SE 32nd Street, west of 244th Avenue SE	6,470
48	SE Issaquah-Beaver Lake Road, west of SE Duthie Hill Road	6,070
49	SE 32nd Street, east of 244th Avenue SE	7,630
50	SE Duthie Hill Road, south of SR-202	7,530
51	East Lake Sammamish Parkway NE, south of NE 30th Street	18,680
52	East Lake Sammamish Parkway SE, north of SE 24th Way	10,560
53	SE 24th Way, east of East Lake Sammamish Parkway SE	1,320
54	212th Avenue SE, north of SE 20th Street	5,090
55	212th Avenue SE, south of SE 32nd Street	4,800
56	SE 20th Street, east of 212th Avenue SE	4,670
57	Sahalee Way NE, north of NE 25th Way	16,960
58	228th Avenue NE, north of NE 12th Place	18,720
59	228th Avenue SE, south of SE 20th Street	31,680
60	Issaquah-Pine Lake Road, south of SE 32nd Way	16,870
61	Issaquah-Pine Lake Road SE, north of SE 48th Street	21,630
62	SE 32nd Way, east of Issaquah-Pine Lake Road SE	8,330
63	SE Klahanie Boulevard, east of Issaquah-Pine Lake Road SE	5,440
65	SE 24th Street, west of 244th Avenue SE	6,040
66	SE Issaquah-Fall City Road, northeast of Issaquah-Pine Lake Road SE	25,720
67	SE Issaquah-Fall City Road, west of Klahanie Drive SE	23,020
68	SE Issaquah-Fall City Road, east of Klahanie Drive SE	15,200
69	Klahanie Drive SE, north of SE Issaquah-Fall City Road	12,470
70	SE Klahanie Boulevard, northeast of SE 37th Street	3,410
71	SE Issaquah-Fall City Road, south of SE Duthie Hill Road	14,350
72	SE Duthie Hill Road, south of SE Issaquah-Beaver Lake Road	13,630
73	SE Duthie Hill Road, west of Trossachs Boulevard SE	14,220
74	Sahalee Way NE, south of NE 37th Way	19,990
75	Sahalee Way NE, south of 217th Place NE	19,120

Background Figure T–6
2016 Average Weekday Daily Traffic



Traffic Level-of-Service Analysis

See Volume I, Transportation Element Policy T.1.3 on page 86.

Level-of-Service (LOS) is the primary measurement used to determine the operating condition of an intersection. LOS is determined by the average delay of all approaches for signalized, roundabouts (RAB), and all way stop-controlled intersections. The LOS for two way stop-controlled intersections is determined by the average delay for the worst minor approach, or left turn movement of the major street. The following section describes the traffic counts volumes that were collected, the approaches used for intersection LOS analysis, and the results of the analyses under existing conditions.

The Highway Capacity Manual (HCM) is the recognized source for the techniques used to measure transportation facility performance. Using the HCM procedures, the quality of controlled intersection operations is graded into one of six levels-of-service: A, B, C, D, E, or F.

Intersection Level of Service

The intersection level of service (LOS) is calculated using the standard analysis procedures described in this section for the AM and PM peak hours. Intersections with LOS' below the defined standards will be considered deficient. For intersections of roadways with different functional classifications, the standard for the higher classification applies to the entire intersection.

The intersection LOS standards adopted in this Transportation Element are LOS C for intersections that include Minor Arterial or Collector Arterial roadways, and LOS D or E for intersections that include Principal Arterials. Attaining LOS D at major intersections with high approach volumes can result in large intersections with exclusive right-turn lanes, double left-turn lanes and additional through lanes. While these improvements reduce delays for vehicles, they can result in very long crossing distances for pedestrians, as well as increased pedestrian-vehicle conflicts. Therefore, if LOS D for intersections on principal arterials cannot be attained with fewer than four approach lanes in any direction, the LOS may be reduced to LOS E.

AM and PM Intersection Level of Service

Intersection turning movement counts were collected at 43 locations during the AM and PM peak hours within the City in 2016. These

counts were collected during a Tuesday and Thursday in April and May, in order to reflect typical weekday conditions. Level of service analysis was performed for existing AM and PM peak- hour conditions at the 43 intersections.

Background Table T–5 summarizes the intersection locations, the existing traffic control for each intersection, and the calculated LOS using the HCM methodology based upon 2016 traffic counts for the AM (7-8) and PM (4:45-5:45) peak hours. The intersection LOS is also illustrated in Background Figure T–7.

Intersection Level of Service Criteria

See Volume I, Transportation Element Policy T.1.3 on page 86.

Level of service for intersections is determined by the average amount of vehicle control delay experienced by vehicles at the intersection.

For signalized and roundabout (RAB) controlled intersections the LOS is calculated based on average delay for the entire intersection. Background Table T–3 summarizes the LOS criteria for signalized and RAB controlled intersections.

Background Table T–3
Level-of-Service Criteria for Signalized and Roundabout Intersections

LEVEL-OF-SERVICE (LOS)	AVERAGE DELAY PER VEHICLE (SECONDS/VEHICLE)
A	≤ 10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

The LOS criteria for two way stop controlled (TWSC) and all way stop controlled (AWSC) intersections have different threshold values than those for signalized intersections, primarily because drivers expect different levels of performance from different types of transportation facilities. In general, stop-controlled intersections are expected to carry lower volumes of traffic than signalized and RAB controlled intersections. Thus for the same LOS, a lower level of delay is acceptable at stop-controlled intersections than it is for signalized and RAB controlled intersections.

For TWSC intersections, LOS is calculated based on the control delay of the worst approach, which tends to be the stop-controlled minor streets, or for left turn movements from major streets, whichever is worse.

Background Table T–4 summarizes the LOS thresholds for both TWSC and AWSC intersections.

Background Table T–4
Level-of-Service Criteria for Stop Controlled Intersections

LEVEL-OF-SERVICE (LOS)	AVERAGE DELAY PER VEHICLE (SECONDS/VEHICLE)
A	≤ 10
B	> 10–15
C	> 15–25
D	> 25–35
E	> 35–50
F	> 50

Source: HCM 2010.

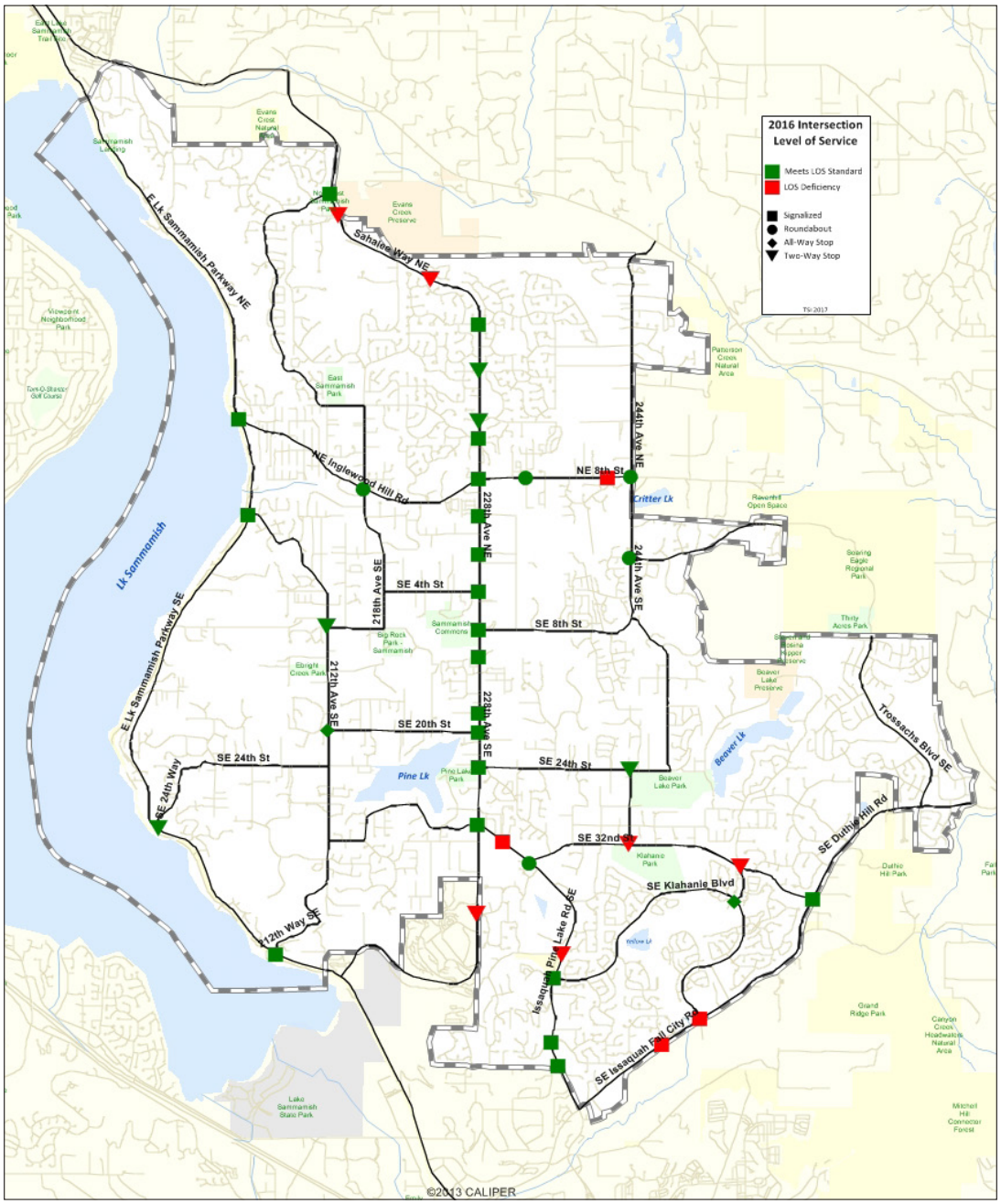
Table T-5 shows that 33 of the 43 study intersections satisfy their adopted LOS standard in the AM and PM peak hours.

Background Table T–5
2016 Intersection LOS – AM and PM Peak Hour

	INTERSECTION	LOS STANDARD[1]	TRAFFIC CONTROL[2]	AM[3] DELAY[3]	AM LOS[1]	PM[3] DELAY[4]	PM LOS[1]
1	Issaquah-Pine Lake Road and SE 48th Street	D	Signal	27.4	C	13.1	B
2	228th Avenue NE and NE 12th Place	D	Signal	12.4	B	8.3	A
3	Klahanie Drive SE and SE Issaquah-Fall City Road	D	Signal	59	E	161	F
4	244th Avenue SE and SE 24th Street	C	TWSC	16.6	C	14.5	B
5	SE 32nd Street and 244th Avenue SE	C	TWSC	17.7	C	37.3	E
6	Issaquah-Pine Lake Road and SE 32nd Way	D	RAB	5.2	A	5.3	A
7	228th Avenue SE and SE 40th Street	D	TWSC	32	D	67.4	F*
8	SE Klahanie Boulevard and 256th Avenue SE	C	AWSC	15.4	C	14	B
9	247th Place SE and SE Issaquah-Fall City Road (Pacific Cascade Middle)	D	Signal	63.8	E	32.4	C
10	Sahalee Way NE and NE 36th Street	D	TWSC	224.4	F	69.6	F
11	242nd Avenue NE and NE 8th Street	C	Signal	38.7	D	12.1	B
12	228th Avenue SE and SE 8th Street	D	Signal	12.9	B	14.4	B
13	228th Avenue NE and NE 19th Drive[5]	D	TWSC	22.6	C	21.2	C
14	216th Avenue NE and NE Inglewood Hill Road	C	RAB	6.9	A	6.4	A
15	228th Avenue NE and NE Inglewood Hill Road/NE 8th Street	D	Signal	29.7	C	21	C
16	228th Ave NE and NE 4th Street	E	Signal	32	C	15.5	B
17	228th Avenue SE and SE 4th Street	E	Signal	16.6	B	10.8	B
18	212th Avenue SE and SE 8th Street	C	TWSC	10.7	B	12.5	B
19	228th Avenue SE and SE 16th Street	D	Signal	10.1	B	9.7	A
20	East Lake Sammamish Parkway and 212th Way SE	C	Signal	5.1	A	4.5	A
21	East Lake Sammamish Parkway and SE 24th Way	C	TWSC	15.7	C	18.8	C
22	212th Avenue SE and SE 20th Street	C	AWSC	10.5	B	12.2	B
23	East Lake Sammamish Pkwy and Louis Thompson Road NE	C	Signal	10	A	10.9	B
24	East Lake Sammamish Pkwy and Inglewood Hill Road	C	Signal	23.3	C	7	A
25	Sahalee Way NE and NE 37th Way	D	Signal	12.8	B	10.4	B
26	NE 8th Street and 244th Avenue NE	C	RAB	5.4	A	4.4	A
27	228th Avenue SE and SE 20th Street	D	Signal	10.6	B	13.5	B
28	228th Avenue SE and SE 24th Street	E	Signal	16.5	B	27.4	C
29	228th Avenue SE and Issaquah-Pine Lake Road	E	Signal	23	C	35.4	D
30	Issaquah-Pine Lake Road SE and SE Klahanie Boulevard	D	Signal	28.9	C	19.5	B
31	Duthie Hill Road and Issaquah-Beaver Lake Road	D	Signal	29.8	C	18.9	B
32	256th Ave SE/E Beaver Lake Dr SE and Issaquah-Beaver Lake Road	C	TWSC	275.2	F	32.3	D
33	228th Avenue NE and NE 14th Street[5]	D	TWSC	22.9	C	23.4	C
34	228th Avenue NE and NE 25th Way	D	Signal	16.9	B	11.1	B
35	Issaquah-Pine Lake Road and SE 42nd Street	D	TWSC	18.2	C	51.4	F
36	Issaquah-Pine Lake Road and 230th Lane SE/231st Lane SE	D	Signal	79.4	E	22	C
37	NE 28th Place/223rd Avenue and Sahalee Way NE	D	TWSC	361.1	F	57.3	F
38	Issaquah-Pine Lake Road and SE 47th Way/238th Way SE	D	Signal	13	B	12.6	B
39	233rd Avenue NE and NE 8th Street	C	RAB	17.2	B	6.2	A
40	228th Avenue SE and East Main Street	D	Signal	3.4	A	5.4	A
41	244th Avenue NE and East Main Drive	C	RAB	5.8	A	4.8	A
42	Duthie Hill Road and Trossachs Boulevard SE	D	Signal	28.3	C	23.2	C
43	228th Avenue SE and SE 10th Street (Skyline High School)	D	Signal	7.7	A	7.4	A

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D except where LOS D cannot be met with three approach lanes in any direction. In those cases, LOS E is assigned. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *Traffic Control: Signal=signalized; TWSC=two-way stop-controlled; AWSC=all-way stop-controlled; RAB = roundabout*
3. *AM peak hour is from 7:00-8:00 AM. PM peak hour is from 4:45-5:45 PM.*
4. *Delay is measured in seconds per vehicle. At signal, RAB, and AWSC intersections, it represents average delay for the intersection. For TWSC intersections, it represents average delay for the worst minor approach or major street left turn movements. Analysis is based on 2016 traffic counts.*
5. *LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2000). All other intersections are based on HCM 2010.*

Background Figure T–7
2016 Intersection Level of Service



Concurrency

Level of service standards are used to evaluate the transportation impacts of long-term growth and concurrency. In order to monitor concurrency, the city must adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified.

A Concurrency Management System (CMS) is a policy procedure designed to enable a City or County to determine whether adequate facilities are available to serve new development. The transportation element of the Growth Management Act (GMA) requires each City and County planning department to incorporate a Concurrency Management System into their comprehensive plan.

In a Concurrency Management System, local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development causes the LOS on a transportation facility to decline below the standard adopted in the Transportation Element of the Comprehensive Plan. Transportation improvements or strategies that accommodate the impacts of development can be made concurrent with the development. (State of Washington Growth Management Act, RCW 36.70A, 1990)

The City of Sammamish has adopted an intersection LOS to monitor for concurrency on selected functionally classified roadways within the City.

Key Intersections Outside of the City

The city also collected AM and PM peak hour turning movement counts in 2016 at the following key intersections outside of Sammamish city limits:

- East Lake Sammamish Pkwy and SR 202 (NE Redmond Fall City Rd;
- E Lk Sammamish Pkwy and SE 43rd Way;
- Sahalee Way NE and SR 202 (Redmond Fall City Rd);
- 244th Ave NE and SR 202 (NE Redmond Fall City Rd
- Issaquah Pine Lk Rd SE and SE Issaquah Fall City Rd

While the city does not control the operations of these intersections, their function has a strong impact on Sammamish residents' ability to assess opportunity in the region. Traffic analysis shows that Sammamish residents experience longer delays leaving the city in the morning and entering in the evening. The city is committed to

partnering with the jurisdictions who own those intersections to find solutions to these key regional facilities.

Collision Analysis

Collision statistics were compiled between 2010 and 2014 by the WSDOT Transportation Data Office for the City of Sammamish. During this five year period there were a total of 1,015 collisions reported. Background Table T–6 summarizes the collisions by type and Background Figure T–8 shows the location and type of collisions within the city.

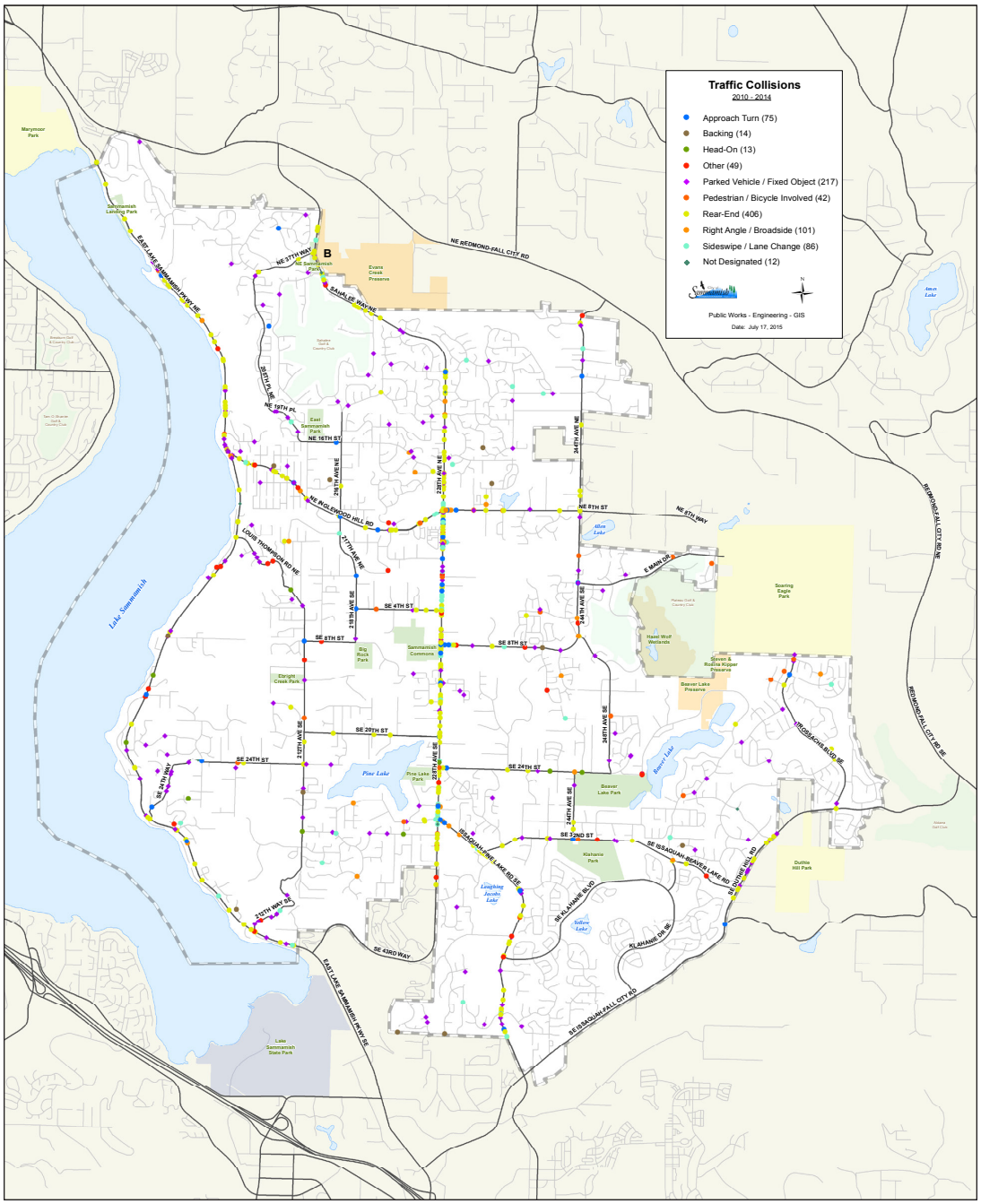
The 228th Avenue corridor shows a high number of collisions likely due to high volumes, vehicle speeds and inexperienced drivers, the latter related to the various schools along the corridor. In addition, the 228th Avenue corridor provides access to the city's major commercial and institutional areas.

Collisions on the East Lake Sammamish Parkway corridor were concentrated at NE Inglewood Hill Road, a major access point to and from the city's existing major commercial area.

Topography and weather conditions likely play a role in a portion of the collisions reported.

There were 42 total pedestrian and bicycle-related collisions reported, or 8.4 per year. These collision were spread throughout the city. Goals to reduce collisions, particularly pedestrian and bicycle-related collisions should be addressed.

Background Figure T–8
City of Sammamish Traffic Collisions (2010–2014)



Background Table T–6
Collision Summary (2010–2014)

COLLISION TYPE	TOTAL COLLISIONS	COLLISIONS PER YEAR
Rear-End	406	81.2
Parked Vehicle/Fixed Object	217	43.4
Right-Angle/Broadside	101	20.2
Sideswipe/Lane Change	86	17.2
Approach Turn	75	15.0
Other	49	9.8
Pedestrian/Bicycle	42	8.4
Backing	14	2.8
Head-On	13	2.6
Not Designated	12	2.4

Traffic Calming

As population and employment in the Sammamish region continue to grow, City streets are experiencing increased traffic pressure. City policy can accommodate growth in a way that can protect neighborhoods from unsafe impacts of traffic through the following measures:

- Develop standards to improve the function, safety, and appearance of the City street system;
- Develop facilities for pedestrians and bicyclists as alternative travel modes to the automobile;
- Protect the quality of life in residential neighborhoods by limiting vehicular traffic and monitoring traffic volumes on collector streets;
- Encourage improvements in vehicular and pedestrian traffic circulation within the City;
- Maintain a consistent LOS on the arterial system that mitigates impacts of new growth and is adequate to serve adjoining land uses; and
- Maintain the public street system to promote safety, comfort of travel, and cost-effective use of public funds.

Traffic calming programs serve to deter through-traffic on local residential streets, protect neighborhoods from vehicular traffic moving at excessive speeds, and discourage parking unrelated to residential activities.

Presently, traffic calming devices within the City of Sammamish are located primarily along:

- NE 14th Drive from 228th Avenue NE to 220th Avenue NE;
- NE 19th Drive from 228th Avenue NE to 236th Avenue NE;
- NE 25th Way from 228th Avenue NE to 239th Avenue NE;
- 217th Avenue NE from Inglewood Hill Road to Main Street;
- SE 32nd Street from 228th Avenue SE to 220th Avenue SE;
- NE 14th Street from 228th Avenue NE to 235th Avenue NE;
- Audubon Park Drive from SE 24th Street to SE 32nd Street;
- 205th Place NE from NE 31st Street to NE 37th Way;
- SE 30th Street from 244th Avenue SE to 252nd Avenue SE;
- 230th Way SE from SE 42nd Street to SE 48th Street;
- SE Windsor Blvd from 244th Avenue SE to Windsor Drive SE;
- NE 20th Way from 216th Avenue NE to NE 25th Way; and
- Sahalee Way NE at NE 28th Place.

See Volume I, Transportation Element Policy T.2.12 on page 88.

Traffic calming features include digital speed boards, traffic circles, chokers, speed humps and curb bulb-outs.

Six-Year Transportation Improvement Program (TIP)

Background Table T–7 summarizes the list of projects that make up the Six-Year Transportation Improvement Program (TIP), 2016–2021. Funding for some of these projects is secured, while funding for other projects is not. Detailed evaluation of future conditions should assume completion only of financially committed projects.

Existing Non-Motorized Conditions

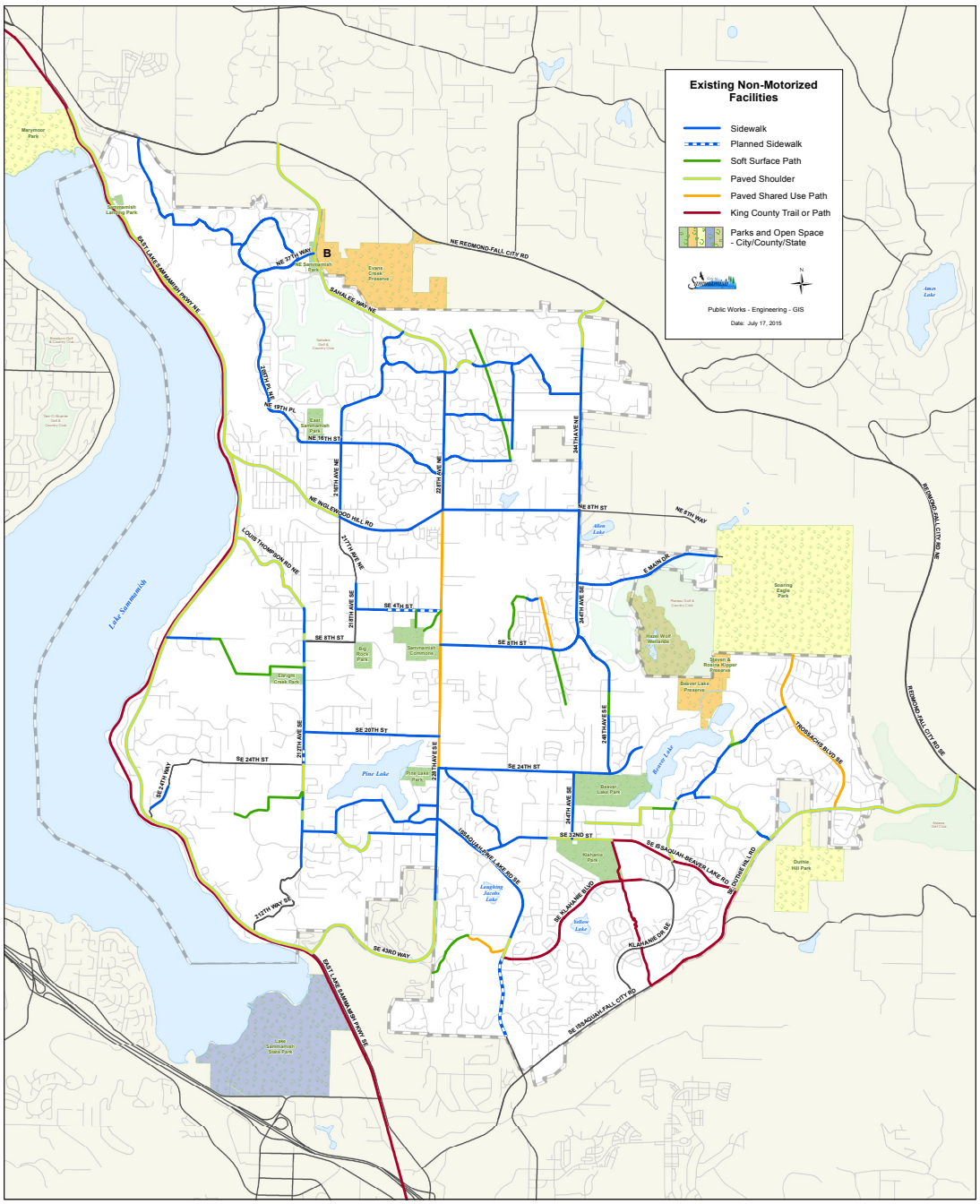
An inventory of existing non-motorized facilities, including sidewalks and walkways was undertaken to identify any system gaps. Roughly 50% of the city's local roads have sidewalks and most of the primary and minor arterials includes sidewalks, paved shoulders or shared use paths. Background Figure T–9 illustrates existing non-motorized facilities and includes the locations of the public open spaces and parks.

Background Table T–7
2016–2021 Six Year Transportation Improvement Program (TIP)

TIP #	PROJECT TITLE[1]	PROJECT EXPENDITURE (X $1,000)[2]						
		Total Project	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*
1	SE 4th St—218th Ave SE to 228th Ave SE [C,CP]	15.171	0.725	9.446	5.000	—	—	—
2	Issaquah-Pine Lake Rd—Klahanie Blvd to SE 32nd [C,CP]	8.000	—	—	—	1.200	2.000	4.800
3	Issaquah-Pine Lake Rd—SE 48th to Klahanie Blvd [C,CP]	17.618	—	0.800	2.500	7.159	7.159	—
4	East Lake Sammamish Pkwy SE / SE 24th St Intersection [C,CP]	3.698	—	—	—	—	—	—
5	Sahalee Way NE—220th Ave NE to North City Limits [C,CP]	14.588	1.600	5.200	7.788	—	—	—
6	228th Ave SE—SE 32nd St to Issaquah-Pine Lake Rd [CP]	0.675	0.675	—	—	—	—	—
7	Issaquah-Fall City Rd—SE 48th St to Klahanie Dr SE [CP]	14.000	0.800	1.000	6.100	6.100	—	—
8	Issaquah-Fall City Rd—Klahanie Dr SE to Issaquah-Beaver Lk Rd [CP]	9.000	—	—	0.600	1.200	3.600	3.600
9	Public Works Trust Fund Loan Repayment (228th Avenue) [CP]	3.256	0.549	0.547	0.544	0.541	0.539	0.536
10	212th Ave SE Gap Project—SE 24th St to Crossings Subdivision [CP,NM]	0.600	0.600	—	—	—	—	—
11	Non-motorized Transportation Projects [CP,NM]	4.500	0.750	0.750	0.750	0.750	0.750	0.750
12	Sidewalk Projects [NM,P]	0.960	0.160	0.160	0.160	0.160	0.160	0.160
13	Intersection and Safety Improvements [P]	1.200	0.200	0.200	0.200	0.200	0.200	0.200
14	Neighborhood CIP [P]	0.600	0.100	0.100	0.100	0.100	0.100	0.100
TOTAL EXPENDITURES		93.866	6.159	18.203	23.742	17.410	14.508	10.146

1. *Project Type: C = Concurrency Project; CP = Capital Project; NM = Non-Motorized Project; P = City Program.*
2. *All project costs are in 2013 dollars.*

Background Figure T–9
City of Sammamish Existing Non-Motorized Facilities



Existing Transit Service

Transit Service

King County Metro and Sound Transit provide transit service to the City of Sammamish. Four transit routes currently serve the City, with service as summarized in Background Table T–8.

Background Table T–8
Existing Transit Service for the City of Sammamish

ROUTE #	ROUTE DESCRIPTION	SERVICE	AVERAGE HEADWAY (MINUTES) *Peak*	*Midday*
216[1]	Downtown Seattle to Issaquah Highlands P&R, to South Sammamish P&R and to Bear Creek P&R	Weekday AM and PM peak hours	30	—
219[1]	Downtown Seattle to Issaquah Highlands P&R, to South Sammamish P&R and to Redmond	Weekday AM and PM peak hours	30–40	—
269[1]	Issaquah TC to Issaquah Highlands P&R, to Bear Creek P&R and to Overlake P&R	Weekday AM and PM peak hours	20–30	—
554[2,3]	NE Redmond-Fall City Road at 185th Ave NE to South Sammamish P&R, to Issaquah TC, to North Mercer Island and to downtown Seattle	Weekday Saturday	60–120 60–120	60–120 60–120

1. King County Metro Transit Route.
2. Sound Transit Route; this route make infrequent trips to the City Sammamish.

Park-and-Ride Facilities

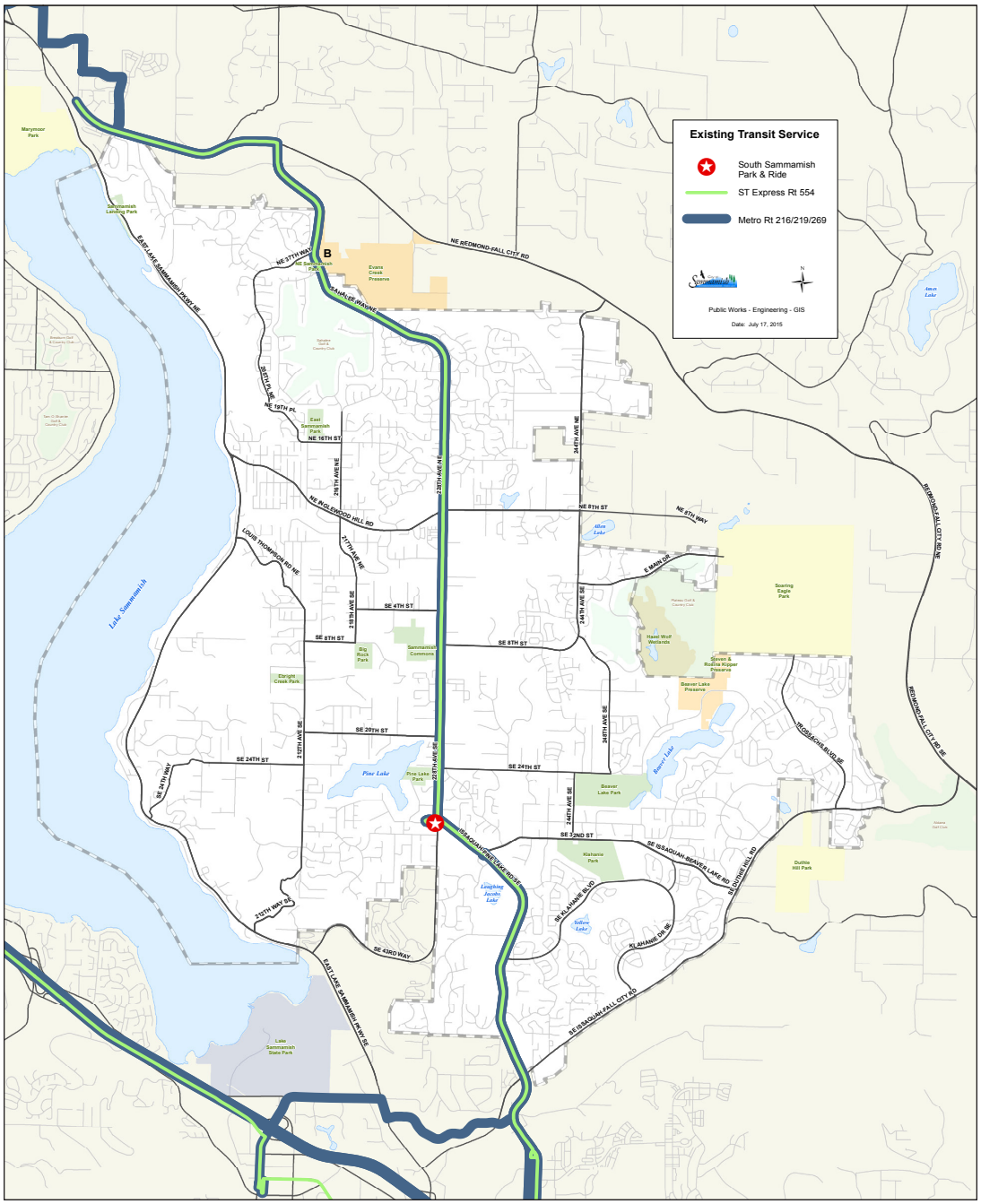
Sammamish currently has two park-and-ride (P&R) facilities:

- Sammamish Hills Lutheran Church at SE 8th Street and 228th Avenue SE (54 spaces).
- South Sammamish P&R at Issaquah-Pine Lake Road SE and 228th Avenue SE (265 spaces).

Existing transit routes and P&R lots within the Sammamish city limits are shown in Background Figure T–10. Outside of the city limits, the nearest P&R lots are:

- Klahanie P&R at SE Klahanie Boulevard and 244th Place SE, King County (30 spaces).
- Klahanie P&R at SE Klahanie Boulevard and SE Issaquah-Fall City Road (30 spaces).
- Tibbett's Valley P&R at 12th NW and Newport Way, Issaquah (94 spaces).
- Issaquah Highlands P&R at Highlands Drive NE and NE High Street, Issaquah (1,010 spaces).
- Bear Creek P&R at NE Union Hill Road and 178th Place NE, Redmond (283 spaces).

Background Figure T–10
Existing Transit Service



Travel Demand Forecasts and Projected Needs

In order to evaluate future transportation needs, forecasts must be made of future travel demand. Developing traffic forecasts for existing streets based on future land use allows the adequacy of the street system to be evaluated.

Travel Forecasting Model

For the City of Sammamish Transportation Element, a transportation computer model was developed to analyze future travel demand and traffic patterns. The major steps of the modeling process are as follows:

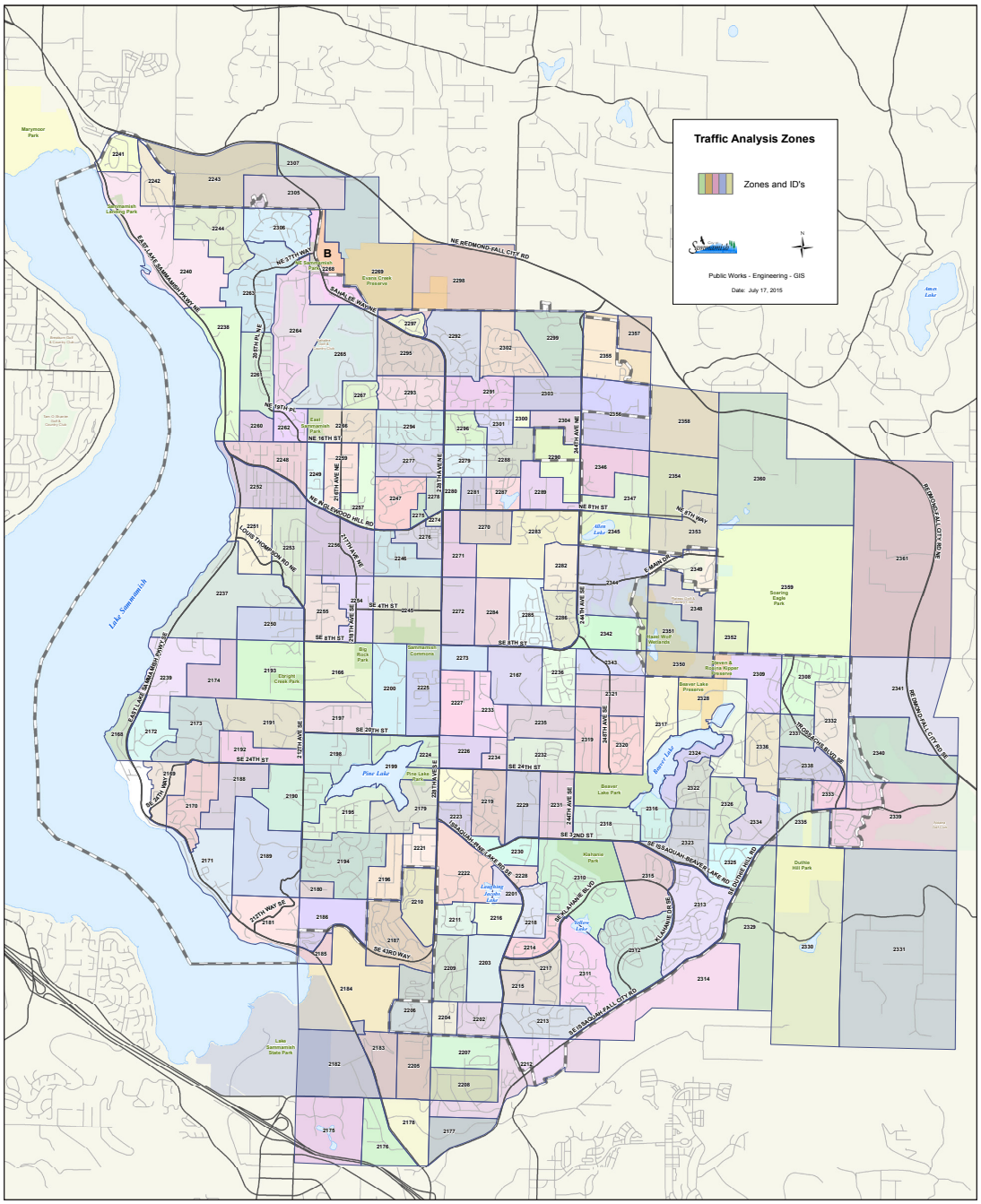
- Current Land Use Assessment;
- Trip Generation;
- Trip Distribution;
- Network Assignment;
- Model Calibration;
- Forecast of Future Land Use; and
- Model of Future Traffic Conditions.

These general steps of the modeling process are described in the following sections, and the technical aspects of the model are described in detail in the Traffic Forecasting Model Documentation Report (DEA 2012), which has been produced for the city as a supplemental document to the Comprehensive Plan.

Current Land Use Assessment

The primary method of determining future travel demand is based on future land use patterns and community growth. The entire study area is divided into Transportation Analysis Zones (TAZs) that have similar land use characteristics. The TAZ boundaries that were established for the City of Sammamish travel-forecasting model are shown in Background Figure T–11. For each zone, land use characteristics of population and employment were estimated based on the City of Sammamish Comprehensive Land Use Plan. In order to establish an accurate base map of existing land use, consultants to the city began with the King County Assessor records, supplemental aerial photos, and field verification of a subset of lots. City staff compiled unit counts of multi-family dwellings and commercial building square feet based on King County records supplemented with some field review.

Background Figure T–11
Transportation Analysis Zones



Trip Generation

The trip generation step forecasts the total number of trips generated by and attracted to each TAZ. The trips were forecast using statistical data that take into account population and household characteristics, employment information, economic model output, and land-use information. Trips generated are categorized by their general purpose, which are:

- Home-based-work: any trip with home as one end and work as the other end
- Home-based-other: any non-work trip with home as one end
- Non-home-based: any trip that does not have home at either end

The trip generation model forecasts the total number of trips that are generated per household or non-residential unit during the analysis period for the trip categories under consideration.

Trip Distribution

The trip distribution step allocates the trip generation to a specific zonal origin and destination. This is accomplished through use of the gravity model, which distributes trips according to two basic assumptions: (1) more trips will be attracted to larger zones (the size of a zone is defined by the number of attractions estimated in the trip generation phase, not the geographical size), and (2) more trip interchanges will take place between zones that are closer together than the number that will take place between zones that are farther apart. The result is a trip matrix (for each of the trip purposes specified as input to the trip generation model) that estimates the percentage of trips are taken from each zone to every other zone. These trips are often referred to as trip interchanges.

Network Assignment

The arterial street system is coded into the city's Traffic Model as a series of links that represent roadways and nodes that represent the intersection of those roadways. Each roadway link and intersection node is entered into the model with an assigned functional classification, and associated characteristics such as length, capacity, and speed. This information is then used to determine the optimum path between all the zones based on travel time and distance. The model then distributes the trips from each of the zones onto the street network.

The forecasted trips are assigned to the transportation network using an incremental assignment process where the total traffic is assigned to the network, one increment at a time. Vehicle travel paths reflect the best travel time between each origin and destination. After a portion of the vehicles is assigned, the zone-to-zone travel times with the additional traffic are recalculated. The next increment of traffic is assigned to the network, and the optimal paths are determined based upon the adjusted travel times. The zone-to-zone travel times are calculated again, reflecting the added traffic. The cycle of network assignment and travel time recalculation is repeated, until all vehicles have been assigned to the network. The result is a computerized road network with traffic volumes calculated for each segment of roadway, which takes into account the effects of increasing traffic congestion on the system.

Model Calibration

The 2012 calibrated VISUM travel demand model developed by DEA has a mean relative error of 2% and is a very good representation of the traffic generated by a known land uses (2012 occupied development). The calibration error does not directly relate to the accuracy of the forecast in that the land use assumptions are general, factors including fuel prices, social objectives, and other issues modify travel behaviors over time. In most case future forecasts should be considered with a broader margin of error. A range of plus or minus 10% is a reasonable error to assume for a 20-year planning horizon. This potential error should be considered when evaluating the travel demand forecasts and level of service summaries. Forecast volumes could be 10% more or less in most cases.

Land Use Assumptions used in Travel Demand Forecasting

The land use assumptions used in the VISUM travel demand forecasting model are based upon the Land Use Element of the Comprehensive Plan, which in turn is based upon the PSRC residential and employment allocations for Sammamish. External land use assumptions were based upon PSRC forecasts for the jurisdictions around Sammamish, including the cities of Redmond, Issaquah and Bellevue to ensure that the forecast trip distribution for trips originating in or destined to the region outside the city are modeled correctly. Key elements of the land use forecast include infill single family residential development in vacant and underdeveloped land identified in the buildable lands analysis and the realization of the Town Center, a mixed use subarea planned for 1,760 multifamily residential units, 200,000 square feet of office, and 400,000 square feet of retail space.

Future Traffic Conditions

Once future land use conditions were input, the model was run to forecast PM peak hour traffic conditions that are expected to result from the projected land use. The PM peak hour is modeled since it is the most congested time of day. However, since the segment analysis requires projected daily traffic volumes, the PM peak hour volumes are converted to AWDT volumes. The conversion to daily volumes was accomplished by applying a post-processing method, based primarily upon application of a peak-to-daily conversion factor. This factor was based upon the declining K-factor observed in citywide traffic counts since 2002.

2035 Committed Capital Improvement Projects (CIP)

Background Table T–9 lists the future improvements for which funding is secure; and thus, are assumed to be in place for analysis of future conditions.

Background Table T–9
Committed Capital Improvement Projects (CIP)

LOCATION	CIP IMPROVEMENT
SE 4th St–218th Ave SE to 228th Ave SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
Issaquah-Pine Lake Rd–Klahanie Blvd to SE 32nd	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
Issaquah-Pine Lake Rd–SE 48th to Klahanie Blvd	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk
East Lake Sammamish Pkwy SE/SE 24th St Intersection	Construct traffic signal, turn lanes, curb, gutter, and sidewalk
Sahalee Way NE–220th Ave NE to North City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
228th Ave SE–SE 32nd St to Issaquah-Pine Lake Road	Provide additional southbound through lane
Issaquah-Fall City Rd–SE 48th St to Klahanie Dr SE	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk
212th Ave SE Gap Project–SE 24th St to Crossings Subdivision	Provide non-motorized facilities

Level-of-Service Analysis for 2035 Land Use

Background Table T–10 summarizes the intersection LOS expected under the 2035 land use scenario if no additional transportation improvements are made beyond the committed CIP. The 2035 intersection LOS is illustrated in Background Figure T–12.

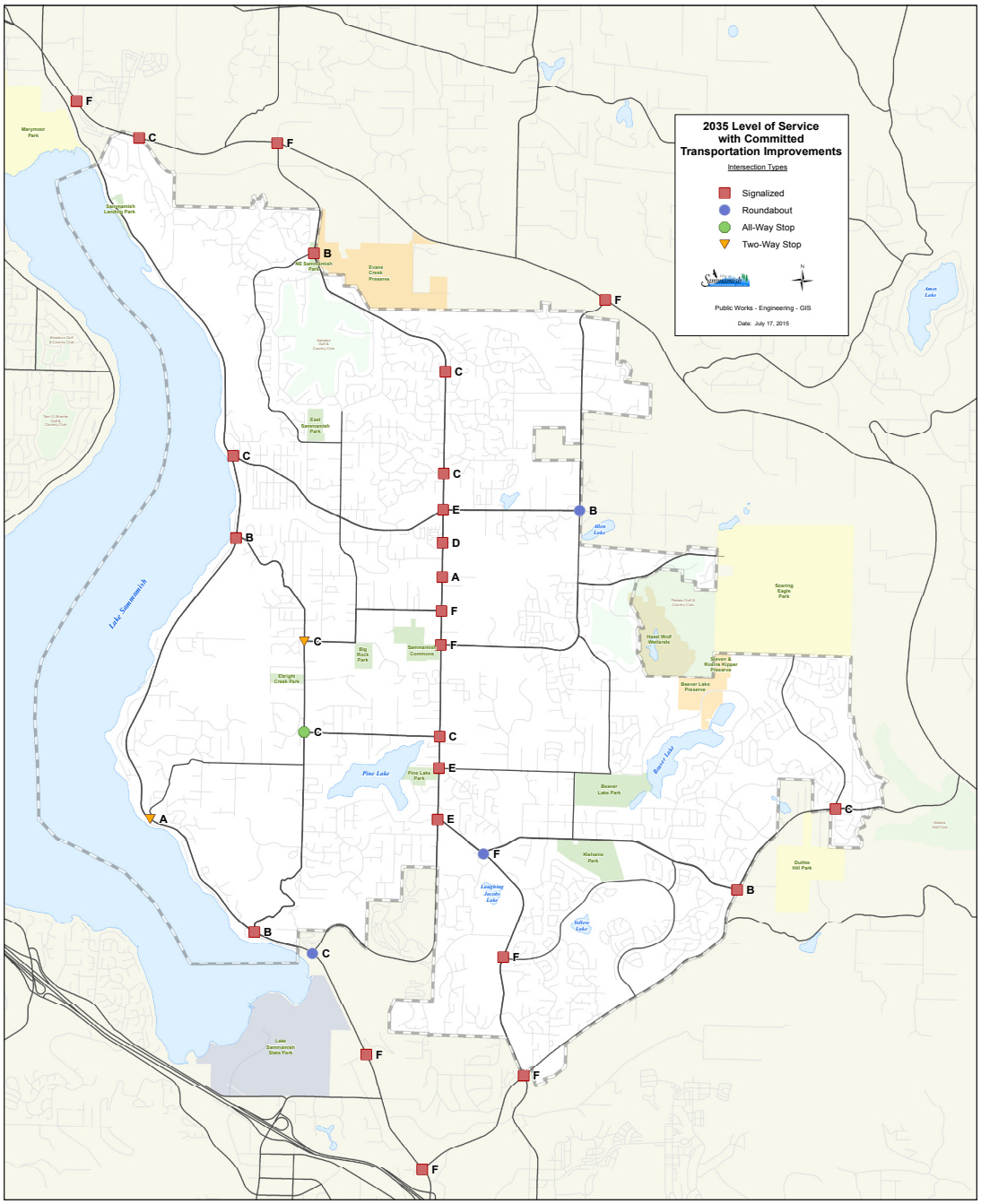
The committed improvements listed in Background Table T–10 address several existing deficiencies identified in the 2012 existing conditions analysis. However, the future 2035 analyses show that the increase in traffic resulting from additional development would cause increased congestion at other locations, if no additional

Background Table T–10
2035 Intersection LOS—PM Peak Hour—Committed Improvements Only

INTERSECTION	LOS STANDARD[1]	TRAFFIC CONTROL[2]	DELAY[3]	LOS[4]
228th Ave NE and NE 12th St	D	S	21	C
Sahalee Way NE and NE 37th St	D	S	21	C
228th Ave SE and SE 4th St	E	S	156	F*
228th Ave SE and SE 8th St	D	S	190	F*
228th Ave SE and SE 20th St	D	S	21	C
228th Ave NE and SE 24th St	E	S	77	E
228th Ave SE and Issaquah-Pine Lk Rd SE	E	S	69	E
Issaquah-Pine Lk Rd SE and SE Klahanie Blvd	D	S	83	F*
E Lk Sammamish Pkwy and NE Inglewood Hill Rd	C	S	20	C
E Lk Sammamish Pkwy and 212th Way SE	C	S	17	B
228th Ave NE and NE 8th St (NE Inglewood Hill Rd)	D	S	57	E*
192nd Drive NE and NE Redmond Fall City Rd (SR202)	D	S	23	C
Issaquah-Pine Lk Rd SE and SE 32nd Way	D	RAB	94	F*
E Lk Sammamish Pkwy and Louis Thompson Rd NE	C	S	17	B
212th Ave SE and SE 20th St	C	AWSC	25	C
SE Duthie Hill Rd and SE Issaquah-Beaver Lk Rd	D	S	19	B
Trossachs Blvd SE and SE Duthie Hill Rd	D	S	28	C
E Lk Sammamish Pkwy and SE 24th Way	C	S	7	A
244th Ave NE and NE 8th St	C	RAB	15	B
228th Ave NE and NE 25th St	D	S	22	C
228th Ave NE and NE 4th St	D	S	43	D
228th Ave NE and E. Main St	D	S	5	A
212th Ave SE and SE 8th St	C	TWSC	21	C
Sahalee Way NE and SR202[5]	E	S	131	F*
Issaquah-Pine Lk Rd SE and SE Issaquah-Fall City Rd[5]	E	S	203	F*
244th Ave NE and NE Redmond Fall City Rd (SR202)[5]	D	S	102	F*
E Lk Sammamish Pkwy and NE Redmond Fall City Rd (SR202)[5]	D	S	175	F*
E Lk Sammamish Pkwy and SE 56th St[5]	D	S	252	F*
E Lk Sammamish Pkwy and SE Issaquah-Fall City Rd[5]	E	S	216	F*
E Lk Sammamish Pkwy and SE 43rd Way[5]	D	RAB	31	C

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *Intersection Control: S = signalized; TWSC = two-way stop-controlled; AWSC = all-way stop-controlled; RAB = roundabout*
3. *Delay is measured in seconds per vehicle.*
4. *LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2010). (*) Denotes an LOS below the defined standard, indicating that the intersection is considered deficient.*
5. *Intersection is outside of the city limits.*

Background Figure T–12
2035 Level of Service–2035 Land Use and Committed Transportation Improvements



improvements were made. On 228th Ave three signalized intersections are projected to operate above their LOS standard: SE 4th Street (LOS F), SE 8th Street (LOS F), and NE 8th Street (LOS E). The NE 8th Street intersection falls just above its LOS D standard by 2 seconds. On Issaquah-Pine Lake Road SE the signal at SE Klahanie Boulevard and the roundabout at SE 32nd Way are forecast to operate at LOS F.

Outside of the city limits six signalized intersections are projected to operate at LOS F. Continued coordination with Issaquah, Redmond and King County will be necessary.

Background Table T–11 summarizes the concurrency status for each of the 49 roadway segments, under the 2035 land use with only committed improvements, based upon the policy-defined AWDT thresholds previously described. Measuring the forecasted volumes against the policy-defined roadway segment concurrency thresholds and considering only the committed improvements documents above, three road corridors and eleven road segments will fail under the future land use scenario with the committed improvements only.

Travel Demand Forecast Accuracy–Implications to LOS Results

The LOS failures indicated in the 2035 forecast are generally less than 10% over the volume-to-capacity (v/c) thresholds assumed for the 2035 network. Given the accuracy of the forecast these failures could be worse than anticipated or may not materialize at all. The magnitude of the LOS failures (generally less than 10%) predicted for 2035 suggest the need for ongoing monitoring to determine if the LOS forecast is reasonably accurate or if future conditions are better or worse than projected. The city's concurrency management system is designed to monitor the cumulative impacts of growth and will provide an early warning of potential future problems.

Background Table T–11
AWDT Concurrency Thresholds and 2035 Volumes for Roadway Segments—Committed Improvements Only

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	CONCURRENCY THRESHOLD	2035 PROJECTED AWDT	2035 PROJECTED Fails?
1–3	**East Lk Sammamish Parkway North Corridor**		**25,877**	**22,000**	
1	E Lk Sammamish Pkwy, City limits–196th Ave NE (Weber Point)	Minor Arterial	24,330	21,900	
2	E Lk Sammamish Pkwy, 196th Ave NE–NE 26th Pl	Minor Arterial	24,330	21,800	
3	E Lk Sammamish Pkwy, NE 26th Pl–NE Inglewood Hill Rd	Minor Arterial	28,970	22,300	
4–6	**East Lk Sammamish Parkway Central Corridor**		**17,370**	**13,167**	
4	E Lk Sammamish Pkwy, Inglewood Hill Rd–Louis Thompson Rd	Minor Arterial	17,370	15,800	
5	E Lk Sammamish Pkwy, Louis Thompson Rd NE–SE 8th St	Minor Arterial	17,370	12,100	
6	E Lk Sammamish Pkwy, SE 8th St–SE 24th Way	Minor Arterial	17,370	11,600	
7–8	**East Lk Sammamish Parkway South Corridor**		**17,370**	**16,550**	
7	E Lk Sammamish Pkwy, SE 24th Way–212th Ave SE	Minor Arterial	17,370	13,600	
8	E Lk Sammamish Pkwy, 212th Ave SE–City Limit	Minor Arterial	17,370	19,500	X
11–14	**Louis Thompson Road–212th Corridor**		**10,786**	**7,100**	
11	Louis Thompson Rd, E Lk Sammamish Pkwy–SE 8th St	Collector Arterial	9,820	4,900	
12	212th Ave SE, SE 8th St–SE 20th St	Collector Arterial	11,425	9,000	
13	212th Ave SE, SE 20th St–SE 32nd St	Collector Arterial	11,350	7,800	
14	212th Ave SE, SE 32nd St–E Lk Sammamish Pkwy	Collector Arterial	10,550	6,700	
21–23	**Sahalee Way–228th Avenue North Corridor**		**20,077**	**22,533**	**X**
21	Sahalee Way/228th Ave NE, City Limit–220th Ave NE	Principal Arterial	22,010	23,200	X
22	Sahalee Way/228th Ave NE, 220th Ave NE–NE 25th Way	Principal Arterial	18,530	20,000	X
23	228th Ave, NE 25th Way–NE 12th St	Principal Arterial	19,690	24,400	X
24–25	**228th Avenue Central Corridor**		**34,950**	**36,100**	
24	228th Ave, NE 12th St–SE 4th St	Principal Arterial	34,950	33,500	
25	228th Ave, SE 4th St–SE 20th St	Principal Arterial	34,950	38,700	X
26–27	**228th Avenue South Corridor**		**28,726**	**28,850**	**X**
26	228th Ave, SE 20th St–Issaquah Pine Lake Rd SE	Principal Arterial	36,023	36,100	X
27	228th Ave, Issaquah Pine Lake Rd SE–SE 43rd Way	Principal Arterial	21,430	21,600	X
32–34	**Issaquah-Pine Lake Road Corridor**		**28,513**	**24,400**	
32	Issaquah-Pine Lk Rd, 228th Ave SE–SE 32nd Way	Principal Arterial	31,480	20,300	
33	Issaquah-Pine Lk Rd, SE 32nd Way–SE Klahanie Blvd	Principal Arterial	17,370	22,200	X
34	Issaquah-Pine Lk Rd, SE Klahanie Blvd–SE 48th St	Principal Arterial	36,690	30,700	

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Background Table T–11
AWDT Concurrency Thresholds and 2035 Volumes for Roadway Segments—Committed Improvements Only (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	CONCURRENCY THRESHOLD	2035 PROJECTED AWDT	2035 PROJECTED Fails?
35–37	**224th Avenue North Corridor**		**17,370**	**12,600**	
35	244th Ave NE, NE 30th Pl–NE 20th St	Minor Arterial	15,050	11,900	
36	244th Ave NE, NE 20th St–NE 8th St	Minor Arterial	15,050	15,500	X
37	244th Ave NE, NE 8th St–SE 8th St	Minor Arterial	22,010	10,400	
39	**244th Avenue South Corridor**		**16,330**	**11,100**	
39	244th Avenue, SE 24th St–SE 32nd Way	Minor Arterial	16,330	11,100	
9	SE 24th St, E Lk Sammamish Pkwy–200th Ave SE	Collector Arterial	9,420	1,100	
10	SE 24th St, 200th Ave SE–212th Ave SE	Collector Arterial	9,420	2,600	
15	NE Inglewood Rd, E Lk Sammamish Pkwy–216th Ave NE	Minor Arterial	16,790	14,400	
16	NE Inglewood Rd, 216th Ave NE–228th Ave NE	Minor Arterial	17,370	12,600	
17	SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Collector Arterial	9,430	6,900	
18	SE 4th St, 218th Ave SE–228th Ave SE	Minor Arterial	22,010	23,000	X
19	SE 20th St, 212th Ave SE–219th Pl SE	Collector Arterial	11,070	6,500	
20	SE 20th St, 219th Pl SE–228th Ave SE	Collector Arterial	11,070	7,300	
28	NE 8th St, 228th Ave NE–244th Ave NE	Minor Arterial	21,430	15,000	
29	SE 8th St, 228th Ave SE–244th Ave SE	Minor Arterial	20,730	14,700	
30	SE 24th St, 228th Ave SE–244th Ave SE	Collector Arterial	10,550	11,000	X
31	SE 24th St, 244th Ave SE–W Beaver Lk Dr SE	Collector Arterial	10,550	6,600	
38	248th Ave SE, SE 24th St–SE 14th S	Collector Arterial	9,420	400	
40	SE 32nd Way, Issaquah-Pine Lk Rd–244th Ave SE	Minor Arterial	16,790	12,700	
41	SE 32nd St, 244th Ave SE–W Beaver Lk Dr SE	Minor Arterial	16,790	12,600	
42	Issaquah-Beaver Lk Rd, W Beaver Lk Dr SE–SE Duthie Hill Rd	Minor Arterial	17,950	9,000	
43	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–266th Ave SE	Principal Arterial	16,790	19,600	X
44	SE Duthie Hill Rd, 266th Ave SE–Trossachs Blvd SE	Principal Arterial	16,790	19,500	X
45	Trossachs Blvd SE, SE 9th St–SE Duthie Hill Rd	Collector Arterial	13,680	11,600	
46	218th Ave NE, SE 4th St–SE 8th St	Collector Arterial	9,420	6,800	
47	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–SE Issaquah-Fall City Rd	Principal Arterial	22,010	18,600	
48	SE Issaquah-Fall City Rd, SE Duthie Hill Rd–Klahanie Dr SE	Principal Arterial	22,010	24,100	X
49	SE Issaquah-Fall City Rd, Klahanie Dr SE–Issaquah-Pine Lk Rd	Principal Arterial	36,690	33,600	

Recommended Plan

Based upon evaluation of existing conditions, travel demand forecast and evaluation of future conditions that result from the 2035 land use forecast, and the concurrency standards and priorities stated by the city, the Recommended Plan contains the following elements:

- Recommended Transportation Improvements
- Functional Classification Assessment
- Connectivity Assessment
- Roadway Design Guidelines
- Traffic Calming Program
- Transportation Demand Management
- Transit Service and Facilities
- Non-Motorized Facilities

Recommended Transportation Improvements

Based upon the analysis of 2012 and 2035 level of service, a list of recommended improvement projects was developed for the 2035 planning horizon. The list of improvement projects is summarized in Background Table T–12.

Planning level estimates were prepared for each of the projects under consideration. The cost estimates (in current dollars) are included in the City of Sammamish Capital Facilities Plan.

Background Table T–12
Summary of Recommended Transportation Improvements

PROJECT #	2015–2035 TIP PRIORITY #	LOCATION	IMPROVEMENT	CONCURRENCY PROJECT?	PROJECT COST (X $1,000)[1]
1		E Lk Sammamish Pkwy SE, 212th Ave SE–South City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	10,935
2	3	Issaquah-Pine Lk Rd SE, SE 48th St–SE Klahanie Blvd	Widen to 5 lanes with bike lanes, curb, gutter and sidewalk	X	21,315
3	2	Issaquah-Pine Lk Rd SE, SE Klahanie Blvd–SE 32nd Way	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	21.651
4	1	SE 4th St, 218th Ave SE to 228th Ave SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	18,981
5		Sahalee Way NE, 220th Ave NE–North City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	12,327
6	5	Sahalee Way NE, NE 25th Way–220th Ave NE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	4,474

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Background Table T–12
Summary of Recommended Transportation Improvements (cont.)

PROJECT #	2015–2035 TIP PRIORITY #	LOCATION	IMPROVEMENT	CONCURRENCY PROJECT?	PROJECT COST (X $1,000)[1]
7	4	E Lk Sammamish Pkwy SE at SE 24th St Intersection	Construct traffic signal, turn lanes, curb, gutter, and sidewalk		13,716
8		SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–"notch"	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk on west side, 8-foot shoulder on east side	X	13,230
9		SE Duthie Hill Rd, West side of "notch" to Trossachs Blvd SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk on west side, 8-foot shoulder on east side	X	13,230
10	8	228th Ave	Public Works Trust Fund Loan Repayment (remaining loan balance)	X	3,808
11		Issaquah-Pine Lake Rd SE, SE Issaquah-Fall City Rd–SE 48th St	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk	X	7,882
12	7	SE Issaquah-Fall City Rd, SE 48th St–Klahanie Dr SE	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk	X	17,321
13		SE Issaquah-Fall City Rd, Klahanie Dr SE–SE Issaquah-Beaver Lk Rd	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	15,917
14		SE Belvedere Way, E Beaver Lk Rd–263rd Pl SE	New roadway connection, extend SE Belvedere Way to E Beaver Lk Dr SE		761
15		New Roadway Connection to E Beaver-Lk Dr SE at 266th Way SE	Extend 266th Way SE to E Beaver Lk Dr SE and widen E Beaver Lk Dr SE, 266th Way SE to Beaver Lk Way SE		8,498
16		212th Way SE (Snake Hill), E Lk Sammamish Pkwy SE–212th Ave SE	Improve 2 lanes with left-turn pockets, curb, gutter, and sidewalk		13,738
17		SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	10,117
18	11	Sidewalk Projects	Various sidewalk projects, includes gap projects, extensions, safety improvements		5,000
19	10	Transit Program	Provide funding for capital project matching funds and/or provide for additional transit service.		10,000
20	13	Neighborhood CIP	Various capital improvement including safety improvements, gap projects, bike routes, pedestrian safety enhancements, and school zone safety improvements.		2,000
21		Street Lighting Program	Provide street lighting at high priority locations with significant safety issues that can be addressed through better street lighting		400
22	12	Intersection Improvements	Various intersection and other spot improvement as needed, including channelization, signing, safety improvements, signalization, or other control devices.		5,000
		TOTAL EXPENDITURES			237,071

X Indicates that project addresses an identified deficiency.
1. All project costs are in 2014 dollars.

2035 Level of Service Analysis with Recommended Improvements

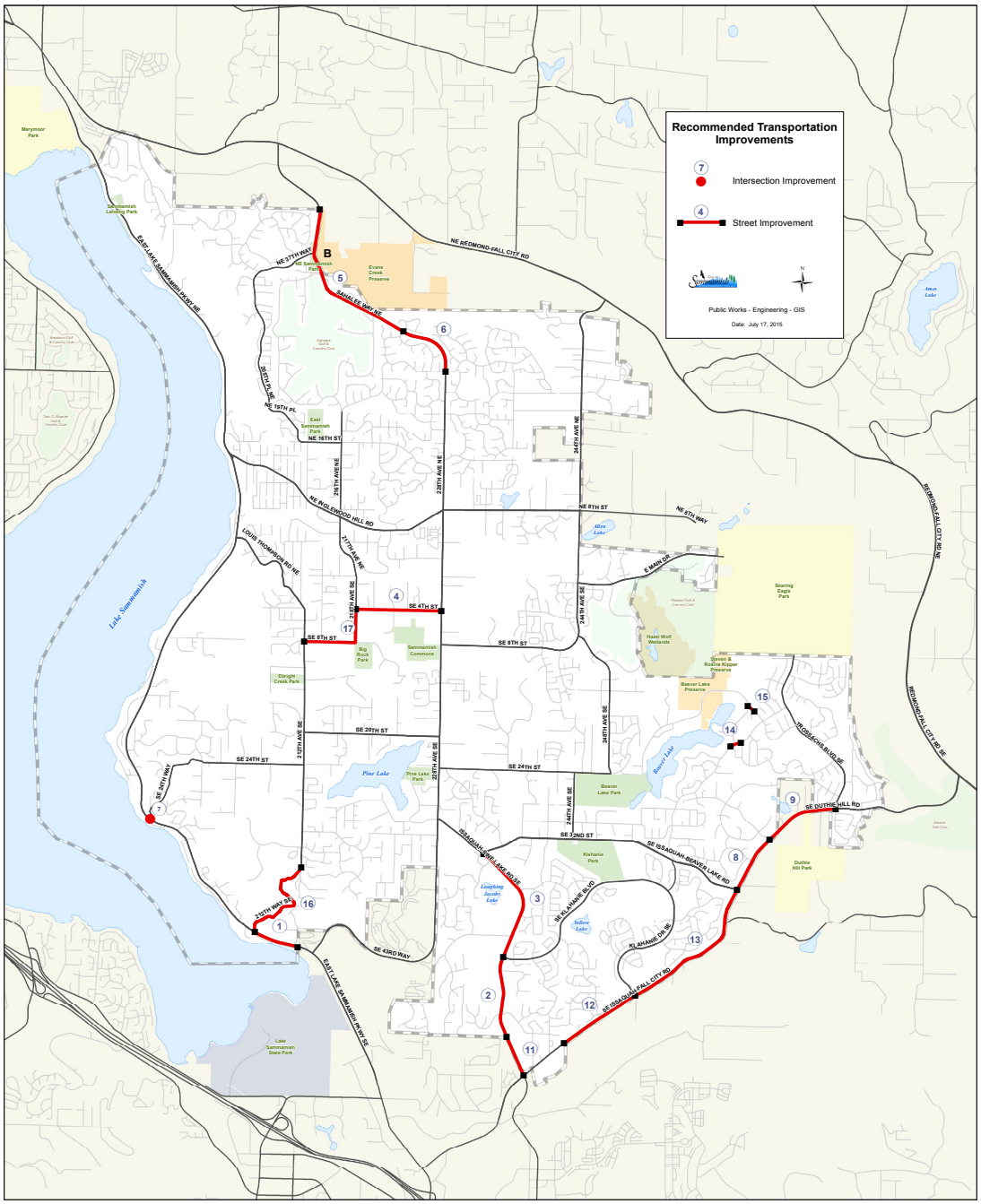
The recommended projects included in the long range plan are illustrated in Background Figure T–13. This list was developed after review of concurrency requirements.

Background Table T–13 summarizes the expected levels-of-service at the 30 designated major intersections with the recommended long range transportation improvements in place. The table includes two future alternative analyses with Sahalee Way NE widened to 3-lanes and to 5-lanes. Analysis shows that 18 of the 30 intersections are expected to operate at an LOS at or better than the intersection concurrency thresholds. On 228th Avenue the six signalized intersections projected at LOS E or worse are at: SE 4th Street, SE 8th Street, SE 24th Street, Issaquah-Pine Lake Road SE, NE 8th Street, and NE 4th Street. On Issaquah-Pine Lake Road SE the signal at SE Klahanie Boulevard and the roundabout at SE 32nd Way are forecast to operate at LOS E. The intersection LOS for the 2035 land use is illustrated in Background Figure T–14.

Outside of the city limits six signalized intersections are projected to operate at LOS E and LOS F. The LOS deficiencies discussed above are not significantly affected by the proposed widening on Sahalee Way NE.

Background Table T–14 summarizes the roadway segment concurrency status for the 2035 Land Use assumed in the Comprehensive Plan, with the recommended transportation improvements in place. The table includes two future alternative analyses with Sahalee Way NE widened to 3-lanes and to 5-lanes. The table shows that with the 3-lane Sahalee Way NE improvement there are six road segments and three corridors forecast to fail concurrency. With the 5-lane Sahalee Way NE improvement there are five road segments and two corridors forecast to fail concurrency.

Background Figure T–13
Recommended Transportation Improvements

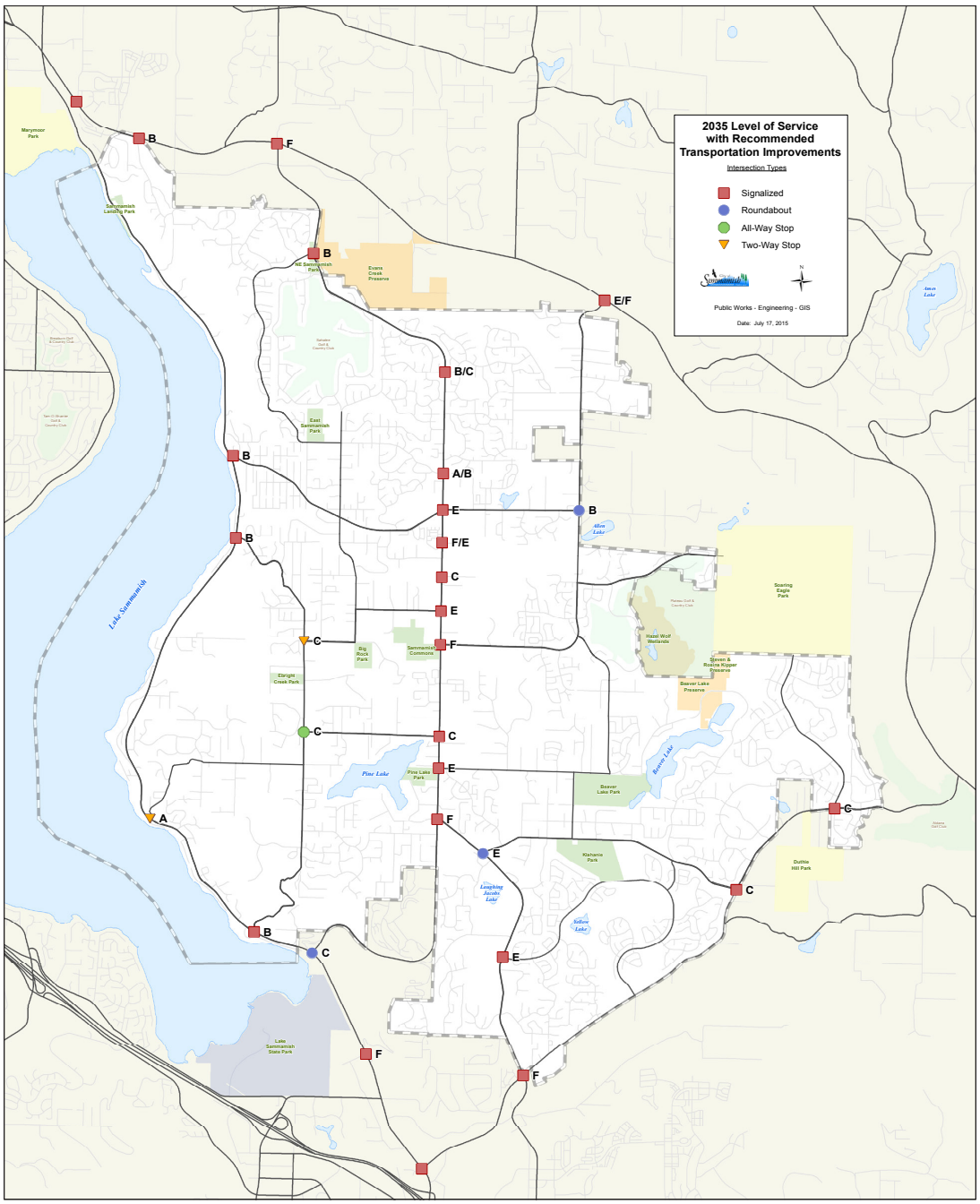


Background Table T–13
2035 Intersection LOS—PM Peak Hour—With Recommended Improvements

INTERSECTION	LOS STD[1]	TRAFFIC CONTROL[2]	3-LANE SAHALEE WAY		5-LANE SAHALEE WAY	
			Delay[3]	*LOS*[4]	*Delay*[3]	*LOS*[4]
228th Ave NE and NE 12th St	D	S	20	B	9	A
Sahalee Way NE and NE 37th St	D	S	21	C	13	B
228th Ave SE and SE 4th St	E	S	70	E	77	E
228th Ave SE and SE 8th St	D	S	109	F*	114	F*
228th Ave SE and SE 20th St	D	S	23	C	24	C
228th Ave NE and SE 24th St	E	S	61	E	60	E
228th Ave SE and Issaquah-Pine Lk Rd SE	E	S	84	F*	83	F*
Issaquah-Pine Lk Rd SE and SE Klahanie Blvd	D	S	64	E*	63	E*
E Lk Sammamish Pkwy and NE Inglewood Hill Rd	C	S	17	B	16	B
E Lk Sammamish Pkwy and 212th Way SE	C	S	14	B	13	B
228th Ave NE and NE 8th St (NE Inglewood Hill Rd)	D	S	57	E*	65	E*
192nd Drive NE and NE Redmond Fall City Rd (SR202)	D	S	11	B	11	B
Issaquah-Pine Lk Rd SE and SE 32nd Way	D	RAB	73	E*	75	E*
E Lk Sammamish Pkwy and Louis Thompson Rd NE	C	S	17	B	16	B
212th Ave SE and SE 20th St	C	AWSC	16	C	15	C
SE Duthie Hill Rd and SE Issaquah-Beaver Lk Rd	D	S	22	C	21	C
Trossachs Blvd SE and SE Duthie Hill Rd	D	S	27	C	26	C
E Lk Sammamish Pkwy and SE 24th Way	C	S	7	A	7	A
244th Ave NE and NE 8th St	C	RAB	14	B	12	B
228th Ave NE and NE 25th St	D	S	20	C	12	B
228th Ave NE and NE 4th St	D	S	63	E*	82	F*
228th Ave NE and E. Main St	D	S	28	C	28	C
212th Ave SE and SE 8th St	C	TWSC	19	C	18	C
Sahalee Way NE and SR202[5]	E	S	89	F*	119	F*
Issaquah-Pine Lk Rd SE and SE Issaquah-Fall City Rd[5]	E	S	180	F*	178	F*
244th Ave NE and NE Redmond Fall City Rd (SR202)[5]	D	S	67	F*	62	E*
E Lk Sammamish Pkwy and NE Redmond Fall City Rd (SR202)[5]	D	S	170	F*	169	F*
E Lk Sammamish Pkwy and SE 56th St[5]	D	S	263	F*	260	F*
E Lk Sammamish Pkwy and SE Issaquah-Fall City Rd[5]	E	S	207	F*	208	F*
E Lk Sammamish Pkwy and SE 43rd Way[5]	D	RAB	27	C	25	C

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *Intersection Control: S=signalized; TWSC=two-way stop-controlled; AWSC=all-way stop-controlled; RAB = roundabout.*
3. *Delay is measured in seconds per vehicle.*
4. *LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2010). (*) Denotes an LOS below the defined standard, indicating that the intersection is considered deficient.*
5. *Intersection is outside of the city limits.*

Background Figure T–14
2035 Level of Service—2035 Land Use with Recommended Transportation Improvements



Background Table T–14
2035 Segment Concurrency Status—With Recommended Improvements

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	3-LANE SAHALEE WAY			5-LANE SAHALEE WAY		
			Concurrency Threshold	*AWDT*	*Fails?*	*Concurrency Threshold*	*AWDT*	*Fails?*
1–3	**East Lk Sammamish Parkway North Corridor**		**25,877**	**21,100**		**25,877**	**20,300**	
1	E Lk Sammamish Pkwy, City limits–196th Ave NE (Weber Point)	Minor Arterial	24,330	21,000		24,330	20,200	
2	E Lk Sammamish Pkwy, 196th Ave NE–NE 26th Pl	Minor Arterial	24,330	20,900		24,330	20,100	
3	E Lk Sammamish Pkwy, NE 26th Pl–NE Inglewood Hill Rd	Minor Arterial	28,970	21,400		28,970	20,600	
4–6	**East Lk Sammamish Parkway Central Corridor**		**17,370**	**13,533**		**17,370**	**13,300**	
4	E Lk Sammamish Pkwy, Inglewood Hill Rd–Louis Thompson Rd	Minor Arterial	17,370	16,000		17,370	15,700	
5	E Lk Sammamish Pkwy, Louis Thompson Rd NE–SE 8th St	Minor Arterial	17,370	12,700		17,370	12,500	
6	E Lk Sammamish Pkwy, SE 8th St–SE 24th Way	Minor Arterial	17,370	11,900		17,370	11,700	
7–8	**East Lk Sammamish Parkway South Corridor**		**19,690**	**16,700**		**19,690**	**16,400**	
7	E Lk Sammamish Pkwy, SE 24th Way–212th Ave SE	Minor Arterial	17,370	14,000		17,370	13,700	
8	E Lk Sammamish Pkwy, 212th Ave SE–City Limit	Minor Arterial	22,010	19,400		22,010	19,100	
11–14	**Louis Thompson Road–212th Corridor**		**12,150**	**6,650**		**12,150**	**6,600**	
11	Louis Thompson Rd, E Lk Sammamish Pkwy–SE 8th St	Collector Arterial	12,150	4,700		12,150	4,600	
12	212th Ave SE, SE 8th St–SE 20th St	Collector Arterial	12,150	8,100		12,150	8,000	
13	212th Ave SE, SE 20th St–SE 32nd St	Collector Arterial	12,150	7,400		12,150	7,400	
14	212th Ave SE, SE 32nd St–E Lk Sammamish Pkwy	Collector Arterial	12,150	6,400		12,150	6,400	
21–23	**Sahalee Way–228th Avenue North Corridor**		**22,010**	**23,667**	**X**	**36,690**	**28,567**	
21	Sahalee Way/228th Ave NE, City Limit–220th Ave NE	Principal Arterial	22,010	24,500	X	36,690	28,700	
22	Sahalee Way/228th Ave NE, 220th Ave NE–NE 25th Way	Principal Arterial	22,010	21,300		36,690	26,300	
23	228th Ave, NE 25th Way–NE 12th St	Principal Arterial	22,010	25,200	X	36,690	30,700	
24–25	**228th Avenue Central Corridor**		**34,950**	**36,250**	**X**	**34,950**	**37,450**	**X**
24	228th Ave, NE 12th St–SE 4th St	Principal Arterial	34,950	35,500	X	34,950	37,300	X
25	228th Ave, SE 4th St–SE 20th St	Principal Arterial	34,950	37,000	X	34,950	37,600	X

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Background Table T–14
2035 Segment Concurrency Status—With Recommended Improvements (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	3-LANE SAHALEE WAY			5-LANE SAHALEE WAY		
			Concurrency Threshold	*AWDT*	*Fails?*	*Concurrency Threshold*	*AWDT*	*Fails?*
26–27	**228th Avenue South Corridor**		**29,016**	**29,050**	**X**	**29,016**	**29,300**	**X**
26	228th Ave, SE 20th St–Issaquah Pine Lake Rd SE	Principal Arterial	36,023	35,900		36,023	36,400	X
27	228th Ave, Issaquah Pine Lake Rd SE–SE 43rd Way	Principal Arterial	22,010	22,200	X	22,010	22,200	X
32–34	**Issaquah-Pine Lake Road Corridor**		**30,060**	**22,333**		**30,060**	**22,600**	
32	Issaquah-Pine Lk Rd, 228th Ave SE–SE 32nd Way	Principal Arterial	31,480	20,500		31,480	21,000	
33	Issaquah-Pine Lk Rd, SE 32nd Way–SE Klahanie Blvd	Principal Arterial	22,010	21,100		22,010	21,400	
34	Issaquah-Pine Lk Rd, SE Klahanie Blvd–SE 48th St	Principal Arterial	36,690	25,400		36,690	25,400	
35–37	**224th Avenue North Corridor**		**22,010**	**12,400**		**22,010**	**12,133**	
35	244th Ave NE, NE 30th Pl–NE 20th St	Minor Arterial	22,010	11,700		22,010	11,500	
36	244th Ave NE, NE 20th St–NE 8th St	Minor Arterial	22,010	15,300		22,010	14,800	
37	244th Ave NE, NE 8th St–SE 8th St	Minor Arterial	22,010	10,200		22,010	10,100	
39	**244th Avenue South Corridor**		**15,630**	**10,500**		**15,630**	**10,300**	
39	244th Avenue, SE 24th St–SE 32nd Way	Minor Arterial	15,630	10,500		15,630	10,300	
9	SE 24th St, E Lk Sammamish Pkwy–200th Ave SE	Collector Arterial	9,420	900		9,420	900	
10	SE 24th St, 200th Ave SE–212th Ave SE	Collector Arterial	9,420	2,400		9,420	2,400	
15	NE Inglewood Rd, E Lk Sammamish Pkwy–216th Ave NE	Minor Arterial	22,010	12,300		22,010	11,900	
16	NE Inglewood Rd, 216th Ave NE–228th Ave NE	Minor Arterial	22,010	12,800		22,010	11,200	
17	SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Collector Arterial	9,420	6,400		9,420	6,400	
18	SE 4th St, 218th Ave SE–228th Ave SE	Minor Arterial	15,390	6,500		15,390	6,500	
19	SE 20th St, 212th Ave SE–219th Pl SE	Collector Arterial	22,010	17,700		22,010	18,100	
20	SE 20th St, 219th Pl SE–228th Ave SE	Collector Arterial	15,390	6,500		15,390	6,200	
28	NE 8th St, 228th Ave NE–244th Ave NE	Minor Arterial	15,390	7,200		15,390	7,000	
29	SE 8th St, 228th Ave SE–244th Ave SE	Minor Arterial	22,010	13,400		22,010	13,400	
30	SE 24th St, 228th Ave SE–244th Ave SE	Collector Arterial	20,730	11,000		20,730	10,800	

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Background Table T–14
2035 Segment Concurrency Status—With Recommended Improvements (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	3-LANE SAHALEE WAY			5-LANE SAHALEE WAY		
			Concurrency Threshold	*AWDT*	*Fails?*	*Concurrency Threshold*	*AWDT*	*Fails?*
31	SE 24th St, 244th Ave SE–W Beaver Lk Dr SE	Collector Arterial	10,550	8,500		10,550	8,300	
38	248th Ave SE, SE 24th St–SE 14th S	Collector Arterial	10,550	6,400		10,550	6,500	
40	SE 32nd Way, Issaquah-Pine Lk Rd–244th Ave SE	Minor Arterial	9,420	400		9,420	400	
41	SE 32nd St, 244th Ave SE–W Beaver Lk Dr SE	Minor Arterial	16,790	12,200		16,790	12,200	
42	Issaquah-Beaver Lk Rd, W Beaver Lk Dr SE–SE Duthie Hill Rd	Minor Arterial	16,790	12,100		16,790	11,900	
43	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–266th Ave SE	Principal Arterial	17,950	9,500		17,950	9,400	
44	SE Duthie Hill Rd, 266th Ave SE–Trossachs Blvd SE	Principal Arterial	22,010	20,000		22,010	19,900	
45	Trossachs Blvd SE, SE 9th St–SE Duthie Hill Rd	Collector Arterial	22,010	19,600		22,010	19,400	
46	218th Ave NE, SE 4th St–SE 8th St	Collector Arterial	13,680	11,600		13,680	11,600	
47	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–SE Issaquah-Fall City Rd	Principal Arterial	22,010	18,700		22,010	18,500	
48	SE Issaquah-Fall City Rd, SE Duthie Hill Rd–Klahanie Dr SE	Principal Arterial	22,010	24,400	X	22,010	24,300	X
49	SE Issaquah-Fall City Rd, Klahanie Dr SE–Issaquah-Pine Lk Rd	Principal Arterial	36,690	34,100		36,690	33,900	

Actions to Meet LOS Standards

Both the 2035 3-lane Sahalee Way NE and 2035 5-lane Sahalee Way NE road networks experience some segment capacity and intersection LOS deficiencies. The LOS and segment capacity deficiencies may be slightly worse or not materialize at all based upon the accuracy of the travel demand model and 2035 land use forecast.

The deficiencies on 228th Ave SE are a result of significant institutional uses in a concentrated area along 228th Ave SE including, Town Center to the south, Sammamish City Hall, the Community Center, the King County Library, Skyline High School, and two churches. On a positive note the institutional nature of these uses lend themselves to Transportation Demand Management (TDM) strategies that smaller individual uses may not be able to achieve.

Infrastructure improvements could also be considered to improve LOS including:

Background Table T–13 identified the following intersection LOS deficiencies with the 2035 recommended improvements and with both Sahalee Way NE widening alternatives.

- Within the city there are seven intersections forecast to operate at LOS E or F and above their LOS respective thresholds. Monitoring programs are recommended at all key city intersections, including those projected to operate at failure to justify future improvement needs. Intersections that do not meet their LOS thresholds are outlined below along with physical or strategic future improvement options:
  - *228th Avenue SE at SE 8th Street* operates at LOS F; LOS D threshold—add turn lanes or a connector roadway to SE 10th Street to reduce the vehicle demand.
  - *228th Avenue SE at SE Issaquah-Pine Lake Rd SE* operates at LOS F; LOS E threshold—add capacity to the south leg of the intersection.
  - *Issaquah-Pine Lake Road SE at SE Klahanie Boulevard* operates at LOS E; LOS D threshold—add turn lanes.
  - *228th Avenue NE at NE 8th Street/NE Inglewood Hill Road* operates at LOS E; LOS D threshold—add turn lanes or consider modifying the LOS threshold to keep intersection more pedestrian friendly.
  - *Issaquah-Pine Lake Road SE at SE 32nd Way* operates at LOS E; LOS D threshold—add bypass lanes.
  - *228th Avenue NE at NE 4th Street* operates at LOS E; LOS D threshold—through monitoring determine the future LOS when the actual Town Center land uses are identified.
- Six intersections outside of the city limits operate above their LOS thresholds. Similar to intersections within the city limits, monitoring programs are also recommended and in addition the monitoring should be coordinated with adjacent agencies to facilitate long term improvement solutions, support enhanced transit service and consider community wide TDM education. Intersection outside of the city limits operating at LOS E or F include:
  - *Sahalee Way NE at NE Redmond-Fall City Road (SR202)* operates at LOS F.
  - *Issaquah-Pine Lake Road SE at SE Issaquah-Fall City Road* operates at LOS F.
  - *244th Avenue NE at NE Redmond-Fall City Road (SR202)* operates at LOS F under the 3-lane Sahalee Way NE and LOS E under the 5-lane Sahalee Way NE alternatives.

- *East Lake Sammamish Parkway at Redmond-Fall City Road (SR202)* operates at LOS F.
- *East Lake Sammamish Parkway at SE 56th Street* operates at LOS F.
- *East Lake Sammamish Parkway at SE Issaquah-Fall City Road* operates at LOS F.

Background Table T–14 identified the following road segment capacity deficiencies with the 2035 recommended improvements and with both Sahalee Way NE widening alternatives:

- *Sahalee Way*—228th Avenue North Corridor (North City Limits to 12th St) is overcapacity with the 3-lane Sahalee Way NE alternative and operates sufficiently under the 5-lane Sahalee Way NE alternative.
- *228th Avenue Central Corridor (NE 12th St to SE 20th St)* is overcapacity—through monitoring determine future AWDT volume impacts when the actual Town Center land uses are identified.
- *228th Avenue South Corridor (SE 20th St–SE 43rd Way)*—through monitoring determine the future AWDT volume impacts when the actual Town Center land uses are identified.
- *SE Issaquah Fall City Road from SE Duthie Hill Road-Klahanie Drive SE*—through monitoring determine the future AWDT volume impacts when the actual Town Center land uses are identified and also consider additional improvements.

3-Lane and 5-Lane Sahalee Way NE Widening

The projected 2035 volumes exceed capacity of the 3-lane Sahalee Way NE section as proposed. A future 3-lane Sahalee Way NE improvement does not meet city LOS standard for concurrency. This results in traffic diverting to other arterials and local streets.

The 5-lane Sahalee Way NE section has sufficient capacity to meet city LOS standards for 2035 and beyond. The additional capacity attracts traffic off of East Lake Sammamish Parkway, 244th Avenue NE and other residential collectors west of Sahalee Way NE. With the 5-lane Sahalee Way NE improvement alternative the following AWDT volume changes are projected when compared to the 3-lane alternative:

- Reduces AWDT volume on East Lake Sammamish Parkway north of Inglewood Hill Road by 850 vehicles per day (vpd)
- Reduces AWDT volume on 205th Place NE near Elizabeth Blackwell Elementary School by 1,000 vpd
- Reduces AWDT volume on 216th Avenue SE north of NE Inglewood Hill Road by 1,600 vpd

- Reduces AWDT volume on NE Inglewood Hill Road west of 228th Avenue NE by 1,400 vpd
- Reduces AWDT volume on 244th Avenue NE north of NE 8th Street)by 450 vpd
- Increases AWDT volume on 228th Avenue NE north of NE 8th Street by 4,900 vpd
- Increases AWDT volume on 228th Avenue NE south of SE 4th Street by 650 vpd
- Reduces traffic volumes in neighborhoods to the west of Sahalee Way NE

Additionally, the 5-lane Sahalee Way NE alternative reduces or eliminates the need for future improvements on East Lake Sammamish Parkway north of NE Inglewood Hill Road and on 244th Avenue NE north of NE 8th Street.

Flexibility in Roadway Design Guidelines

Essential functions of streets in Sammamish include vehicle mobility, pedestrian access, bicycle access, and aesthetics. City standards specify lane widths of 11 feet. Left-turn lanes increase capacity, reduce vehicular collisions, and improve access to adjacent property. Bicycle lanes should be provided along major traffic corridors, and when striped should be a minimum of 5 feet in width. Sidewalk widths should be a minimum of 6 feet. Landscaped medians are especially important to soften wide expanses of pavement, to provide a haven for crossing pedestrians, and to provide aesthetic treatment to streets.

Often when designing streets, obstacles are encountered that require modification in design approach. Impediments might include topographic features that make road construction difficult or very expensive; inadequate available right-of-way to allow for all desired features; or environmentally sensitive areas that require modification to avoid adverse impacts. Additionally, funding or grant sources may require specific features or dimensions.

Traffic Calming Program

The City of Sammamish has a comprehensive traffic calming program in place with the Neighborhood Traffic Management Program (NTMP) described in the Existing Conditions section of this Transportation Element. Thus, it is recommended that the city continue the NTMP in its current form, as already adopted by City ordinance.

Transportation Demand Management

Transportation Demand Management (TDM) consists of strategies that seek to maximize the efficiency of the transportation system by reducing demand on the system. The results of successful TDM can include:

See Volume I, Transportation Element Policy T.2.8–Policy T.2.10 on page 88 87.

- Travelers switch from single-occupancy-vehicle (SOV) to HOV modes such as transit, vanpools or carpools,
- Travelers switch from driving to non-motorized modes such as bicycling or walking,
- Travelers change the time they make trips from more congested to less congested times of day,
- Travelers eliminate trips altogether through such means as compressed workweeks, consolidation of errands, or use of telecommunications.

Within the State of Washington, alternative transportation solutions are further necessitated by the objectives of the Commute Trip Reduction (CTR) Law. Passed in 1991 as a section of the Washington Clean Air Act (RCW 70.94), the CTR Law seeks to reduce workplace commute trips in the nine most populous counties in the state. This law requires that in designated high population counties, each city within the county adopt a commute trip reduction plan requiring private and public employers with 100 or more employees implement TDM programs. Programs provide various incentives or disincentives to encourage use of alternative transportation modes, other than the SOV. The purpose of CTR is to help maintain air quality in metropolitan areas by reducing congestion and air pollution.

The city can promote TDM through policy and/or investments that may include, but are not limited to, the following:

- Public Education related to the benefits of TDM and individual actions to reduce vehicle trips
- Commute Trip Reduction (CTR) Ordinances
- Voluntary Compliance with CTR requirements by the city
- Managed access to facilities and activity centers
- Transit-oriented and pedestrian-friendly design
- Parking management

Transit Service and Facilities

As supported by the Goals, Objectives and Policies of the Transportation Element, public transportation has long-range benefits for the community because it offers:

See Volume I, Transportation Element Policy T.2.15–Policy T.2.22 on page 89.

- Primary mobility for those who cannot drive, including many of our youth, seniors, and citizens with disabilities,
- Mobility options for people who choose not to drive, either to avoid congestion, save money, or support the environment,
- Preservation of the quality of our environment by conserving energy, supporting better air quality, and reducing congestion on our roadways.

Central to the success of a public transportation system is the development of a compatible land use plan. Low-density suburbs and strip development are not designed to accommodate public transportation services. Changing the land use or traditional transit services is difficult and special attention is required to increase the effectiveness of transit by controlling development; modifying the existing arterial street system; and modifying pedestrian facilities to bring passengers to the transit system.

The City of Sammamish can influence compatibility with public transportation by considering the following development issues:

- Pedestrian access and facilities,
- Amount, cost, and location of parking,
- Location of higher density residential developments,
- Location and design of commercial and employment activities,
- Location of transit facilities,
- Location of community activity centers,
- Design of building complexes and their surroundings.

228th Avenue provides the primary corridor to support activity centers and more transit-oriented development. New development, redevelopment, or in-fill development that occurs in major activity centers can be designed to incorporate features that are compatible with public transportation. These features include:

- Land use that creates densities to support transit,
- Facilities that are oriented toward transit service,
- Walking distances that are on a reasonable pedestrian scale,
- Site design that encourages transit riders.

Zoning provisions are the primary means of implementing transportation-related land use policy. In order to accomplish this, the zoning code for major activity centers can be reviewed to ensure transit friendly design in these areas. Some factors that may be considered are:

- Encourage public transportation-compatible in-fill development on areas near transit routes and stops,

- Support the development of park-and-ride lots along transit routes,
- Encourage pedestrian uses at street-level buildings to stimulate activity and interest,
- Support increased residential densities along transit routes,
- Support increased employment densities in activity centers.

See Volume I, Transportation Element Policy T.2.8, Policy T.2.9 and Policy T.2.10 on page 88.

In addition, transit can be made more compatible with pedestrian travel by observing the following design guidelines:

- Provide sidewalks and safe crosswalks for access to the transit system,
- Include provisions for weather protection of the pedestrian,
- Eliminate barriers that discourage pedestrian access,
- Keep walking distances to a quarter-mile or less,
- Provide curb ramps and other facilities conforming to the Americans with Disabilities Act (ADA),
- Provide lighting to improve pedestrian safety and security,
- Provide design guidelines to foster and encourage pedestrian activity.

Special emphasis should be placed on the identification and public awareness of the transit system. Specific tasks could include improved signing, identification, and improved transit stops; route and schedule information provided at all transit stop sites; and shelters provided at some sites. Shelters provide a visual reminder of transit availability and provide an incentive for residents and visitors to use the transit system. Shelters can be installed only in locations with adequate public right-of-way and where appropriate pads can be constructed.

The success of the public transportation system is dependent on integrating key elements that comprise the overall plan. Integration of the transit system with streets, bicycle facilities, and pedestrian facilities is critical to transit's success.

Non-Motorized Plan

See Volume I, Transportation Element Policy T.2.12 and Policy T.2.13 on page 88.

The Trails, Bikeways and Paths Plan is a comprehensive planning document for the City of Sammamish addressing a 20-year vision for development of recreational trails and non-motorized transportation facilities within the city. The dual focus on recreational trails and public right-of-way non-motorized facilities is an intentional effort to create a well-integrated system for pedestrians, bicyclists, equestrians, and other trail users in the city. The title of the plan is also a reflection of the desire for an

integrated system. “Trails, Bikeways and Paths” is a melding of terminologies to de-emphasize the differences between recreation-based and transportation-based facilities, and to underscore the common themes and the benefits of an integrated system.

A vital aspect of the plan and a key part of the message is that this vision is for an integrated system. It was decided early on to pursue a system that avoided the historical, but somewhat arbitrary, distinctions between a non-motorized and a trails plan. This more holistic approach will provide additional flexibility in implementing the overall vision to connect key destinations that in many instances may not be possible to connect using one type of route or the other. It will also provide opportunities for interdepartmental coordination and will bring a greater efficiency to the effort. The benefits far outweigh the inconveniences of developing the plan in such a manner. The resulting system will be greatly enhanced as a result of this integrated approach.

This vision has been developed through a concentrated community outreach effort and through consistent dialogue and involvement of a citizen advisory committee called the Trails, Bikeways and Paths (TBP) Subcommittee. This advisory committee was formed to assist in guiding the development of this plan and reports to the Parks and Recreation Commission regarding the progress of the plan. In addition, community input was gathered at multiple points during the planning process and through the review and adoption process by the City Council.

The development of a vision for the future required an extensive effort to document existing trail and non-motorized facilities to provide a current picture and identify gaps in the system. An existing conditions inventory was completed for all trail and non-motorized facilities in the city, including private trail systems. Documentation of private trail systems was done to provide an understanding of how a proposed public system could integrate with private neighborhood facilities. In addition, key challenges and obstacles were identified to assist in developing proposed system improvements.

Key survey data was collected from the public regarding use of trails, destinations, locations, intensity of use, etc.

This information, along with feedback from the TBP Subcommittee and guidance from state and regional policy on non-motorized facilities, provided the basis for the development of TBP goals and policies. Then, basic overall trail corridors were identified to provide for east/west and north/south connectivity through the city.

With consideration of state, regional, and local design standards a hierarchy of pathways and trail types, as well as bicycle facility types, was created to specifically address the needs and conditions on the Sammamish Plateau. Each facility type description includes detailed information on facility width, height clearances, appropriate location, and surfacing.

The pathway and trail facility types range from paved multi-use trails to primitive soft surface trails, and also include all of the standard sidewalk facilities along streets and roadways. The bicycle facility types are consistent with state and regional standards for signed and striped bike lanes, designated shared bike routes, and multi-use shared paths.

Next, the identified corridors and field conditions were taken into consideration in assigning the hierarchy of facility types to all of the proposed routes. Considerations in this process included existing right-of-way and obstacles, topography, community destinations, and types of potential users. This process resulted in a 20-year pathways and trail system plan and bicycle system plan.

The overall vision is a direct reflection of the community's desire to use trails, bikeways, and paths for travel and recreation purposes. Please see the City of Sammamish *Trails, Bikeways and Paths Master Plan*.

Concurrency

See Volume I, Transportation Element Policy T.1.1–Policy T.1.3 on page 86.

A Concurrency Management System (CMS) is a policy procedure designed to enable a City or County to determine whether adequate facilities are available to serve new development. The transportation element of the Growth Management Act (GMA) requires each City and County planning department to incorporate a Concurrency Management System into their comprehensive plan. In a Concurrency Management System, local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development causes the LOS on a transportation facility to decline below the standard adopted in the Transportation Element of the Comprehensive Plan. Transportation improvements or strategies that accommodate the impacts of development can be made concurrent with the development. (State of Washington Growth Management Act, RCW 36.70A, 1990)

The city of Sammamish Concurrency Management System must be adopted as ordinance, and will involve the following components.

Identification of facilities to be monitored

The City of Sammamish has identified both segments and intersections for concurrency monitoring. All intersections with functionally classified roadways within the city will be monitored. Additionally, all roadway segments, as identified in Background Figure T–9, will be monitored for concurrency.

Establishment of LOS standards

In order to monitor concurrency, the city must adopt standards by which deficiencies may be identified, which were presented earlier in this plan. While GMA requires that LOS standards be adopted for concurrency, it does not mandate how those standards should be defined. Thus, the city is free to adopt by ordinance whatever standards it deems appropriate. The LOS standards that will be used to evaluate the transportation impacts of long-term growth and concurrency are defined as follows:

- **Roadway intersections.** Intersection LOS is calculated using standard HCM analysis procedures and for the AM or PM peak hour, whichever is worse. For intersections, the city shall adopt a standard of LOS D for intersections that include principal arterials and LOS C for intersections that include minor arterial or collector roadways.

  Attaining LOS D at major intersections with high approach volumes can result in large intersections with exclusive right-turn lanes, double left-turn lanes and additional through lanes. These improvements improve LOS for vehicles, but result in very long crosswalks and increased potential for pedestrian-vehicle conflicts at free right turns.

  The LOS for intersections with principal arterials should be LOS D, when LOS D can be attained with maximum of three approach lanes per direction. For example, a typical intersection of two five-lane roadways. The LOS for intersections with principal arterials may be reduced to E for intersections that require more than three approach lanes in any direction.

- **Roadway segments.** Segment LOS is based on allowable AWDT on a roadway segment as a function of roadway characteristics, as described earlier in this Transportation Element. The AWDT thresholds for each of these roadway segments, based upon the roadway characteristics, are defined in Background Table T–7. These thresholds would be adopted as ordinance by the City Council.

- **Corridor LOS.** Roadway LOS will be based upon performance of key corridors.

  Corridor LOS will be determined by averaging the incremental corridor segment volume over capacity (v/c) ratios within each adopted corridor. This has the effect of tolerating some congestion in a segment or more within a corridor while resulting in the ultimate completion of the corridor improvements. The average v/c of the segment s comprising a corridor must be 1.00 or less for the corridor to be considered adequate. All corridors must pass the Corridor LOS standard for the transportation system to be considered adequate. Corridors comprised of one concurrency segment segments must have a v/c of 1.0 or less to be considered adequate.

The following corridors comprised of the concurrency segments shown on the Background Figure T–9 will be monitored:

See Volume I, Transportation Element Policy T.3.3 on page 90.

- East Lake Sammamish Parkway North Corridor
  Concurrency segments 1, 2 and 3
- East Lake Sammamish Parkway Central Corridor
  Concurrency segments 5 and 6
- East Lake Sammamish Parkway South Corridor
  Concurrency segments 7 and 8
- Sahalee Way—228th Avenue North Corridor
  Concurrency segments 21, 22, and 23
- 228th Avenue Central Corridor
  Concurrency segments 24 and 25
- 228th Avenue South Corridor
  Concurrency segments 26 and 27
- Issaquah-Pine Lake Road Corridor
  Concurrency segments 32, 33 and 34
- 244th Corridor North Corridor
  Concurrency segments 35, 36 and 37
- 244th Corridor South Corridor
  Concurrency segments 39
- Louis Thompson Road—212th Corridor
  Concurrency segments 11, 12, 13 and 14
- NE Inglewood Hill Road Corridor
  Concurrency segments 15 and 16
- NE 8th Street
  Concurrency segment 28
- SE 32nd Way—Issaquah Beaver Lake Road Corridor
  Concurrency segments 40, 41 and 42
- SE Duthie Hill Road—Trossachs Boulevard Corridor
  Concurrency segments 43, 44 and 45

- SE 4th Street
  Concurrency segments 17 and 18
- SE 8th Street
  Concurrency segments 29
- SE 20th Street
  Concurrency segments 19 and 20
- SE 24th Street West Corridor
  Concurrency segments 9 and 10
- SE 24th Street East Corridor
  Concurrency segments 30 and 31

Monitoring

On a continuing basis, monitor and evaluate the adequacy of the concurrency policies and established LOS standards as new development occurs and as traffic levels grow. Analyze external influences on the Concurrency Management System. Make periodic adjustments to LOS standards as part of the annual Comprehensive Plan amendment process, based on the on-going evaluation.

Mitigation Fee System

The City has adopted a transportation impact fee.

Financing

See Volume I, Transportation Element Policy T.3.12–Policy T.3.21 on page 92.

The Growth Management Act requires that the transportation-related provisions of comprehensive plans address the financing of the local transportation system. The multiyear financing plans serve as the basis for the six-year street, road, or transit program for cities, counties, and public transportation systems and should be coordinated with the state's six-year transportation improvement program.

Total revenue available to the City of Sammamish for concurrency projects over a 20-year period is estimated in Background Table T–15. The estimated revenue projection is $237,000,000 (year 2015 dollars). The projected revenue presented in Background Table T–15 provides a revenue stream for the expenditures proposed for the next 20 years, based upon these preliminary estimates.

Background Table T–15
Transportation Capital Improvement Funding: 2015–2035

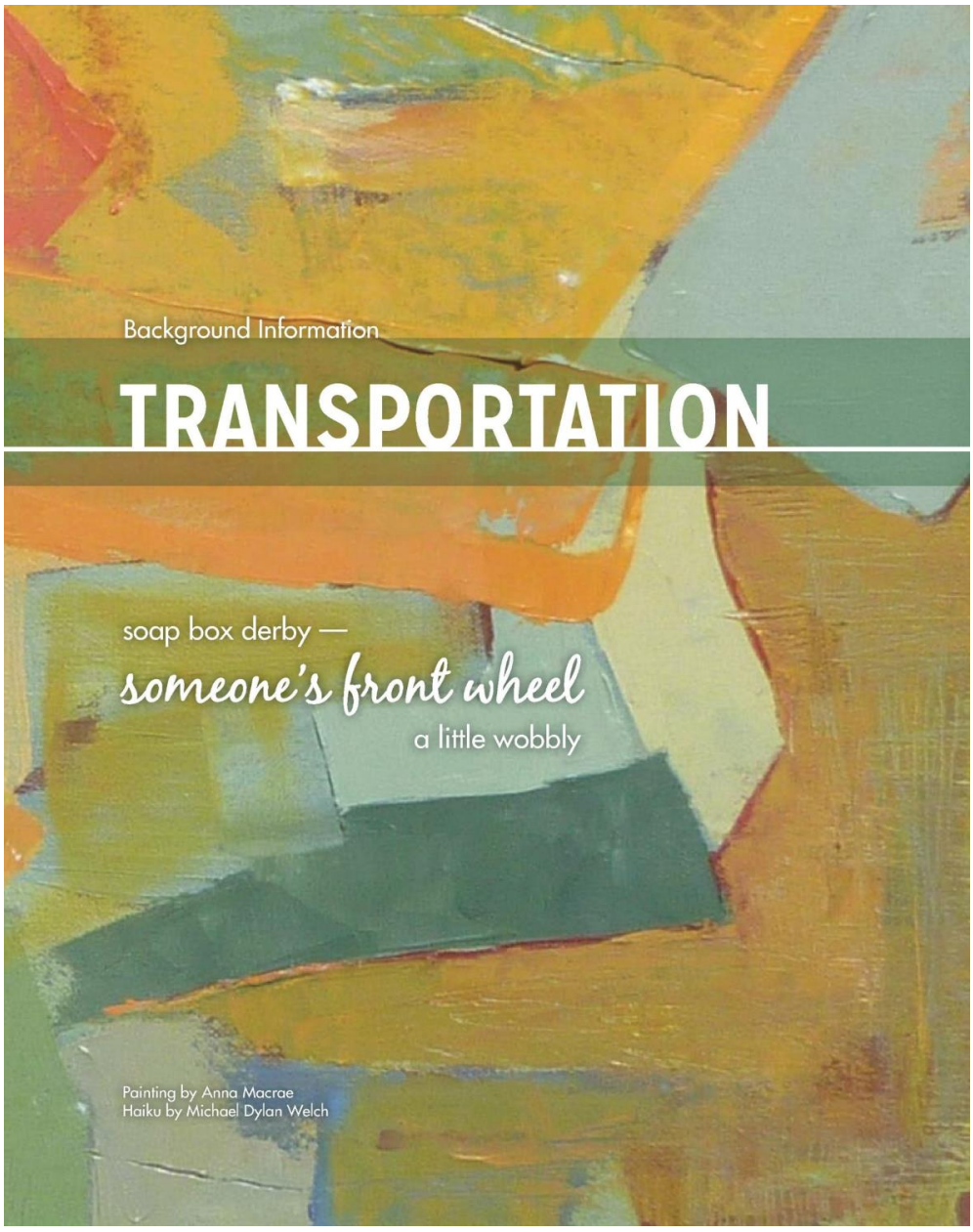
FUNDING SOURCE	AMOUNT (2015 DOLLARS)
Transportation Fund Revenue (REET)	25,000,000
Road Impact Fees (includes beginning fund balance)	35,000,000
Anticipated grants	15,000,000
Funding to be determined	162,000,000
TOTAL REVENUE	237,000,000

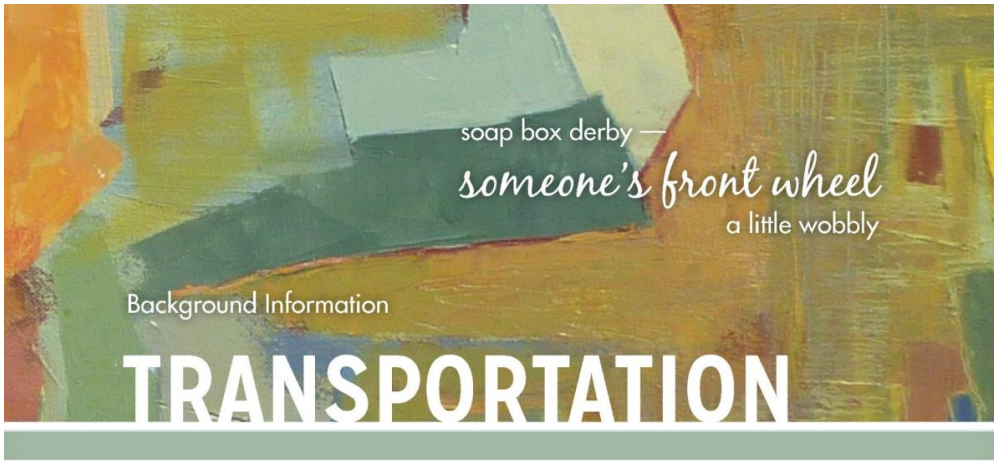
Contingency Plans in the Event of Revenue Shortfall

Some of the revenue forecasts are for revenues that are very secure, and highly reliable. However, other revenue forecasts are for sources that are volatile, and therefore difficult to predict with confidence, including grants, joint agency funding, the motor vehicle registration fee, general obligation bonds, and mitigation payments (which have not been enacted), and which fluctuate with the amount of new development.

In the event that revenues from one or more of these sources is not forthcoming, the city has several options: add new sources of revenue or increase the amount of revenue from existing sources; require developers to provide such facilities at their own expense; reduce the number of proposed projects; change the Land Use Element to reduce the travel demand generated by development; or change and/or lower the LOS standard.

See Volume I, Transportation Element Policy T.3.19 on page 92.


Background Information
TRANSPORTATION
soap box derby —
someone's front wheel
a little wobbly
Painting by Anna Macrae
Haiku by Michael Dylan Welch



The purpose of the Transportation Element is to establish goals and policies that will guide the development of surface transportation in the City of Sammamish, in a manner consistent with the overall goals of the Comprehensive Plan. Based upon existing and projected land use and travel patterns, the Transportation Element Background Information addresses roadway classifications, levels of service, transit and non-motorized modes, future travel forecasts, transportation system improvements, financing strategies, and concurrency management. It establishes the technical basis for transportation system development, and for existing and future improvement of transportation programs and facilities guided by the Transportation Polices of the Comprehensive Plan.

Planning Context

The Plan's Transportation Element has been developed to be consistent with transportation policy and plans that have been adopted at the State and local levels, as described in the following sections.

State of Washington

Growth Management Act

Transportation planning at the State, County and local levels is mandated by the State of Washington Growth Management Act (GMA) [RCW 36.70A]. The GMA contains many requirements for the preparation of a Comprehensive Plan's Transportation Element. In addition to requiring consistency with the land use element, specific GMA requirements for a Transportation Element include [RCW 36.70A.070(6)]:

- Inventory of facilities by mode of transport.
- Level-of-service standards to aid in determining the existing and future operating conditions of the facilities.
- Proposed actions to bring ~~these~~ deficient facilities into compliance with adopted level-of-service standards.
- Traffic forecasts, based upon land use.
- Identification of transportation infrastructure needs to meet current and future demands.
- Funding analysis for needed improvements, as well as possible additional funding sources.
- Identification of intergovernmental coordination efforts.
- Identification of transportation demand management strategies as available.
- Identification of improvements for pedestrian and bicycle facilities and corridors.

In addition to these elements, GMA mandates that development cannot occur unless infrastructure exists, infrastructure improvements or strategies are concurrent with development, or a financial commitment is in place to complete the improvements or strategies within six years. In addition to construction of new capital facilities, infrastructure may include transit service, ride share programs, transportation demand management (TDM) strategies, or transportation system management (TSM) strategies.

Washington Transportation Plan

The Washington Transportation Plan (WTP) 2030 presents the State of Washington's strategy for implementation programs and budget development over a 20-year planning horizon. The WTP contains an overview of the current conditions of the statewide transportation system, as well as an assessment of the State's future transportation investment needs. The WTP policy framework sets the course for meeting those future needs. The WTP is based on the following six transportation policy goals:

- Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- Safety: To provide for and improve the safety and security of transportation customers and the transportation system;
- Mobility: To improve the predictable movement of goods and people throughout Washington state;
- Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- Stewardship: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

The WTP addresses the essential and interconnected roles of the Regional Planning Organizations and their local jurisdictions, and the important transportation issues of tribal governments in Washington State. It highlights the role of the Washington State Department of Transportation (WSDOT) to maintain, preserve and improve the transportation system while meeting the other societal goals defined above.

Puget Sound Region

Puget Sound Regional Council—*Transportation 2040*

Transportation 2040 is a 30-year action plan for transportation in the central Puget Sound Region (King, Pierce, Snohomish, and Kitsap Counties). The plan identifies investments to support growth and improve transportation services to people and businesses, provides a financing plan for funding transportation improvements, and proposes strategies for reducing environmental impacts. *Transportation 2040* establishes three integrated and sustainable strategies: congestion and mobility; environment; and funding. These three strategies are then broken into four major investment categories that pertain to maintaining existing services; enhancing safety and security; improving system efficiency through travel demand management (TDM); and implementing strategic capacity investments for all travel modes and facilities.

Transportation 2040 is an offshoot of the *Vision 2040* plan whose fundamental goal is to focus growth in urban areas to maintain and promote the well-being of people and communities, economic vitality, and a healthy environment (PSRC 2014).

King County

2012 King County Planning Policies

Supporting Growth

An effective transportation system is critical to achieving the Regional Growth Strategy and ensuring that centers are functional and appealing to the residents and businesses they are designed to attract.

> *Goal Statement: Local and regional development of the transportation system is consistent with and furthers realization of the Regional Growth Strategy.*

Mobility

Mobility is necessary to sustain personal quality of life and the regional economy. For individuals, mobility requires an effective transportation system that provides safe, reliable, and affordable travel options for people of all ages, incomes and abilities. While the majority of people continue to travel by personal automobile, there are growing segments of the population (e.g. urban, elderly, teens, low income, minorities, and persons with disabilities) that rely on other modes of travel such as walking, bicycling, and public transportation to access employment, education and training, goods and services.

The movement of goods is also of vital importance to the local and regional economy. International trade is a significant source of employment and economic activity in terms of transporting freight, local consumption, and exporting of goods.

> *Goal Statement: A well-integrated, multi-modal transportation system transports people and goods effectively and efficiently to destinations within the region and beyond.*

System Operations

The design, management and operation of the transportation system are major factors that influence the region's growth and mobility.

> *Goal Statement: The regional transportation system is well-designed and managed to protect public investments, promote public health and safety, and achieve optimum efficiency.*

King County Metro Strategic Plan for Public Transportation 2011–2021

The King County Strategic Plan for Public Transportation 2011–2021 describes a vision for the county's future transportation system and sets objectives, goals, and strategies for getting there. The plan is consistent with other regional and countywide policies and plans, such as *Vision 2040*. Strategies to achieve Metro's goals are as follows:

- Increase safety and security in public transportation operations and facilities.
- Increase travel opportunities and public transportation products to serve appropriate markets (including low-income, elderly, and students) and mobility needs.
- Provide travel options and alternatives to regular fixed route-transit, such as ridesharing and other alternative or "right-sized" services.
- Expand services to account for the region's growing population and serve new transit markets.
- Support CTR and TDM strategies for employers, local jurisdictions, and other agencies.
- Enhanced service to and within jurisdictions that aggressively implement local land use plans, growth management strategies, and transit-oriented development.
- Design and modification of services and infrastructure to be more efficient and effective.
- Coordinate with Sound Transit, Community Transit, Pierce Transit, and the Washington State Ferry System to provide integrated efficient service to major destinations throughout the region.
- Improve access for pedestrians (with and without disabilities) and bicyclists, as well as the waiting environment at transit facilities with the highest use.
- Provide service that is easy to understand, use and promote. (King County Metro 2013)

Sound Transit

Sound Transit 2 expands mass transit with the addition of more regional express transit and link light rail and commuter rail service. This second mass transit phase builds onto the Sound Move strategic program, approved by voters in 1996. Sound Transit 2 expands the link light rail system to include link light rail from North Seattle into Snohomish County (Sound Transit 2008).

Inventory and Existing Conditions

The primary objective of this section of the report is to assess existing traffic conditions within and adjacent to the City of Sammamish. In order to identify existing traffic conditions, a comprehensive data collection process has been undertaken. The data was primarily collected from the City of Sammamish, King County, and WSDOT. The assessment of existing conditions serves as a baseline for measurement of capacity for future land use and transportation planning.

The following categories are included in this section:

- Identification of State Highways;
- Roadway Inventory;
- Traffic Signal Inventory;
- Roadway Design Standards;
- Traffic Level-of-Service Analysis;
- Analysis of Access to the city;
- Traffic Calming;
- Current Six-Year Transportation Improvement Program (TIP);
- Existing Transit Service; and
- Existing Non-Motorized Conditions.

Identification of State Highways

Identification of State Highways

No state highways are located within ~~the~~ Sammamish city limits. However, three State-controlled highways, Interstate 90 (I-90), State Route 520 (SR 520), and State Route 202 (SR 202)~~, run near or adjacent to Sammamish, providing~~ provide the primary means of access into and out of the city. Improvements on these facilities will highly impact traffic conditions in Sammamish and in turn, conditions on the highways will be impacted by transportation conditions and improvements in Sammamish.

I-90 is a limited-access freeway that consists of three lanes in each direction and runs east-west, approximately one mile south of the southern Sammamish city limits. From just west of Issaquah to Seattle, I-90 also has an HOV lane in each direction. I-90 serves as the primary east-west freeway for regional travel within and beyond western Washington. To the west, it provides direct connection to the Cities of Bellevue, Mercer Island, and Seattle. To

the east, it serves as the major east-west freeway across the State of Washington, connecting to Spokane at the eastern state border, and running beyond to the eastern coast of the United States.

SR 520 is a limited access freeway that consists primarily of two to three lanes in each direction and runs east west between the Cities of Redmond, Bellevue and Seattle. There are HOV lanes present along various stretches of this highway, but these lanes are not continuous.

SR 202, which runs adjacent to the northern Sammamish city limits, connects to SR 520 west of the city. SR 202 (also called Redmond-Fall City Road in the area adjacent to Sammamish) consists of one lane in each direction, widening to two lanes in each direction west of Sahalee Way. SR 520/SR 202 is the primary east-west highway alternative to I-90. This highway corridor provides direct connection to the Cities of Redmond, Bellevue, Kirkland, and Seattle to the west, and to the Cities of Snoqualmie and North Bend to the east.

Both I-90 and SR 520 connect directly to Interstate 405 (I-405) and Interstate 5 (I-5) to the west, which are the primary north-south freeways within the region.

Highways of Statewide Significance

In 1998, Highways of Statewide Significance (HSS) legislation was passed by the Washington State Legislature and codified as RCW 47.06.140. Highways of Statewide Significance are those facilities deemed to provide and support transportation functions that promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant facilities should be planned from a statewide perspective (WSDOT 2004). Thus, level-of-service requirements for HSS highways are established by WSDOT, not by local standards.

Adjacent to the City of Sammamish, I-90 carries the HSS designation (Washington State Transportation Commission 2004) and thus is controlled by State level-of-service requirements. Additionally, SR 520 is also identified as an HSS.

Roadway Inventory

Roadway Functional Classification and Inventory

Transportation roadway systems consist of a hierarchy of streets that provide the dual functions of access to land and development, and

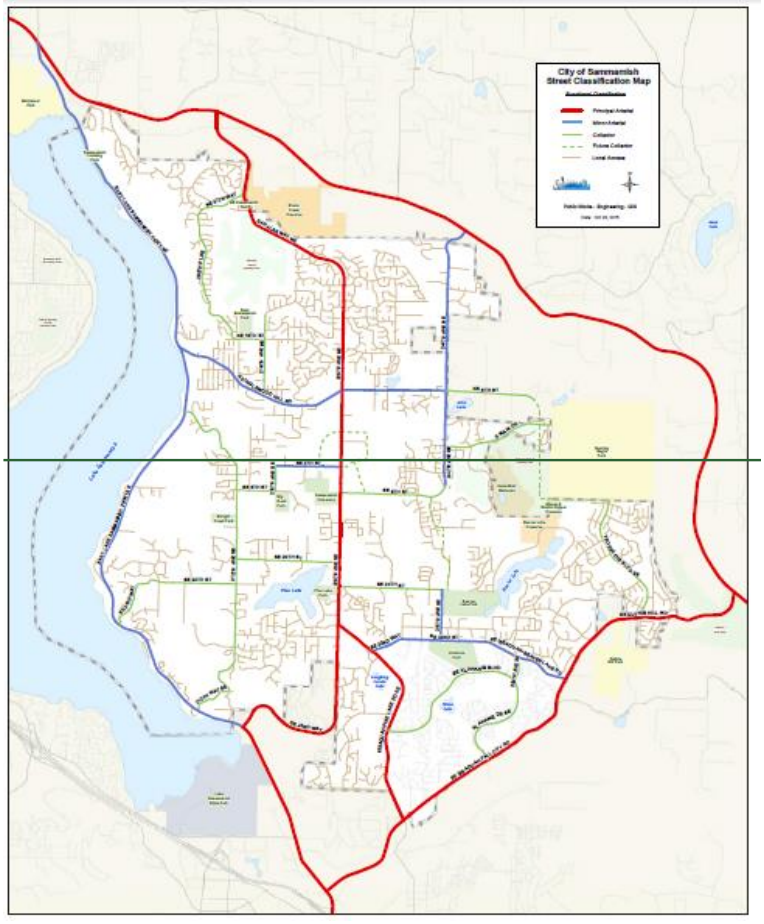
through movement for travelers. Streets are classified based upon the relative degree to which they provide these functions. Land use policies and street standards typically vary according to the street function. For example, most jurisdictions designate minimum right-of-way requirements, stopping and entering sight distances, roadway width, design speed, design traffic volumes, access control, and sidewalk requirements in accordance with an adopted classification system. These requirements are usually codified in the jurisdiction's municipal code and/or adopted as street standards.

Based on state law, cities and counties are required to adopt a street classification system that is consistent with state and federal guidelines. In the State of Washington, these requirements are codified in RCW 35.78.010 and RCW 47.26.090. Each local jurisdiction is responsible for defining its transportation system into the following functional classifications: freeway, principal arterial, minor arterial, and collector. All other roadways are assumed to be local access streets.

Background Figure T–1 shows the existing classification of roadways for the City of Sammamish. The classifications are summarized as follows:

- **Freeways/Interstates** are multi-lane, high-speed, high-capacity roadways intended exclusively for motorized traffic. All access is controlled by interchanges and bridges separate road crossings. While I-90 to the south and SR 520 to the northwest are classified as freeways, no roadways of this designation exist within the city limits.
- **Principal Arterials** are roadways connecting between major community centers and facilities, and are often constructed with limited direct access to abutting land uses. Principal arterials serve high-volume corridors, carrying the greatest portion of through or long-distance traffic within a city. The selected routes should provide an integrated system for complete circulation of traffic, including ties to the major rural highways entering the urban area. There is an estimated 11 miles of principal arterial roads in the city. The following is a list of roadways currently designated as principal arterials in the City of Sammamish:
  - Sahalee Way NE, between 228th Ave NE and the north city limits;
  - 228th Ave, between SE 43rd Way and Sahalee Way NE;
  - SE 43rd Way, between the south city limits and 228th Ave SE;
  - ~~SE~~ Issaquah-Pine Lake Rd SE, between city limits ~~SE Issaquah-Fall City Rd~~ and 228th Ave SE;

Background Figure T–1
Existing Roadway Inventory and Functional Classifications



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Sammamish Comprehensive Plan
Transportation Background Information
June 2017

~~–~~ SE Issaquah-Fall City Rd, between city limits~~Issaquah-Pine Lake Rd~~
– ~~SE~~ and SE Duthie Hill Rd; and
– SE Duthie Hill Rd, between Issaquah-Fall City Rd and the east city limits.

- **Minor Arterials** are roadways connecting centers and facilities within the community and serving some through traffic, while providing a greater level of access to abutting properties. Minor arterials connect with other arterial and collector roads extending into the urban area, and serve less concentrated traffic-generating areas, such as neighborhood shopping centers and schools. These roads also serve as boundaries to neighborhoods and collect traffic from collector streets. Although the predominant function of minor arterial streets is the movement of through traffic, they also provide for considerable local traffic with origins or destinations at points along the corridor. The following is a list of roadways currently designated as minor arterials in the City of Sammamish:
  – E Lake Sammamish Pkwy, between the south city limits and the north city limits;
  – NE Inglewood Hill Rd, between E Lake Sammamish Pkwy and 228th Ave NE;
  – NE 8th St, between 228th Ave NE and 244th Ave NE;
  – SE 8th St, between 228th Ave SE and 244th Ave SE;
  – 244th Ave NE, between E Main Dr~~NE 8th St~~ and the north city limits;
  ~~– 244th Ave SE Corridor, between SE 24th St and SE 8th St;~~
  ~~– 244th Ave SE, between SE 32nd St and SE 24th St;~~
  ~~– SE 4th St, between 218th Ave SE and 228th Ave SE; and~~
  – 244th Ave SE, between SE 8th St and ~~NE 8th St~~E Main Dr; ~~and~~
  – SE 32nd Way/SE 32nd St-SE Issaquah Beaver Lk Rd, between Issaquah-Pine Lake Rd SE and SE Issaquah-Fall City Rd/ SE Duthie Hill Rd.
- ~~**Collectors**~~ **Collector Arterials** are roadways that connect two or more neighborhoods or commercial areas, while also providing a high degree of property access within a localized area. These roadways "collect" traffic from local neighborhoods and carry it to the arterial roadways. Additionally, collector~~s~~ arterials provide direct access to services and residential areas, local parks, churches and areas with similar uses of the land. Collector~~s~~ arterials may be separated into principal and minor designations according to~~and~~ the degree of travel between areas and the expected traffic volumes. The following is a list of roadways currently designated as collector arterials in the City of Sammamish:
  – NE 37th Way/ 205th Pl NE/NE 16th St, between

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Sahalee Way NE and 216th Ave NE;
- 216th Ave NE, between NE Inglewood Hill Rd and NE 16th St;
- Louis Thomson Rd, between 212th Ave SE and East Lake Sammamish Pkwy NE;

- ~~216th Ave NE, between NE Inglewood Hill Rd and NE 16th St~~NE ~~20th Pl;~~
- 212th Ave, between E Lk Sammamish Pkwy S~~N~~E and Louis Thomson Rd;
- SE 8th St, between 212th Ave SE and 218th Ave SE;
- 218th Ave SE, between SE 8th St and SE 4th St;
- SE 4th St, between 218th Ave SE and 228th Ave SE;
- 248th Ave SE, between SE 24th St and SE 14th St;
- E Main Dr, between 244th Ave SE and the east city limits;
- SE 20th St, between 212th Ave SE and 228th Ave SE;
- SE 24th Way/SE 24th St, between E Lk Sammamish Pkwy SE and 212th Ave SE~~Pine Lake~~;
- SE 24th St, between 228th Ave SE and 248th Ave SE; ~~and~~
- Trossachs Boulevard SE, between SE Duthie Hill Rd and the north city limits;
- SE Windsor Blvd/~~248th Ave SE~~, between SE 8th St and SE 1~~2~~4th St;
- South Pine Lake Route (SE 32nd St-~~/~~216th Ave SE-~~/~~SE 28th St-~~/~~222nd Pl SE-~~/~~SE 30th St), between 212th Ave SE and 228th Ave SE;
- 244th Ave SE, between SE 24th St and SE 32nd St;
- SE Klahanie Blvd/Klahanie Dr SE, between Issaquah-Pine Lake Rd SE and SE Issaquah-Fall City Rd; ~~and~~
- 256th Ave SE, between SE Issaquah-Beaver Lake Rd and SE Klahanie Blvd.
- 218th Ave SE-217th Ave NE-216th Ave NE, between SE 4th St to Inglewood Hill Rd~~, between SE 6th St NE and Inglewood Hill Rd~~

Background Table T–1 provides a comparison of the City of Sammamish arterial and collector roadway miles to Federal Highway Administration (FHWA) guidelines (FHWA 1989), which must be followed to qualify the City of Sammamish streets for State and Federal grant programs.

The topography and development patterns within the City of Sammamish limit opportunities to add Principal or Minor Arterial routes. Some additional Collector mileage could be added and the totals would still remain within the FHWA guidelines.

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Background Table T–1
Miles of Roadway by Functional Classification

FUNCTIONAL CLASSIFICATION	EXISTING MILES OF ROADWAY IN SAMMAMISH[1]	TYPICAL RANGE OF PERCENTAGE OF TOTAL ROADWAY[2]	TYPICAL RANGE OF MILES BASED UPON FHWA GUIDELINES
Freeway & Principal Arterial	~~11.7~~14.0	5%–10%	~~8–16~~10-20
Minor Arterial	~~17.1~~16.0	10%–15%	16–24
Collector Arterial	~~11.1~~21.0	5%–10%	8–16
Non-Arterial Street~~Local Access~~	~~121.1~~157.0	—	~~104–128~~135-167
TOTAL	~~160.0~~208.0	—	~~160~~207

1. *Source: City of Sammamish ~~2015~~2016~~8~~*
2. *Source: FHWA 1989*

Traffic Signal and Roundabout Intersection Inventory

An inventory of the signalized and roundabout ~~(RAB)~~ intersections, and those with four way flashers within ~~inside~~ and nearby the City of Sammamish was conducted ~~by the City of Sammamish~~. The locations ~~of the twenty-one~~thirty-five~~six existing signalized, five~~ two ~~intersections with flashing beacons and three~~six ~~RAB~~six RABintersections~~,~~ are illustrated in Background Figure T–2., and ~~These~~ are the intersections that most directly affect City of Sammamish residents' travel patterns.

Freight Routes

See Volume I, Transportation Element Policy T.1.6~~5~~ on page 87.

Freight destined to and from Sammamish is associated primarily with retail oriented commercial developments in the city. There are no significant industrial, manufacturing, or import/export freight generators in the city. Limited through freight associated with FedEx sorting facilities in Issaquah to the south and UPS sorting facilities in Redmond to the north travel through the city. Freight traffic uses two corridors. Through freight typically uses East Lake Sammamish Parkway and local freight traffic uses Sahalee Way/228th Ave. Background Figure T–3 shows these routes.

Roadway Design Standards

See Volume I, Transportation Element Policy T.3.4 on page 90.

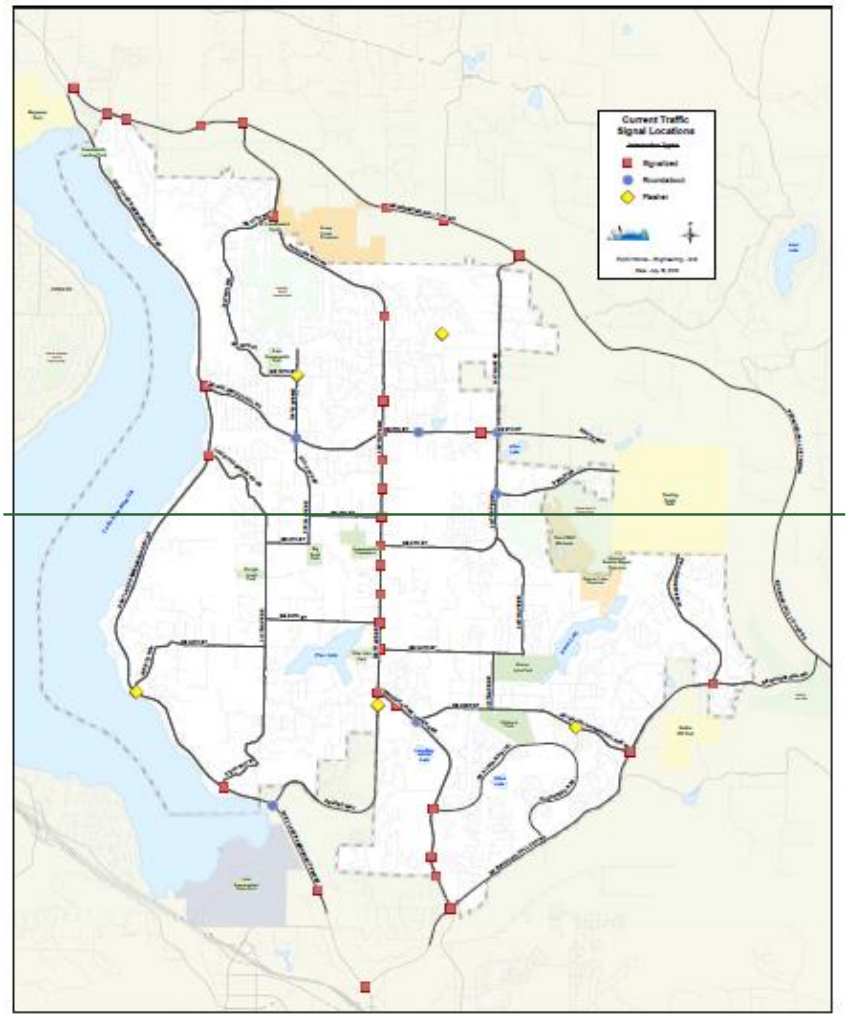
The City has adopted ~~interim~~ standards for development of City streets, as documented in the ~~*Interim Public Works Standards (April 2000)*~~ 2016 Public Works Standards (December 31, 2016)~~and as amended for the local road section, per City memorandum (July 1, 2014)~~. As the city reconstructs roadways to improve vehicular capacity and safety, they will become more urban in nature. The Goals, Objectives and Policies of the Transportation Element relate street design to the desires of the local community, and advise that design be at a scale commensurate with the function that the street serves. Guidelines are therefore important to provide designers with essential elements of street design as desired by the community.

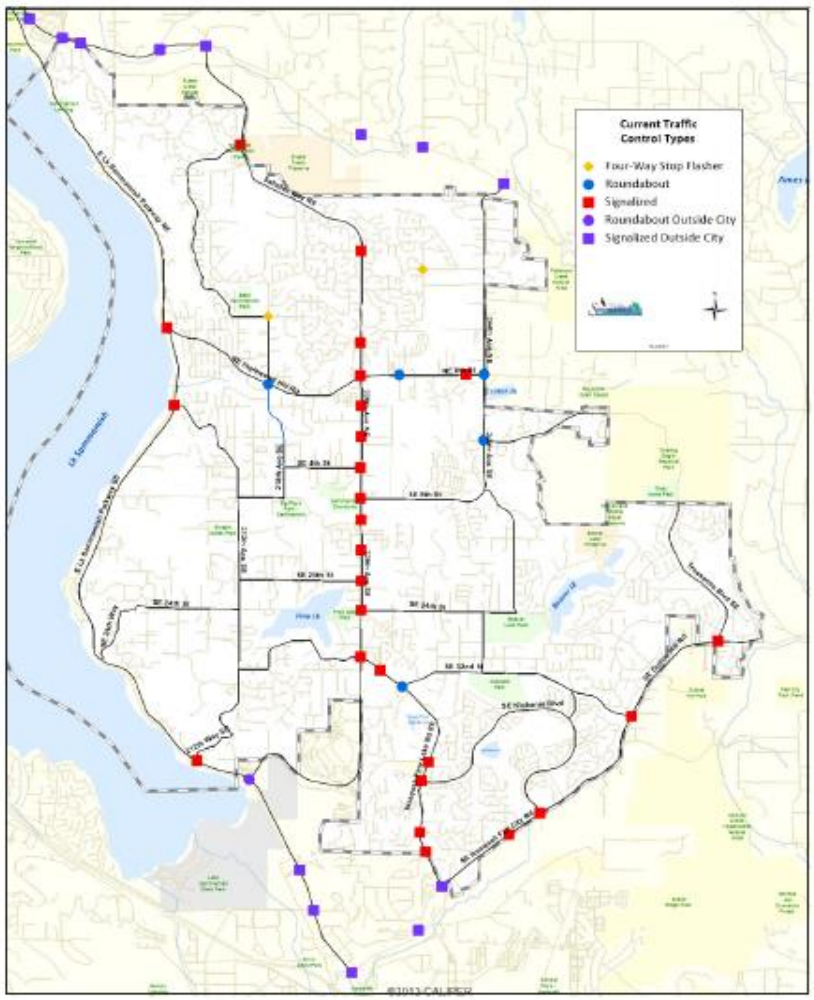
~~Background Figure T–4 illustrates typical street sections for Arterial and Collector Street design. This design is consistent with most municipalities' urban roadway design standards. In this illustration, the vertical curbs provide access control and the overall character suggests a "city" driving behavior with lower travel speeds.~~

In June 2008, the City of Sammamish adopted the Sammamish Town Center Plan. The Town Center Plan established policy direction that amends the previous Comprehensive Plan. The Town Center provides a central area for the increased residential and commercial densities. Transportation improvements associated with the Town Center are

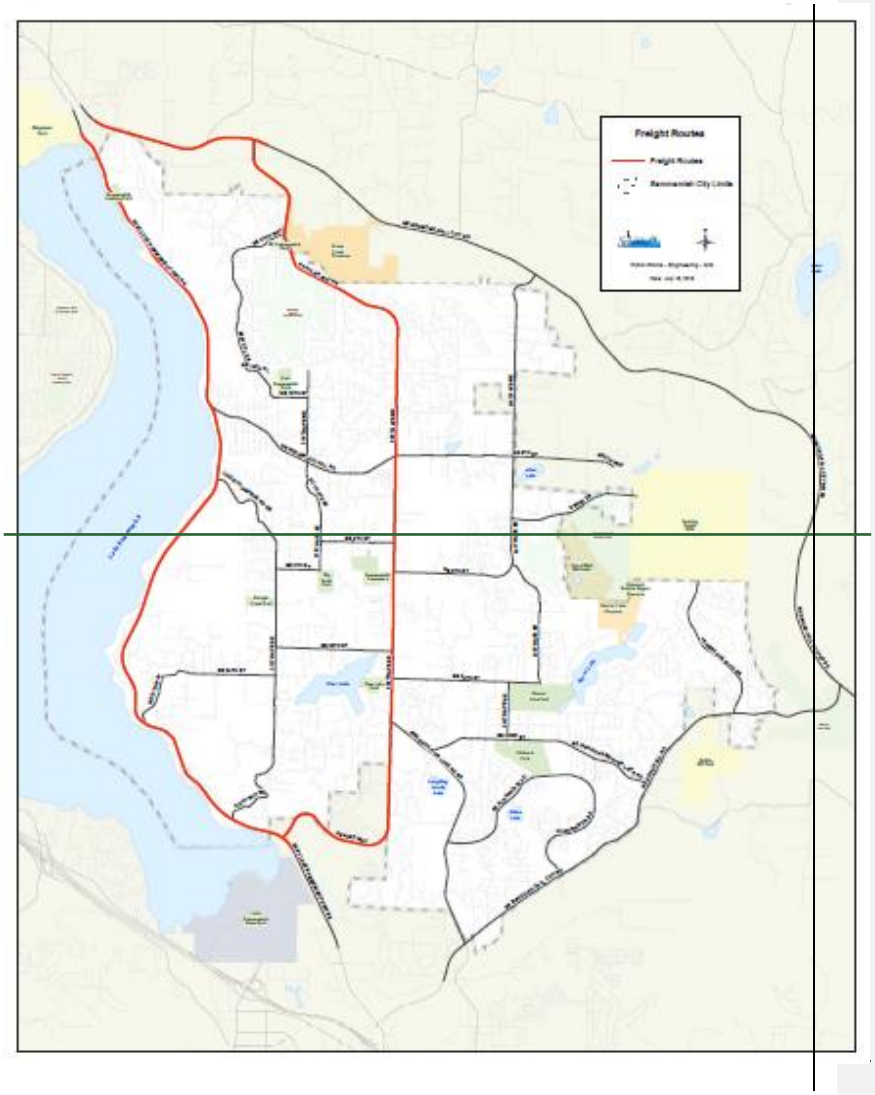
intended to provide safe, efficient and attractive connections to central

Background Figure T–2
Current ~~Traffic~~ Signal, Roundabout, and Four-Way Flasher Locations




Current Traffic Control Types
Four-Way Stop Flasher
Roundabout
Signalized
Roundabout Outside City
Signalized Outside City

Background Figure T–3
Freight Routes




City of Sammamish
Freight Routes
Freight Routes
City Limit
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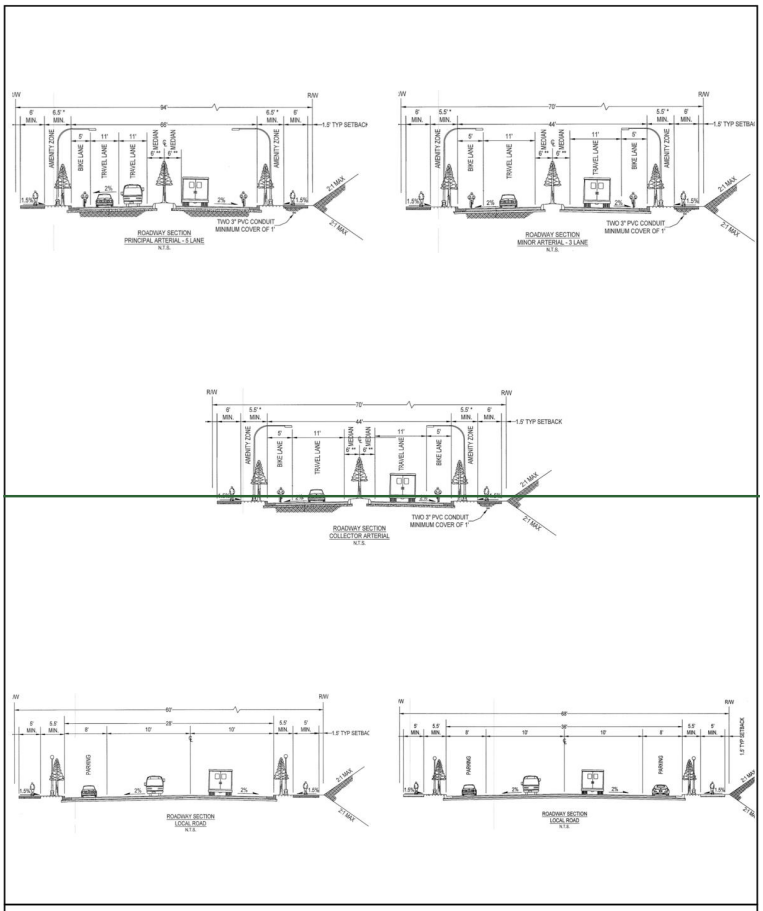
~~*Background Figure T-4*~~
~~*Current Roadway Design Standards*~~



2016 Public Works Standards
Street Cross-Sections

Source: City of Sammamish 2016 Public Works Standards

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uses and amenities, minimize congestion impacts within the Town Center and surrounding areas, and promote alternative travel modes. To support the Town Center Plan improvement concepts including roadway cross-sections specific to roadways supporting the Town Center were developed.

~~Background Figure T–5~~ Background Figure T–4 and ~~Background Figure T–6~~ Background Figure T–5 illustrate the conceptual Sammamish Town Center street cross-sections (Sammamish Town Center Plan June 2008).

Field Code Changed

Field Code Changed

Field Code Changed

Traffic Counts

Daily traffic counts were collected by the City in 2016 at 74 locations throughout the city. Average weekday daily traffic (AWDT) counts were calculated by averaging the daily traffic counts of Monday, Tuesday, Wednesday, Thursday, and Friday during a typical week. Locations and volumes for existing AWDTs are listed in Background Table T–2 and illustrated in Background Figure T–6.

The highest traffic volumes shown occur near the high schools and City Hall on 228th Ave SE.

In addition, intersection turning movement counts were collected at 43 locations during the AM and PM peak hours within the City in 2016. These counts were collected during a Tuesday and Thursday in April and May, in order to reflect typical weekday conditions. These counts consider vehicle traffic volumes making each turn movement during the AM and PM peak hours. These counts are collected manually and are further described in the following section.

See Volume I, Transportation Element Policy T.1.3 on page 86.

Traffic Level-of-Service Analysis

Level-of-Service (LOS) is the primary measurement used to determine the operating condition of an ~~roadway segment or~~ intersection. ~~In general,~~ LOS is determined by the average delay of all approaches for signalized, roundabouts (RAB), and all way stop-controlled intersections. The LOS for two way stop-controlled intersections is determined by the average delay for the worst minor approach, or left turn movement of the major street.~~comparing traffic volumes (counted or modeled) to the carrying capacity of the intersection or roadway segment~~ The following section describes the traffic counts ~~volumes~~ that were collected, the approach~~es~~ used for intersection LOS analysis, and the results of the analyses under existing conditions.

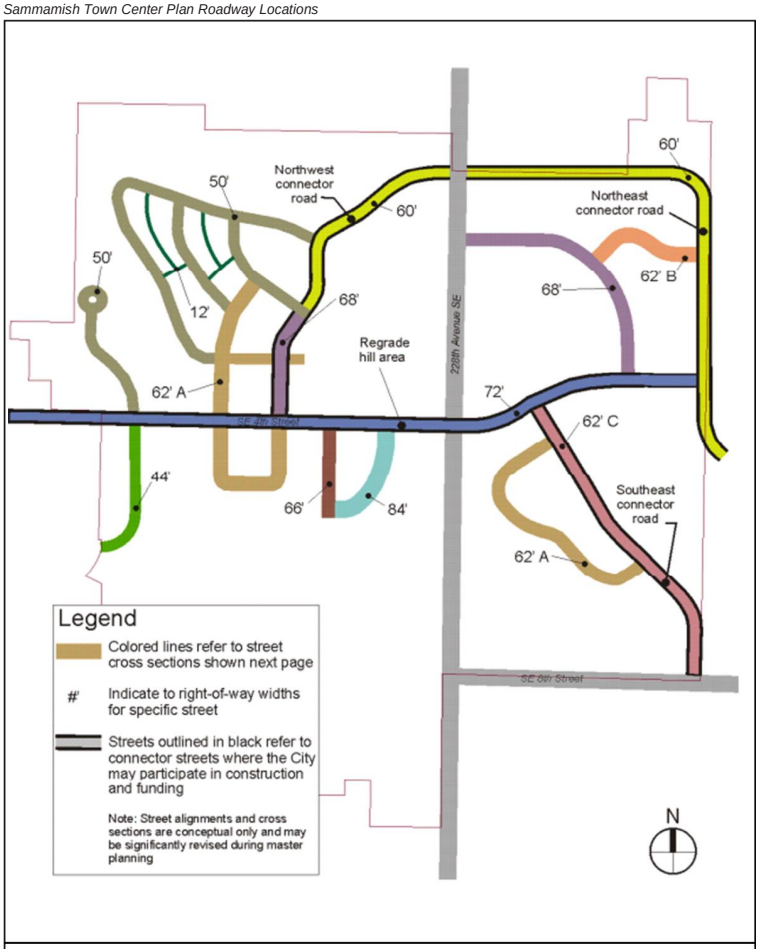
~~Average Weekday Daily Traffic~~

~~Daily traffic counts were collected by the City of Sammamish in 20122016 at sixteen78 locations throughout the city. Average weekday daily traffic (AWDT) counts were calculated by averaging the daily traffic counts of Monday, Tuesday, Wednesday, and Thursday, and Friday during a typical week. Locations and volumes for existing AWDTs are listed in Background Table T-2 and illustrated in Background Figure T-7.~~

~~The highest traffic volumes shown occur near the high schools and City Hall.~~

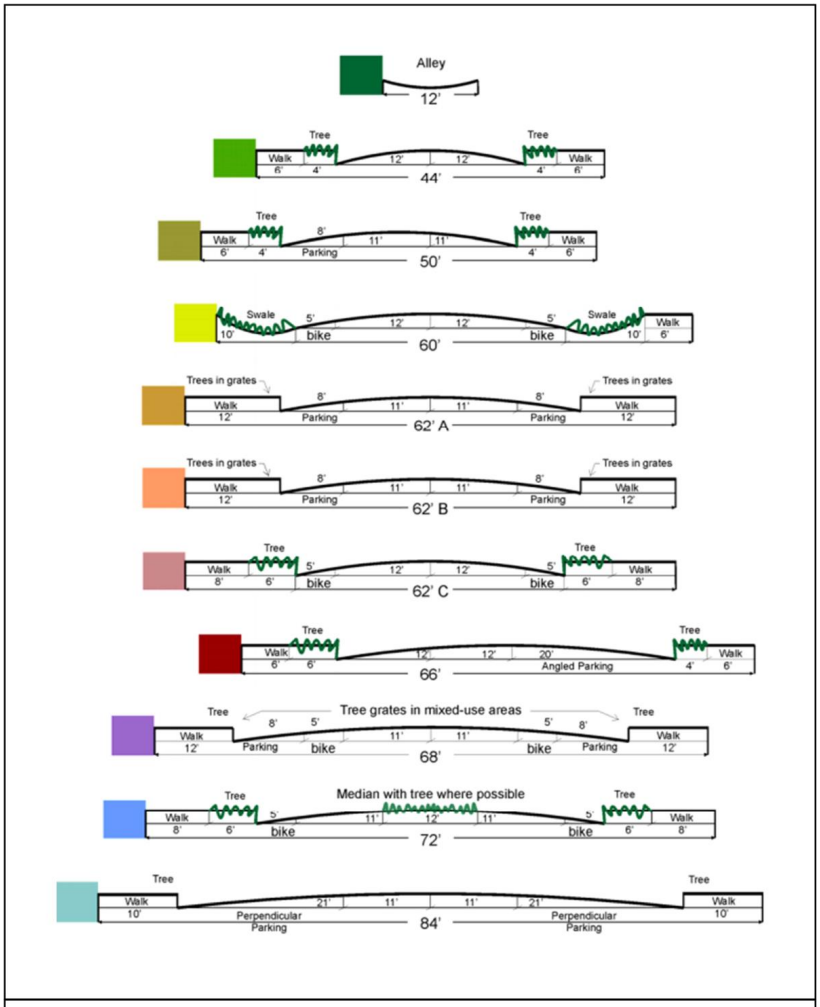
Background Figure T–~~5~~4

Sammamish Town Center Plan Roadway Locations



Sammamish Town Center Plan
Roadway Locations

Source: City of Sammamish Town Center Plan



Sammamish Town Center Plan
Street Cross-Sections

Source: City of Sammamish Town Center Plan

Background Table T–2
2016~~2~~ Average Weekday Daily Traffic (AWDT)

SITE #	LOCATION	2016~~2~~ AWDT
1	East Lake Sammamish Parkway NE, south of 187th Avenue NE	19,070~~17,770*~~
2	Sahalee Way SE, south of NE 50th Street	21,210
3	244th Ave ~~S~~NE, south of SR-202	7,000~~5,800~~
4	East Lake Sammamish Parkway SE, south of Louis Thompson Road	10,020~~8,200~~
5	212th Avenue SE, south of SE 8th Street	4,710~~3,600~~
6	228th Avenue SE, south of SE 10th Street	29,750
7	East Lake Sammamish Parkway, south of 212th Avenue SE	16,830~~14,100~~
8	228th Avenue SE, south of SE 32nd Street	18,160
9	Issaquah-Pine Lake Road, east~~south~~ of 228th Avenue SE	15,260~~17,160*~~
10	244th Avenue SE, north of SE 32nd Street	5,670~~5,500~~
11	Beaver Lake Drive SE, north of Issaquah-Beaver Lake Road	2,690
12	SE Duthie Hill Road, north of Issaquah-Beaver Lake Road	15,170~~13,400~~
13	East Lake Sammamish Parkway, south of SE 43rd Way	35,150
14	Issaquah-Fall City Road, southwest of Issaquah-Pine Lake Road	28,190
15	Issaquah-Pine Lake Road, south of SE Klahanie Boulevard	19,500
16	Trossachs Boulevard SE, north of SE Duthie Hill Road	8,930~~7,700~~
17	East Lake Sammamish Parkway, south of NE Inglewood Hill Road	13,210
18	East Lake Sammamish Pkwy, north of ~~Inglewood Hill Road~~NE 18th Place	18,990~~15,500~~
19	East lake Sammamish Parkway, south of SE 32nd Street	11,580
20	NE Inglewood Hill Road, east of East Lake Sammamish Parkway	10,200
21	NE 8th Street, east of 228th Avenue NE	10,250~~9,100~~
22	228th Avenue NE, north of NE 8th Street	20,740
23	228th Avenue NE, south of NE Inglewood Hill Road/NE 8th Street	24,920~~23,200~~
24	228th Avenue SE, south of SE 8th Street	26,650~~23,000~~
25	212th Avenue SE, south of SE 20th Street	5,270
26	228th Avenue SE, south of Issaquah-Pine Lake Rd	18,370~~15,500~~
27	SE 20th Street, west of 228th Avenue SE	5,050
28	SE 28th Street, east of 218th Avenue SE (South Pine Lake Route)	2,340
29	SE 8th Street, east of 228th Ave SE	8,540~~7,700~~
30	SE 24th Street, east of Audubon Park Drive	7,320
31	244th Avenue SE, north of SE Windsor Boulevard	6,790
32	East Main Drive, east of 244th Avenue SE	2,950
33	244th Avenue NE, north of NE 8th Street	8,260
34	NE 8th Street, west of 244th Avenue NE	7,630
35	South Pine Lake Route (Issaquah-Pine Lake Rd ext), west of 228th Ave SE	4,190
36	West Beaver Lake Drive SE, south of SE 18th Place	710
37	205th Place NE, south of NE 37th Way	3,210
38	SE 4th Street, west of 228th Avenue SE	2,820
39	248th Avenue SE, north of SE 24th Street	3,100
40	244th Ave ~~S~~NE, north of NE 3rd Way (on bridge)~~E Main Street~~	7,430~~6,990*~~

41	216th Avenue NE, south of NE 16th Street	4,780
42	217th Avenue NE, south of NE 4th Street	1,600
43	218th Avenue SE, south of SE 4th Street	2,140
44	Louis Thompson Road NE, east of East Lake Sammamish Parkway NE	4,170
45	212th Way SE, east of East Lake Sammamish Parkway SE	4,870
46	SE 32nd Street, west of 228th Avenue SE	1,100
47	SE 32nd Street, west of 244th Avenue SE	6,470
48	SE Issaquah-Beaver Lake Road, west of SE Duthie Hill Road	6,070
49	SE 32nd Street, east of 244th Avenue SE	7,630
50	SE Duthie Hill Road, south of SR-202	7,530
51	East Lake Sammamish Parkway NE, south of NE 30th Street	18,680
52	East Lake Sammamish Parkway SE, north of SE 24th Way	10,560
53	SE 24th Way, east of East Lake Sammamish Parkway SE	1,320
54	212th Avenue SE, north of SE 20th Street	5,090
55	212th Avenue SE, south of SE 32nd Street	4,800
56	SE 20th Street, east of 212th Avenue SE	4,670
57	Sahalee Way NE, north of NE 25th Way	16,960~~19,410*~~
58	228th Avenue NE, north of NE 12th Place	18,720
59	228th Avenue SE, south of SE 20th Street	31,680
60	Issaquah-Pine Lake Road, south of SE 32nd Way~~Street~~	16,870~~18,925*~~
61	Issaquah-Pine Lake Road SE, north of SE 48th Street	21,630
62	SE 32nd Way, east of Issaquah-Pine Lake Road SE	8,330
63	SE Klahanie Boulevard, east of Issaquah-Pine Lake Road SE	5,440
64	SE 24th Street, west of 244th Avenue SE	6,040
65	SE Issaquah-Fall City Road, northeast of Issaquah-Pine Lake Road SE	25,720~~27,160~~
66	SE Issaquah-Fall City Road, west~~south~~ of Klahanie Drive SE	23,020~~26,830*~~
67	SE Issaquah-Fall City Road, east of Klahanie Drive SE	15,200
68	Klahanie Drive SE, north of SE Issaquah-Fall City Road	12,470
69	SE Klahanie Boulevard, northeast of SE 37th Street	3,410
70	SE Issaquah-Fall City Road, south of SE Duthie Hill Road	14,350
71	SE Duthie Hill Road, south of SE Issaquah-Beaver Lake Road	13,630
72	SE Duthie Hill Road, west of Trossachs Boulevard SE	14,220
73	Sahalee Way NE, south of NE 37th Way	19,990~~18,400~~
74	Sahalee Way NE, south of 217th Place NE	19,120
~~10b~~	~~SE 24th Street, west of 212th Avenue SE~~	~~1,840~~
~~16b~~	~~NE Inglewood Hill Rd, west of 228th Ave NE216th Avenue NE~~	~~9,940~~8,600
~~50b~~	~~Issaquah-Pine Lake Road SE, north of SE Issaquah-Fall City Road~~	~~22,230~~
~~56b~~	~~256th Avenue SE, north of SE Klahanie Boulevard~~	~~4,920~~

~~* 2014 volumes were collected at locations marked with asterisks.~~

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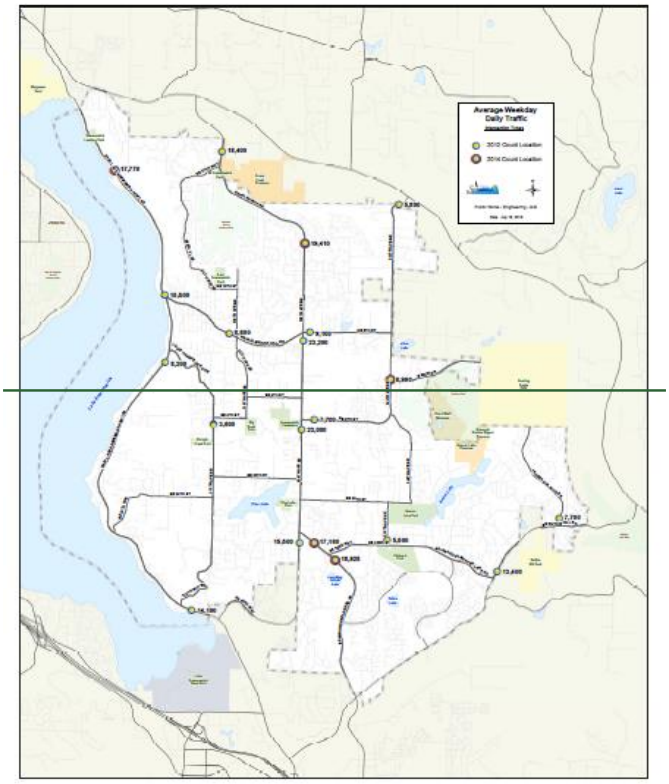
Background Figure T-~~7~~6
~~2012~~ 2016 Average Weekday Daily Traffic



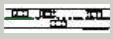
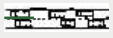

2016 Average Weekday Daily Traffic
2016 Count Location
©2013 CALIPER

Roadway Level of Service Analysis

See Volume I, Transportation Element Policy T.1.3 on page 86.

The Highway Capacity Manual (HCM 20002010) is the recognized source for the techniques used to measure transportation facility performance. Using the HCM procedures, the quality of traffic operation is graded into one of six levels of service: A, B, C, D, E, or F. Background Table T-3 summarizes the characteristic traffic flow for the varying levels of service. As the table shows, LOS A and B represent the best traffic operation. LOS C and D represent intermediate operation and LOS E and F represent high levels of traffic congestion.

Background Table T-3
Characteristic Traffic Flow for Level-of-Service Measures

LEVEL-OF-SERVICE		CHARACTERISTIC TRAFFIC FLOW
A		Free flow, low volumes and no delays
B		Stable flow, speeds restricted by travel conditions, minor delays,
C		Stable flow, speeds and maneuverability closely controlled due to higher volumes.
D		Stable flow, speeds and maneuverability closely controlled due to higher volumes.
E		Unstable flow, low speeds, considerable delay, volume at or near capacity, freedom to maneuver is extremely difficult.
F		Forced flow, very low speeds, volumes exceed capacity, long delays with stop-and-go traffic.

Source: HCM 1997.

Level of service standards are used to evaluate the transportation impacts of long-term growth and concurrency. In order to monitor concurrency, the city must adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified. The Highway Capacity Manual (HCM) is the recognized source for the techniques used to measure transportation facility performance. Using the HCM procedures, the quality of controlled intersection operations is graded into one of six levels-of-service: A, B, C, D, E, or F.

Intersection Level of Service

The intersection level of service (LOS) is calculated using the standard analysis procedures described in this section for the AM and PM peak hours. Intersections with LOS' below the defined standards will be considered deficient. For intersections of roadways with different functional classifications, the standard for the higher classification applies to the entire intersection.

The intersection LOS standards adopted in this Transportation Element are LOS C for intersections that include Minor Arterial or Collector Arterial roadways, and LOS D or E for intersections that include Principal Arterials. Attaining LOS D at major intersections with high approach volumes can result in large intersections with exclusive right-turn lanes, double left-turn lanes and additional through lanes. While these improvements reduce delays for ~~These improvements improve LOS for~~ vehicles, they can ~~but~~ result in very long cross~~walks~~ing distances for pedestrians, as well as increased ~~and increase potential for~~ pedestrian-vehicle conflicts ~~at free right turns~~. Therefore, if LOS D for intersections on principal arterials cannot be attained with fewer than four approach lanes in any direction, the LOS may be reduced to LOS E.

AM and PM Peak-Hour Intersection Level of Service

Intersection turning movement counts were collected at 43 locations during the AM and PM peak hours within the City in 2016. These counts were collected during a Tuesday and Thursday in April and May, in order to reflect typical weekday conditions. Level of service analysis was performed for existing AM and PM peak-hour conditions at the 43 intersections.

Background Table T–5 summarizes the intersection locations, the existing traffic control for each intersection, and the calculated LOS using the HCM methodology based upon 2016 traffic counts for the AM (7-8) and PM (4:45-5:45) peak hours. The intersection LOS is also illustrated in Background Figure T–~~8~~7.

Intersection Level of Service Criteria

Level of service for intersections is determined by the average amount of vehicle control delay experienced by vehicles at the intersection.

For signalized and roundabout (RAB) controlled intersections the LOS is calculated based on average control delay for the entire intersection. ~~Background Table T–4~~ Background Table T–3 summarizes the LOS criteria for signalized and RAB controlled intersections.

~~For two-way stop-controlled (TWSC) intersections, LOS is based on the control delay for each minor-street movement (or shared movements) and for left turn movements from the major street.~~the worst approach, which tends to be the stop-controlled minor streets.

~~All-way stop-controlled (AWSC) intersections require drivers on all~~

See Volume I, Transportation Element Policy T.1.4 on page 8~~7~~6.

~~approaches to stop before proceeding into the intersection. Level of service for AWSC intersections is determined by the average computed or measured delay for all movements.~~

Background Table T–~~4~~3
Level-of-Service Criteria for Signalized and Roundabout Intersections

LEVEL-OF-SERVICE (LOS)	AVERAGE DELAY PER VEHICLE (SECONDS/VEHICLE)
A	~~=~~ ≤10
B	> 10–20
C	> 20–35
D	> 35–55
E	> 55–80
F	> 80

Source: HCM 2010.

~~Roundabouts (RAB's) are generally circular intersections characterized by yield control on entry and counterclockwise circulation around a central island. Level of service for RAB's is determined by the control delay at the intersections worst approach.~~

The LOS criteria for ~~unsignalized~~ two way stop controlled (TWSC) and AWSC intersections ~~(TWSC and AWSC and RAB's)~~ have different threshold values than those for signalized and RAB controlled intersections, primarily because drivers expect different levels of performance from ~~distinct~~ different types of transportation facilities. In general, stop-controlled intersections are expected to carry lower volumes of traffic than signalized and RAB controlled intersections. Thus for the same LOS, a lower level of delay is acceptable at stop-controlled intersections than for signalized and RAB controlled intersections.

For TWSC intersections, LOS is calculated based on the control delay of the worst approach, which tends to be the stop-controlled minor streets, or for left turn movements from major streets, whichever is worse.

~~Background Table T–5~~ Background Table T–4 summarizes the LOS thresholds for both TWSC and AWSC intersections.

~~Background Table T–5~~4
Level-of-Service Criteria for ~~TWSC, AWSC and RAB~~Stop Controlled Intersections

LEVEL-OF-SERVICE (LOS)	AVERAGE DELAY PER VEHICLE (SECONDS/VEHICLE)
A	~~=~~ ≤10
B	> 10–15
C	> 15–25

D	> 25–35
E	> 35–50
F	> 50

Source: HCM 2010.

~~Intersection Level of Service Standards~~

~~Level of service standards are used to evaluate the transportation impacts of long-term growth and concurrency. In order to monitor concurrency, the city must adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified. The intersection LOS standards adopted in this Transportation Element are LOS D or E for intersections that include Principal Arterials and LOS C for intersections that include Minor Arterial or Collector roadways. For intersections of roadways with different functional classifications, the higher classification (and thus the lower standard) applies. Attaining LOS D at major intersections with high approach volumes can result in large intersections with exclusive right-turn lanes, double left-turn lanes and additional through lanes. These improvements improve LOS for vehicles, but result in very long crosswalks and increase potential for pedestrian-vehicle conflicts at free right-turns.~~

~~The LOS for intersections with Principal Arterials should be LOS D, when LOS D can be attained with a maximum of three approach lanes per direction (for example, a typical intersection of two five-lane roadways). The LOS for intersections with principal arterials may be reduced to LOS E, up to 80 seconds average delay, for intersections that require more than three approach lanes in any direction.~~

~~Intersection LOS is calculated using the standard analysis procedures described in this section for the AM and PM peak hours. Intersections with LOS below the defined standards will be considered deficient.~~

~~AM and PM Peak Hour Intersection Level of Service~~

~~Intersection turning movement counts were collected at 43 locations during the AM and PM peak hours within the City of Sammamish in 2016. These counts were collected during a Tuesday and Thursday in April, in order to reflect typical weekday conditions. Level of service analysis was performed for existing AM and PM peak hour conditions at 30 intersections within and adjacent to the Sammamish city limits. Background Table T-6 Background Table T-5 summarizes the intersection locations, the existing traffic control for each intersection, and the calculated LOS using HCM 2010 methodology, based upon 20122016 traffic counts for the AM and PM peak hours. The intersection LOS is also illustrated in Background Figure T-8. The results shown in the table represent LOS based upon average delay for all traffic movements at signalized, RAB, and AWSC intersections. At TWSC intersections, the LOS is based on~~

~~the average delay for the worse minor stop controlled approach or left turn movement from the major road. Thus, at TWSC intersections there may be significantly longer delays for certain directions of traffic movements than the composite LOS measure shows. At roundabouts, the LOS is based on the control delay at the worst approach.~~

Table T-5 shows that 33 of the 43 study intersections satisfy their adopted ~~defined~~ LOS standard in the AM and PM peak hours.

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Sammamish Comprehensive Plan
Transportation Background Information
~~June 2017~~April 2018

Background Table T-~~6~~5
2016~~2~~ Intersection LOS—~~ AM and~~ PM Peak Hour

ID #	INTERSECTION	LOS STANDARD[1]	TRAFFIC CONTROL[2]	AM[3] DELAY	AM LOS[3]	PM[3] DELAY[4][5]	PM LOS[3][4]
1	Issaquah-Pine Lake Road and SE 48th Street	D	Signal	27.4	C	~~7.9~~13.1	B~~A~~
2	228th Avenue ~~NE~~ SE~~NE~~ ~~&~~ and NE 12th Place~~St~~	D	Signal	12.4	B	~~22.4~~16 8.3	~~C~~A~~B~~
3	Klahanie Drive SE and SE Issaquah-Fall City Road	D	Signal	59	E	~~39~~161	~~D~~F
4	244th Avenue SE and SE 24th Street	C	TWSC	16.6	C	~~14.6~~14. 5	B
5	SE 32nd ~~Street~~Way~~Street~~ and 244th Avenue SE	C	TWSC	17.7	C	~~52.3~~37. 3	~~F*~~E
6	Issaquah-Pine Lake Road ~~SE~~ and SE 32nd Way	D	RAB	5.2	A	~~5.5~~5.3	A
7	228th Avenue SE and SE 40th Street	D	TWSC	32	D	~~87~~67.4	~~F*~~
8	SE Klahanie Boulevard and 256th Avenue SE	C	AWSC	15.4	C	~~11.4~~14	B
9	247th Place SE and SE Issaquah-Fall City Road ~~&~~ (Pacific Cascade Middle School)~~/247th Pl SE~~	D	Signal	63.8	E	~~33.1~~32. 4	C
10	Sahalee Way NE and NE 36th ~~Lane~~Street	D	TWSC	224.4	F	~~670.8~~69.6	~~F*~~
11	242nd Avenue NE and NE 8th Street	C	Signal	38.7	D	~~11.6~~12. 1	B
12	228th Avenue SE and SE 8th Street	D	Signal	12.9	B	~~18.7~~14.4~~2~~ ~~4~~	B~~C~~
13	228th Avenue ~~NS~~NE and NE 19th Drive[5]	D	TWSC	22.6	C	~~61.3~~21.2	~~F*~~C
14	216th Avenue NE and NE Inglewood Hill Road	C	RAB	~~6.6~~6.9	A	~~6.6~~6.4	A
15	228th Avenue ~~NE~~ SE~~NE~~ and ~~NE 8th Street (~~NE Inglewood Hill Road~~)/~~NE 8th Street	D	Signal	29.7	C	~~32.3~~2140	C~~D~~
16	228th Ave ~~NE~~ SNE and NE 4th Street	~~D~~E	Signal	32	C	~~15.6~~15. 5~~26~~	B~~C~~
17	228th Avenue SE and SE 4th Street	~~DE~~E	Signal	16.6	B	~~8.6~~10.8 ~~11~~	A~~B~~B
18	212th Avenue SE and SE 8th Street	C	TWSC	10.7	B	~~11.1~~12. 5~~10~~	B
19	228th Avenue SE and SE 16th Street~~Pl~~Street	D	Signal	10.1	B	~~7.4~~9.7	A
20	East Lake Sammamish Parkway and 212th Way SE	C	Signal	~~7.5~~5.1	A	~~4.5~~9	A
21	East Lake Sammamish Parkway and SE 24th Way	C	TWSC	15.7	C	~~17.9~~18. 8~~21~~	A~~C~~
22	212th Avenue SE and SE 20th Street	C	AWSC	10.5	B	~~10.7~~12.2~~9~~	A~~B~~
23	East Lake Sammamish Pkwy ~~NE~~ and Louis Thompson Rd NE	C	Signal	10	A	~~12.3~~10. 9~~11~~	B
24	East Lake Sammamish Pkwy ~~NE~~ and ~~NE~~ Inglewood Hill Road	C	Signal	23.3	C	~~13,1~~7	B~~A~~
25	Sahalee Way NE and NE 37th Way~~St~~	D	Signal	12.8	B	~~24.9~~10. 4~~11~~	~~C~~B ~~B~~
26	~~244th Avenue NE and~~ NE 8th Street and 244th Avenue NE	C	RAB	5.4	A	~~4.2~~4.~~45~~	A
27	228th Avenue SE and SE 20th Street	D	Signal	10.6	B	~~12.0~~13. 5~~14~~	B
28	228th Avenue ~~N~~SE and SE 24th Street	~~DE~~E	Signal	16.5	B	~~32.8~~27. 4~~33~~	C

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Commented [KB2]: This table has been updated from the 2015 Comp Plan to reflect 2016 counts and level of service analysis, to reflect AM and PM peak hour conditions, and to focus on the 43 in-city concurrency intersections.

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Sammamish Comprehensive Plan
Transportation Background Information
~~June 2017~~April 2018

29	228th Avenue SE and Issaquah-Pine Lake Road ~~SE~~	E	Signal	23	C	~~79.6~~35.4~~46~~	~~E~~D ~~D~~
30	Issaquah-Pine Lake Road SE and SE Klahanie Boulevard	D	Signal	28.9	C	~~22.9~~19.5~~24~~	~~C~~B
31	~~SE~~ Duthie Hill Road and Issaquah-Beaver Lake Road	D	Signal~~TWSC~~[5]	29.8	C	~~21.5~~18.9~~235~~	~~C~~B ~~F*~~
32	256th Ave SE/E Beaver Lake Dr SE and Issaquah-Beaver Lake Road	C	TWSC	275.2	F F	~~36.1~~32.3	~~E*~~ D
33	228th Avenue ~~NS~~NE and NE 14th Street[5]	D	TWSC	22.9	C	~~290.3~~3.4	~~F*~~ C
34	228th Avenue ~~NE S~~NE and NE 25th ~~Street~~Way	D	Signal	16.9	B	~~20.8~~11.~~16~~	~~C~~B ~~B~~
35	Issaquah-Pine Lake Road ~~SE~~ and SE 42nd Street	D	TWSC	18.2	C	~~306.45~~ 1.4	~~F*~~
36	Issaquah-Pine Lake Road ~~SE~~ and 230th Lane SE/231st Lane SE	D	Signal	79.4	E	~~11.3~~22	~~B~~C
37	~~Sahalee Way NE and~~ NE 28th ~~PlaceWay~~Place/223rd Avenue and Sahalee Way NE	D	TWSC	361.1	F	~~74.9~~57.3	~~F*~~
38	Issaquah-Pine Lake Road ~~SE~~ and SE 47th Way/238th Way SE	D	Signal	13	B	~~6.3~~12.6	~~A~~B
39	~~NE 8th Street and~~ 233rd Avenue NE and NE 8th Street	C	RAB	17.2	B	~~2.9~~6.2	~~A~~
40	228th Avenue ~~NE~~ SE ~~&~~ and ~~East~~ Main Street	D	Signal	3.4	A	~~4.8~~5.4~~0~~	A
41	24~~8~~4th Avenue NE and East Main Drive	C	RAB	5.8	A	4.8	A
42	~~Trossachs Boulevard SE and SE~~ Duthie Hill Road and Trossachs Boulevard SE	D	Signal	28.3	C	~~35.1~~23.~~214~~	~~D~~C ~~B~~
43	228th Avenue SE and SE 10th Street(~~/~~Skyline High School)	D	Signal	7.7	A	~~14~~7.4	~~B~~A
~~44~~	~~192nd Drive NE and NE Redmond Fall City Rd (SR202)~~	~~D~~	~~Signal~~			~~78~~	~~A~~
~~100~~	~~East Lake Sammamish Pkwy and SR 202 (NE Redmond-Fall City Rd (SR202)[5]~~	~~D~~	~~Signal~~			~~118.7~~16	~~F*~~
~~101~~	~~E Lk Sammamish Pkwy and SE 43rd Way[5]~~	~~D~~	~~RAB~~			~~4.5~~6	~~A~~
~~102~~	~~Sahalee Way NE and SR 202 (Redmond-Fall City Rd)[5]~~	~~DE~~	~~Signal~~			~~27.8~~36	~~C~~D
~~103~~	~~244th Ave NE and SR 202 (NE Redmond-Fall City Rd (SR202)[5]~~	~~D~~	~~Signal~~			~~20.9~~16	~~C~~B
~~104~~	~~Duthie Hill Road and SR 202 (Redmond-Fall City Road)[5]~~	~~D~~	~~Signal~~			~~10.3~~	~~B~~
~~105~~	~~Issaquah-Pine Lk Rd SE and SE Issaquah-Fall City Rd[5]~~	~~E~~	~~Signal~~			~~31.4~~10~~7~~	~~C~~F ~~*~~
	~~E Lk Sammamish Pkwy and SE 56th St[5]~~	~~D~~	~~S~~			~~160~~	~~F*~~
	~~E Lk Sammamish Pkwy and SE Issaquah-Fall City Rd[5]~~	~~E~~	~~S~~			~~137~~	~~F*~~

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D except where LOS D cannot be met with three approach lanes in any direction. In those cases, LOS E is assigned. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *~~Intersection~~ Traffic Control: Signal=signalized; TWSC=two-way stop-controlled; AWSC=all-way stop-controlled; RAB = roundabout*
3. *AM peak hour is from 7:00-8:00 AM. PM peak hour is from 4:45-5:45 PM.*
4. *Delay is measured in seconds per vehicle. At ~~S and~~signal, RAB, and AWSC intersections, it represents average delay for the intersection. For TWSC intersections, it represents average delay for the worst minor approach ~~, movements~~ or major street left turn movements. ~~, For RABs, it represents the worst approach.~~ Analysis is based on 2016 traffic counts. ~~AM Delay and AM LOS peak hhours are is from 7:00-8:00 AM.~~*
   ~~PM peak hour is from 4:45-5:45 PM.~~
   ~~4.~~ LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2000~~2010~~). All other intersections are based on HCM 2010. ~~(*) Denotes an LOS below the defined standard, indicating that the intersection is considered deficient.~~ phis
5. *~~Intersection is outside of the city limits.~~*
   ~~Intersection was signalized in late 2012 and is no longer deficient.~~

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Concurrency

Level of service standards are used to evaluate the transportation impacts of long-term growth and concurrency. In order to monitor concurrency, the city must adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified.

A Concurrency Management System (CMS) is a policy procedure designed to enable a City or County to determine whether adequate facilities are available to serve new development. The transportation element of the Growth Management Act (GMA) requires each City and County planning department to incorporate a Concurrency Management System into their comprehensive plan.

In a Concurrency Management System, local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development causes the LOS on a transportation facility to decline below the standard adopted in the Transportation Element of the Comprehensive Plan. Transportation improvements or strategies that accommodate the impacts of development can be made concurrent with the development. (State of Washington Growth Management Act, RCW 36.70A, 1990)

The City of Sammamish has adopted an intersection LOS to monitor for concurrency on selected functionally classified roadways within the city.

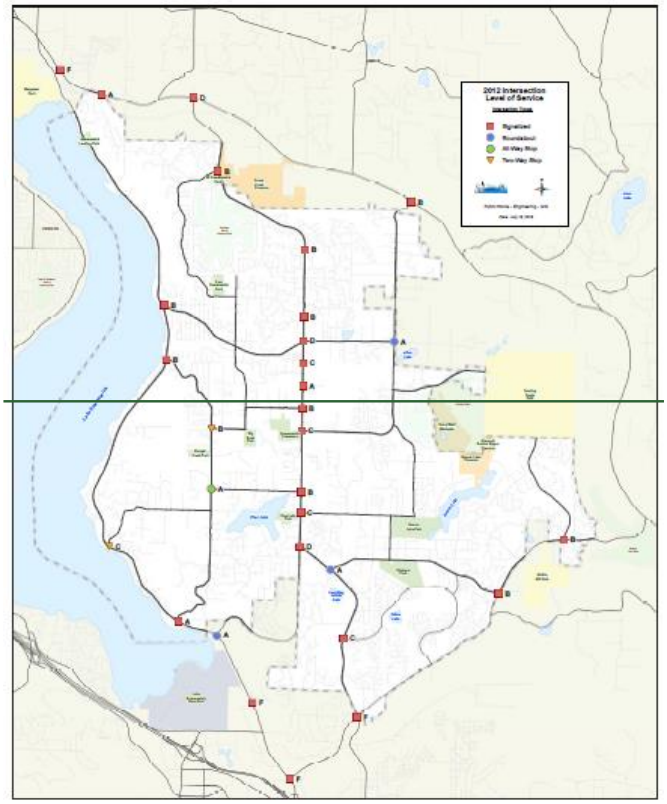
Key Intersections Outside of the City

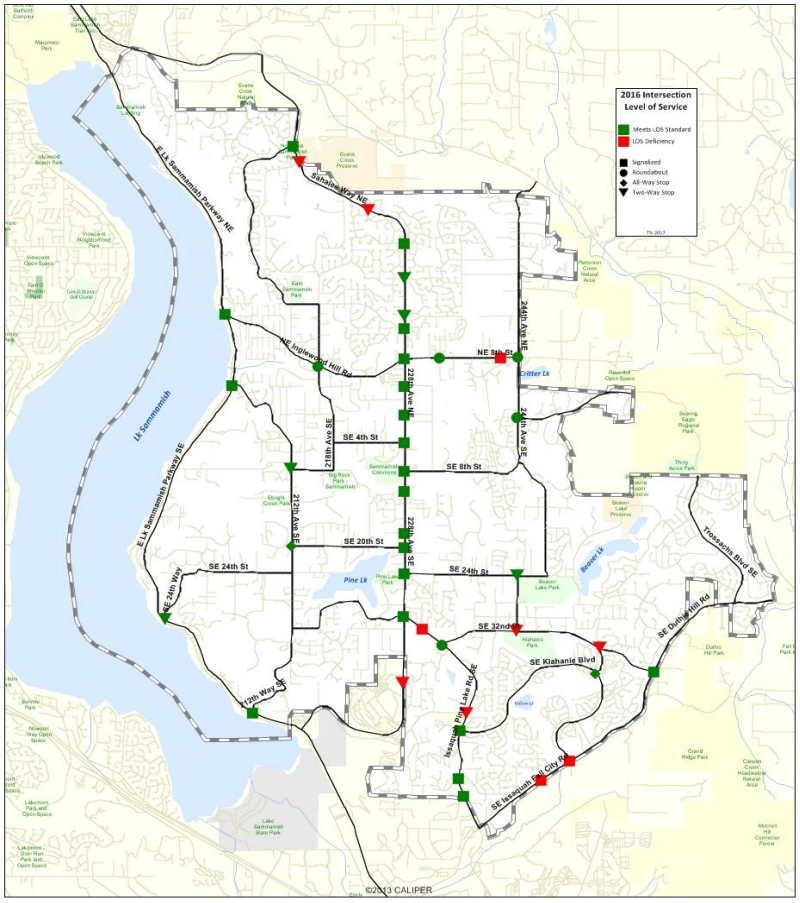
The city also collected AM and PM peak hour turning movement counts in 2016 at the following key intersections outside of Sammamish city limits:

- ~~192nd Drive NE and NE Redmond Fall City Rd (SR 202)~~
- East Lake Sammamish Pkwy and SR 202 (NE Redmond Fall City Rd ~~(SR 202)~~
- E Lk Sammamish Pkwy and SE 43rd Way
- Sahalee Way NE and SR 202 (Redmond Fall City Rd)
- 244th Ave NE and SR 202 (NE Redmond Fall City Rd ~~(SR 202))~~
- ~~Duthie Hill Road and SR 202 (Redmond Fall City Rd)~~
- Issaquah Pine Lk Rd SE and SE Issaquah Fall City Rd
- ~~E Lk Sammamish Pkwy and SE 56th St~~
- ~~E Lk Sammamish Pkwy and SE Issaquah Fall City Rd~~

While the city does not control the operations of these intersections, their function has a strong impact on Sammamish residents' ability to assess opportunity in the region. Traffic analysis shows that Sammamish residents experience longer delays leaving the city in the morning and entering in the evening. The city is committed to partnering~~monitoring operations at these facilities and being an active partner in collaborating~~ with the jurisdictions who own those intersections to find ~~on regional~~ solutions to these key regional facilities.

Background Figure T–~~8~~7
201~~6~~2 Intersection Level of Service


2012 Intersection
Level of Service


2016 Intersection Level of Service
Meets LOS Standard
LOS Deficiency
Signalized
Roundabout
All-Way Stop
Two-Way Stop
E Lk Sammamish Parkway NE
Sahalee Way NE
NE Inglewood Hill Rd
244th Ave NE
NE 8th St
Critter Lk
232nd Ave NE
228th Ave SE
216th Ave SE
SE 4th St
SE 8th St
Lk Sammamish
E Lk Sammamish Parkway SE
212th Ave SE
SE 20th St
222nd Way SE
SE 24th St
NE 24th Way
Pine Lk
Beaver Lk
Trossachs Blvd SE
SE 32nd
SE Klahanie Blvd
SE Duthie Hill Rd
Issaquah Pine Lake Rd SE
SE Issaquah Fall City Rd
©2013 CALIPER

In year 2012, the table shows that 25 of the 30 study intersections satisfy their defined LOS standard. Within the city limits and in 2012 the SE Duthie Hill Road at SE Issaquah-Beaver Lake Road intersection operated at LOS F. This intersection was stop sign controlled on SE Issaquah-Beaver Lake Road approaching SE Duthie Hill Road, and the stop sign controlled approach experienced high levels of delay. This intersection was signalized in late 2012 and is no longer deficient.

Background Table T–8
Background Assumptions for Concurrency AWDT Threshold Definitions

TWO-LANE ROADWAY		TWO-DIRECTIONAL CAPACITY (VEHICLES PER DAY)		
		Principal or Minor Arterial	*Collector*	*Neighborhood Collector*
Base Capacity		**12,850**	**9,020**	**2,850**
Lane Width	10 feet	0	0	0
	11 feet	1,620	1,130	320
	12 feet	3,240	2,260	640
Striped Bike Lane/ Shoulder width[1]	8 feet max.	580	410	120
Median	None	0	0	0
	Median	4,640	3,240	920
	Left-Turn Lane or Physically Constrained	4,640	3,240	920
Walkway/Bikeway[2]	None	0	0	0
	Sidewalk or BikewayWalkway	1,160	810	230
	Bikeway	1,620	1,130	320
	Both or Multi-use Path	1,620	1,130	320
Regional Trail width[3]	12 feet max.	580	0	0
MAXIMUM CAPACITY		25,370	17,800	5,100

FOUR-LANE ROADWAY		TWO-DIRECTIONAL CAPACITY (VEHICLES PER DAY)		
		Principal or Minor Arterial	*Collector*	*Neighborhood Collector*
Base Capacity		**25,920**	**18,100**	**5,180**
Lane Width	10 feet	0	0	0
	11 feet	3,240	2,260	640
	12 feet	6,480	4,540	1,300
Striped Bike Lane/ Shoulder width[4]	8 feet max.	580	410	120
Median	None	0	0	0
	Median	4,630	3,240	930
	Left-Turn Lane or Physically Constrained	4,630	3,240	930
Walkway/Bikeway[2]	None	0	0	0
	Sidewalk or BikewayWalkway	1,160	810	230
	Bikeway	1,620	1,130	320
	Both or Multi-use Path	1,620	1,130	320

~~MAXIMUM CAPACITY~~	~~41,670~~	~~29,160~~	~~8,370~~

~~1. To qualify as a bike lane, the pavement must be marked as such, and have a minimum width of 5 feet.~~
~~2. For the purpose of these calculations, a bikeway is defined as a bicycle facility that is physically separated from the roadway. Walkway and bikeway values only apply if the roadway has shoulders of less than 4-foot width.~~
~~3. In order to realize the capacity benefits, the "regional trips" must be parallel and in close proximity to the City's arterial. The measured portion of the trail must be paved.~~

Collision Analysis

Collision statistics were compiled between 2010 and 2014 by the WSDOT Transportation Data Office for the City of Sammamish. During this five year period, there were a total of 1,015 collisions reported. ~~Background Table T–9~~ Background Table T–6 summarizes the collisions by type and ~~Background Figure T–10~~ Background Figure T–98 shows the location and type of collisions within the city.

See Volume I, Transportation Element Policy T.3.9–Policy T.3.11 on page 91.

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The 228th Avenue corridor shows a high number of collisions likely due to high volumes, vehicle speeds and inexperienced drivers, the latter related to the various schools along the corridor. In addition, the 228th Avenue corridor provides access to the city's major commercial and institutional areas.

Collisions on the East Lake Sammamish Parkway corridor were concentrated at NE Inglewood Hill Road, a major access point to and from the city's existing major commercial area.

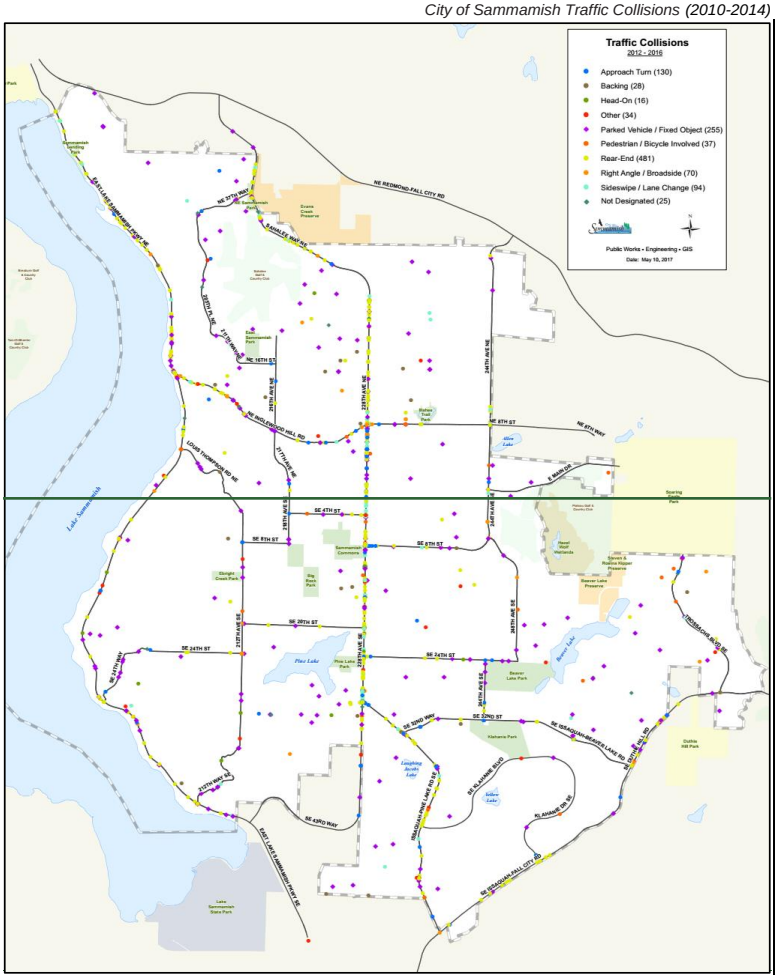
Topography and weather conditions likely play a role in a portion of the collisions reported.

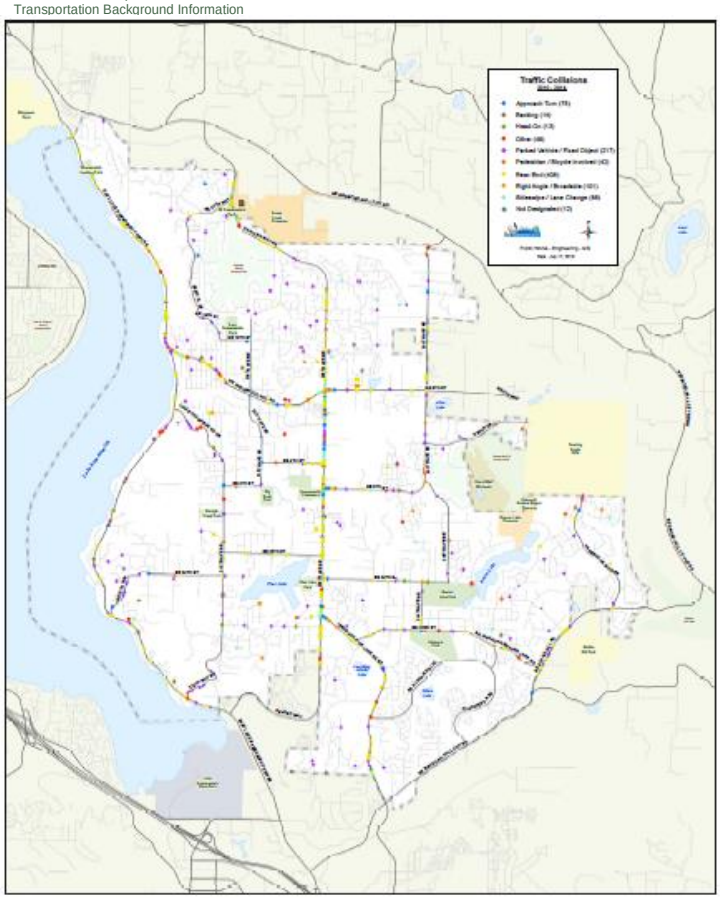
There were 42 total pedestrian and bicycle-related collisions reported, or 8.4 per year. These collisions were spread throughout the city. Goals to reduce collisions, particularly pedestrian and bicycle-related collisions should be addressed.

Background Table T–~~9~~6
Collision Summary (2010-2014)

COLLISION TYPE	TOTAL COLLISIONS	COLLISIONS PER YEAR
Rear-End	406	81.2
Parked Vehicle/Fixed Object	217	43.4
Right-Angle/Broadside	101	20.2
Sideswipe/Lane Change	86	17.2
Approach Turn	75	15.0
Other	49	9.8
Pedestrian/Bicycle	42	8.4
Backing	14	2.8
Head-On	13	2.6
Not Designated	12	2.4
TOTAL	1,015	203.0

Background Figure T-~~10~~9
City of Sammamish Traffic Collisions (2010-2014)




Traffic Collisions

Traffic Calming

As population and employment in the Sammamish region continue to grow, City streets are experiencing increased traffic pressure. City policy can accommodate growth in a way that can protect neighborhoods from unsafe impacts of traffic through the following measures:

- Develop standards to improve the function, safety, and appearance of the City street system;
- Develop facilities for pedestrians and bicyclists as alternative travel modes to the automobile;
- Protect the quality of life in residential neighborhoods by limiting vehicular traffic and monitoring traffic volumes on collector streets;
- Encourage improvements in vehicular and pedestrian traffic circulation within the City;
- Maintain a consistent LOS on the arterial system that mitigates impacts of new growth and is adequate to serve adjoining land uses; and
- Maintain the public street system to promote safety, comfort of travel, and cost-effective use of public funds.

Traffic calming programs serve to deter through-traffic on local residential streets, protect neighborhoods from vehicular traffic moving at excessive speeds, and discourage parking unrelated to residential activities.

Presently, traffic calming devices within the City of Sammamish are located primarily along:

- NE 14th Drive from 228th Avenue NE to 220th Avenue NE;
- NE 19th Drive from 228th Avenue NE to 236th Avenue NE;
- NE 25th Way from 228th Avenue NE to 239th Avenue NE;
- 217th Avenue NE from Inglewood Hill Road to Main Street;
- SE 32nd Street from 228th Avenue SE to 220th Avenue SE;
- NE 14th Street from 228th Avenue NE to 235th Avenue NE;
- Audubon Park Drive from SE 24th Street to SE 32nd Street;
- 205th Place NE from NE 31st Street to NE 37th Way;
- SE 30th Street from 244th Avenue SE to 252nd Avenue SE;
- 230th Way SE from SE 42nd Street to SE 48th Street;
- SE Windsor Blvd from 244th Avenue SE to Windsor Drive SE;
- NE 20th Way from 216th Avenue NE to NE 25th Way; and
- Sahalee Way NE at NE 28th Place.
- ~~248th Avenue SE at SE 17th Place~~

Traffic calming features include digital speed boards, traffic circles, chokers, speed humps, ~~raised tables at crosswalks, chicanes, roadway narrowing, raised intersections, medians~~ and curb bulb-outs.

~~Current~~ Six-Year Transportation Improvement Program (TIP)

~~Background Table T–10~~ Background Table T–7 summarizes the list of projects that make up the ~~current~~ Six-Year Transportation Improvement Program (TIP), 2016-2021. Funding for some of these projects is secured, while funding for other projects is not. Detailed evaluation of future conditions should assume completion only of financially committed projects.

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Existing Non-Motorized Conditions

See Volume I, Transportation Element Policy T.2.12 on page 88.

An inventory of existing non-motorized facilities, including sidewalks and walkways was undertaken to identify any system gaps. Roughly 50% of the city's local roads have sidewalks and most of the primary and minor arterials includes sidewalks, paved shoulders or shared use paths. ~~Background Figure T–11~~ Background Figure T–~~10~~9 illustrates existing non-motorized facilities and includes the locations of the public open spaces and parks.

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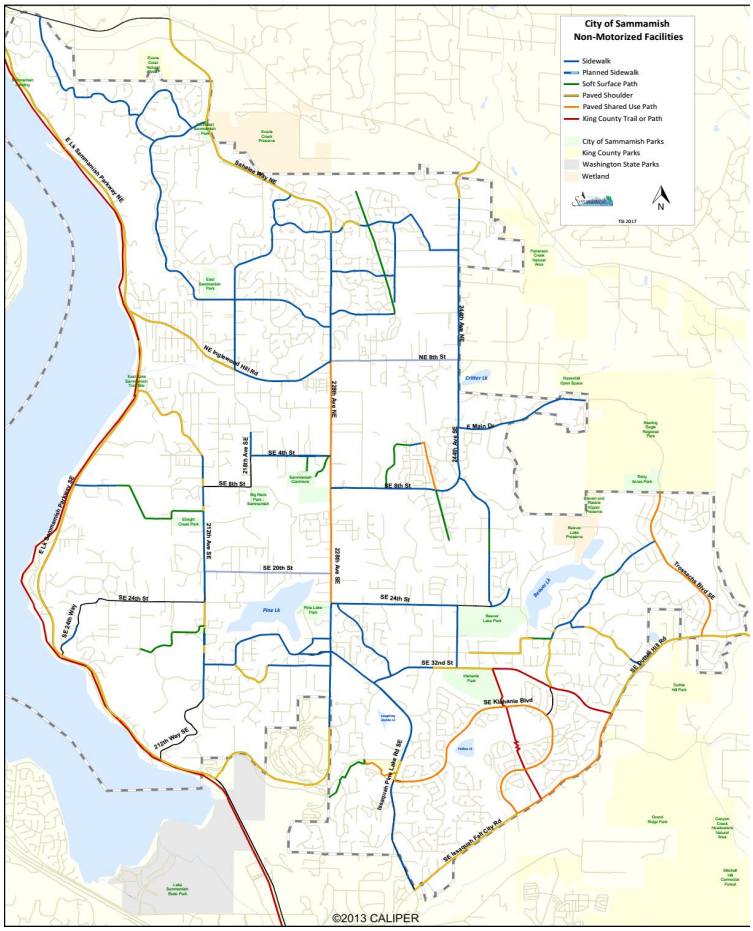
Background Table T–~~10~~7
2016-2021 Six Year Transportation Improvement Program (TIP)

TIP #	PROJECT TITLE[1]	Total Project	PROJECT EXPENDITURE (X $1,000)[2] 2016	2017	2018	2019	2020	2021
1	SE 4th St—218th Ave SE to 228th Ave SE C,CP	15.171	0.725	9.446	5.000	—	—	—
2	Issaquah-Pine Lake Rd—Klahanie Blvd to SE 32nd C,CP	8.000	—	—	—	1.200	2.000	4.800
3	Issaquah-Pine Lake Rd—SE 48th to Klahanie Blvd C,CP	17.618	—	0.800	2.500	7.159	7.159	---
4	East Lake Sammamish Pkwy SE / SE 24th St Intersection C,CP	3.698	—	—	—	—	—	—
5	Sahalee Way NE—220th Ave NE to North City Limits C,CP	14.588	1.600	5.200	7.788	---	---	---
6	228th Ave SE—SE 32nd St to Issaquah-Pine Lake Rd CP	0.675	0.675	—	—	—	—	—
7	Issaquah-Fall City Rd—SE 48th St to Klahanie Dr SE CP	14.000	0.800	1.000	6.100	6.100	—	—
8	Issaquah-Fall City Rd—Klahanie Dr SE to Issaquah-Beaver Lk Rd CP	9.000	—	—	0.600	1.200	3.600	3.600
9	Public Works Trust Fund Loan Repayment (228th Avenue) CP	3.256	0.549	0.547	0.544	0.541	0.539	0.536
10	212th Ave SE Gap Project—SE 24th St to Crossings Subdivision CP,NM	0.600	0.600	—	—	—	—	—
11	Non-motorized Transportation Projects CP,NM	4.500	0.750	0.750	0.750	0.750	0.750	0.750
12	Sidewalk Projects NM,P	0.960	0.160	0.160	0.160	0.160	0.160	0.160
13	Intersection and Safety Improvements P	1.200	0.200	0.200	0.200	0.200	0.200	0.200
14	Neighborhood CIP P	0.600	0.100	0.100	0.100	0.100	0.100	0.100
TOTAL EXPENDITURES		93.866	6.159	18.203	23.742	17.410	14.508	10.146

1. Project Type: C = Concurrency Project; CP = Capital Project; NM = Non-Motorized Project; P = City Program.
2. All project costs are in 2013 dollars.

Background Figure T-~~11~~ ~~10~~9 City of Sammamish
Existing Non-Motorized Facilities



Existing Transit Service

Transit Service

King County Metro and Sound Transit provide transit service to the City of Sammamish. Four transit routes currently serve the City, with service as summarized in ~~Background Table T–11~~Background Table T–8.

Background Table T–~~11~~8
Existing Transit Service for the City of Sammamish

ROUTE #	ROUTE DESCRIPTION	SERVICE	AVERAGE HEADWAY (MINUTES) Peak	Midday
216[1]	Downtown Seattle to Issaquah Highlands P&R, to South Sammamish P&R and to Bear Creek P&R	Weekday AM and PM peak hours	30	—
219[1]	Downtown Seattle to Issaquah Highlands P&R, to South Sammamish P&R and to Redmond	Weekday AM and PM peak hours	30–40	—
269[1]	Issaquah TC to Issaquah Highlands P&R, to Bear Creek P&R and to Overlake P&R	Weekday AM and PM peak hours	20–30	—
554[2,3]	NE Redmond-Fall City Road at 185th Ave NE to South Sammamish P&R, to Issaquah TC, to North Mercer Island and to downtown Seattle	Weekday	60–120	60–120
		Saturday	60–120	60–120

1. *King County Metro Transit Route.*
2. *Sound Transit Route; this route make infrequent trips to the City Sammamish.*

Park-and-Ride Facilities

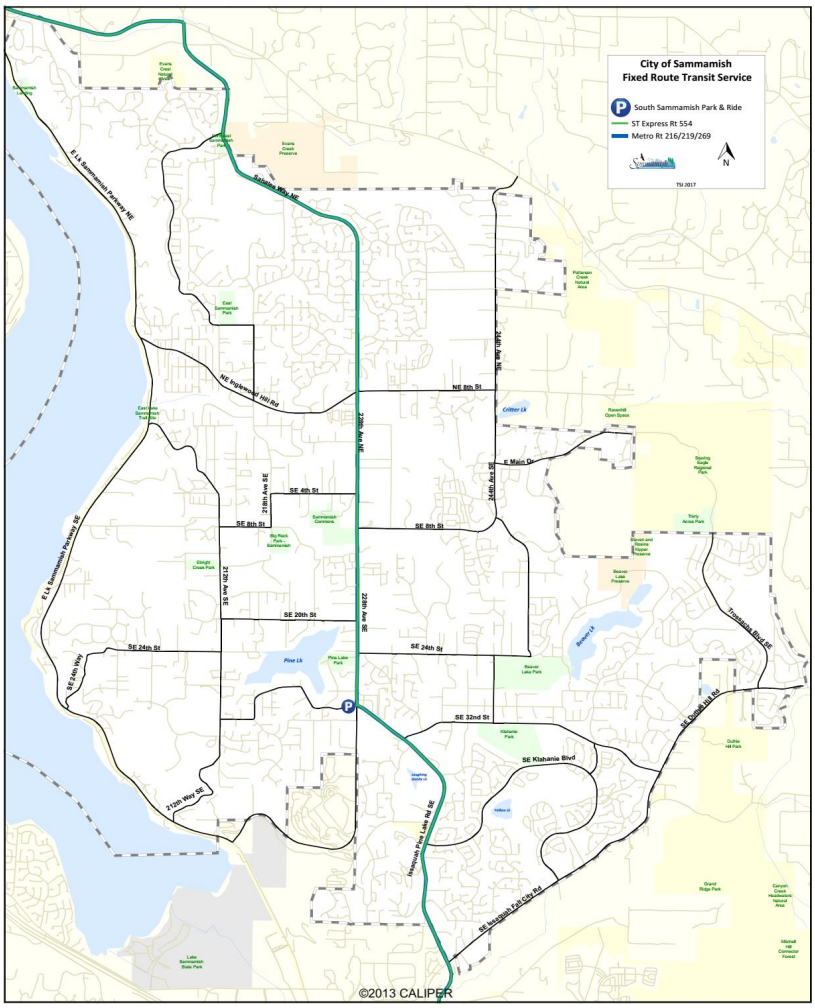
Sammamish currently has ~~three~~two park-and-ride (P&R) facilities:

- Sammamish Hills Lutheran Church at SE 8th Street and 228th Avenue SE (54 spaces).
- ~~South Sammamish P&R at Issaquah-Pine Lake Road SE and 228th Avenue SE (265 spaces).~~
- ~~Klahanie P&R at Klahanie Boulevard and 244th Place SE (30 spaces).~~

Existing transit routes and P&R lots within the Sammamish city limits are shown in ~~Background Figure T–12~~Background Figure T–~~11~~0. Outside of the city limits, the nearest P&R lots are:

- Klahanie P&R at SE Klahanie Boulevard and 244th Place SE, King County (30 spaces).
- Klahanie P&R at SE Klahanie Boulevard and SE Issaquah-Fall City Road (30 spaces).
- Tibbett's Valley P&R at 12th NW and Newport Way, Issaquah (94 spaces).
- Issaquah Highlands P&R at Highlands Drive NE and NE High Street, Issaquah (1,010 spaces).
- Bear Creek P&R at NE Union Hill Road and 178th Place NE,
- Redmond (283 spaces)

Background Figure T–~~12~~ 10 Existing Transit Service



Travel Demand Forecasts and Projected Needs

In order to evaluate future transportation needs, forecasts must be made of future travel demand. Developing traffic forecasts for existing streets based on future land use allows the adequacy of the street system to be evaluated.

Travel Forecasting Model

For the City of Sammamish Transportation Element, a transportation computer model was developed to analyze future travel demand and traffic patterns. The major steps of the modeling process are as follows:

- Current Land Use Assessment;
- Trip Generation;
- Trip Distribution;
- Network Assignment;
- Model Calibration;
- Forecast of Future Land Use; and
- Model of Future Traffic Conditions.

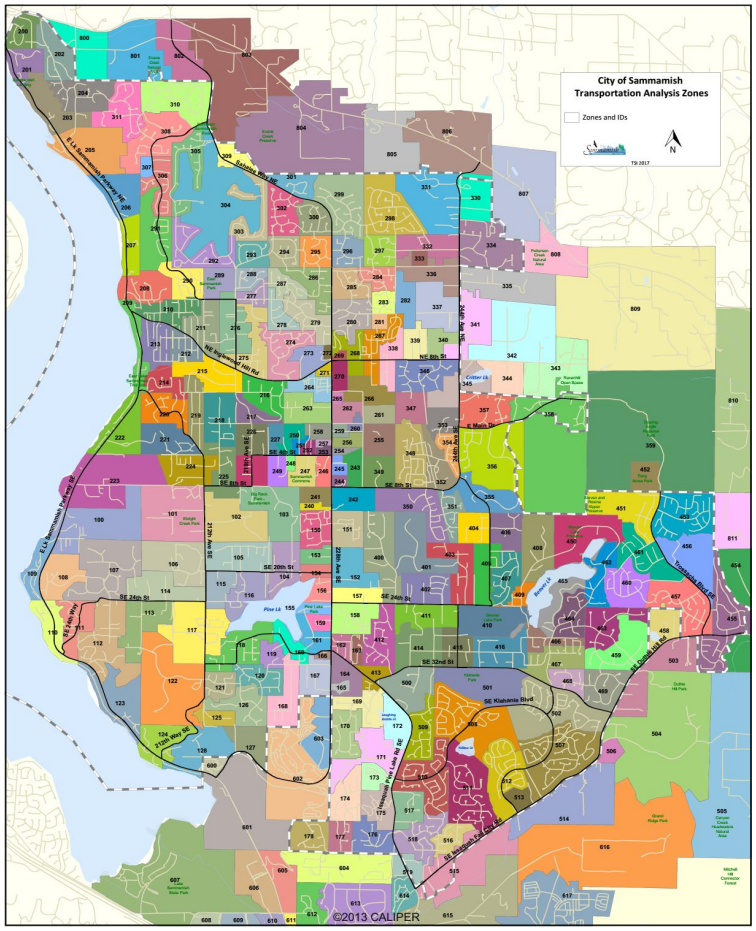
These general steps of the modeling process are described in the following sections and the technical aspects of the model are described in detail in the Traffic Forecasting Model Documentation Report (DEA 2012), which has been produced for the city as a supplemental document to the Comprehensive Plan.

Current Land Use Assessment

The primary method of determining future travel demand is based on future land use patterns and community growth. The entire study area is divided into Transportation Analysis Zones (TAZs) that have similar land use characteristics. The TAZ boundaries that were established for the City of Sammamish travel-forecasting model are shown in ~~Background Figure T–13~~Background Figure T–11~~2~~. For each zone, land use characteristics of population and employment were estimated based on the City of Sammamish Comprehensive Land Use Plan. In order to establish an accurate base map of existing land use, consultants to the city began with the King County Assessor records, supplemental aerial photos, and field verification of a subset of lots. City staff compiled unit counts of multi-family dwellings and commercial building square feet based on King County records supplemented with some field

review.

Background Figure T-~~13~~ 11.
Transportation Analysis Zones



Trip Generation

The trip generation step forecasts the total number of trips generated by and attracted to each TAZ. The trips were forecast using statistical data that take into account population and household characteristics, employment information, economic model output, and land-use information. Trips generated are categorized by their general purpose, which are:

- Home-based-work: any trip with home as one end and work as the other end
- Home-based-other: any non-work trip with home as one end
- Non-home-based: any trip that does not have home at either end

The trip generation model forecasts the total number of trips that are generated per household or non-residential unit during the analysis period for the trip categories under consideration.

Trip Distribution

The trip distribution step allocates the trip generation to a specific zonal origin and destination. This is accomplished through use of the gravity model, which distributes trips according to two basic assumptions: (1) more trips will be attracted to larger zones (the size of a zone is defined by the number of attractions estimated in the trip generation phase, not the geographical size), and (2) more trip interchanges will take place between zones that are closer together than the number that will take place between zones that are farther apart. The result is a trip matrix (for each of the trip purposes specified as input to the trip generation model) that estimates the percentage of trips are taken from each zone to every other zone. These trips are often referred to as trip interchanges.

Network Assignment

The arterial street system is coded into the city's Traffic Model as a series of links that represent roadways and nodes that represent the intersection of those roadways. Each roadway link and intersection node is entered into the model with an assigned functional classification, and associated characteristics such as length, capacity, and speed. This information is then used to determine the optimum path between all the zones based on travel time and distance. The model then distributes the trips from each of the zones onto the street network.

The forecasted trips are assigned to the transportation network using an incremental assignment process where the total traffic is assigned to the network, one increment at a time. Vehicle travel paths reflect the best travel time between each origin and destination. After a portion of the vehicles is assigned, the zone- to-zone travel times with the additional traffic are recalculated.
The next increment of traffic is assigned to the network, and the optimal paths are determined based upon the adjusted travel times. The zone-to-zone travel times are calculated again, reflecting the added traffic. The cycle of network assignment and travel time recalculation is repeated, until all vehicles have been assigned to the network. The result is a computerized road network with traffic volumes calculated for each segment of roadway, which takes into account the effects of increasing traffic congestion on the system.

Model Calibration

The 2012 calibrated VISUM travel demand model developed by DEA has a mean relative error of 2% and is a very good representation of the traffic generated by a known land uses (2012 occupied development). The calibration error does not directly relate to the accuracy of the forecast in that the land use assumptions are general, factors including fuel prices, social objectives, and other issues modify travel behaviors over time. In most case future forecasts should be considered with a broader margin of error. A range of plus or minus 10% is a reasonable
error to assume for a 20-year planning horizon. This potential error should be considered when evaluating the travel demand forecasts and level of service summaries. Forecast volumes could be 10% more or less in most cases.

Land Use Assumptions used in Travel Demand Forecasting

The land use assumptions used in the VISUM travel demand forecasting model are based upon the Land Use Element of the Comprehensive Plan, which in turn is based upon the PSRC residential and employment allocations for Sammamish. External land use assumptions were based upon PSRC forecasts for the jurisdictions around Sammamish, including the cities of Redmond, Issaquah and Bellevue to ensure that the forecast trip distribution for trips originating in or destined to the region outside the city are modeled correctly. Key elements of the land use forecast include infill single family residential development in vacant and
underdeveloped land identified in the buildable lands analysis and the realization of the Town Center, a mixed use subarea planned for 1,760 multifamily residential units, 200,000 square feet of office, and 400,000 square feet of retail space.

Future Traffic Conditions

Once future land use conditions were input, the model was run to forecast PM peak hour traffic conditions that are expected to result from the projected land use. The PM peak hour is modeled since it is the most congested time of day. However, since the segment analysis requires projected daily traffic volumes, the PM peak hour volumes are converted to AWDT volumes. The conversion to daily volumes was accomplished by applying a post-processing method, based primarily upon application of a peak-to-daily conversion factor. This factor was based upon the declining K-factor observed in citywide traffic counts since 2002.

2035 Committed Capital Improvement Projects (CIP)

~~Background Table T–12~~ Background Table T–9 lists the future improvements for which funding is secure; and thus, are assumed to be in place for analysis of future conditions.

Background Table T–~~12~~9
Committed Capital Improvement Projects (CIP)

LOCATION	CIP IMPROVEMENT
SE 4th St–218th Ave SE to 228th Ave SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
Issaquah-Pine Lake Rd–Klahanie Blvd to SE 32nd	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
Issaquah-Pine Lake Rd–SE 48th to Klahanie Blvd	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk
East Lake Sammamish Pkwy SE/SE 24th St Intersection	Construct traffic signal, turn lanes, curb, gutter, and sidewalk
Sahalee Way NE–220th Ave NE to North City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk
228th Ave SE–SE 32nd St to Issaquah-Pine Lake Road	Provide additional southbound through lane
Issaquah-Fall City Rd–SE 48th St to Klahanie Dr SE	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk
212th Ave SE Gap Project–SE 24th St to Crossings Subdivision	Provide non-motorized facilities

Level-of-Service Analysis for 2035 Land Use

~~Background Table T–13~~ Background Table T–10 summarizes the intersection LOS expected under the 2035 land use scenario if no additional transportation improvements are made beyond the committed CIP. The 2035 intersection LOS is illustrated in ~~Background Figure T–14~~Background Figure T–12.

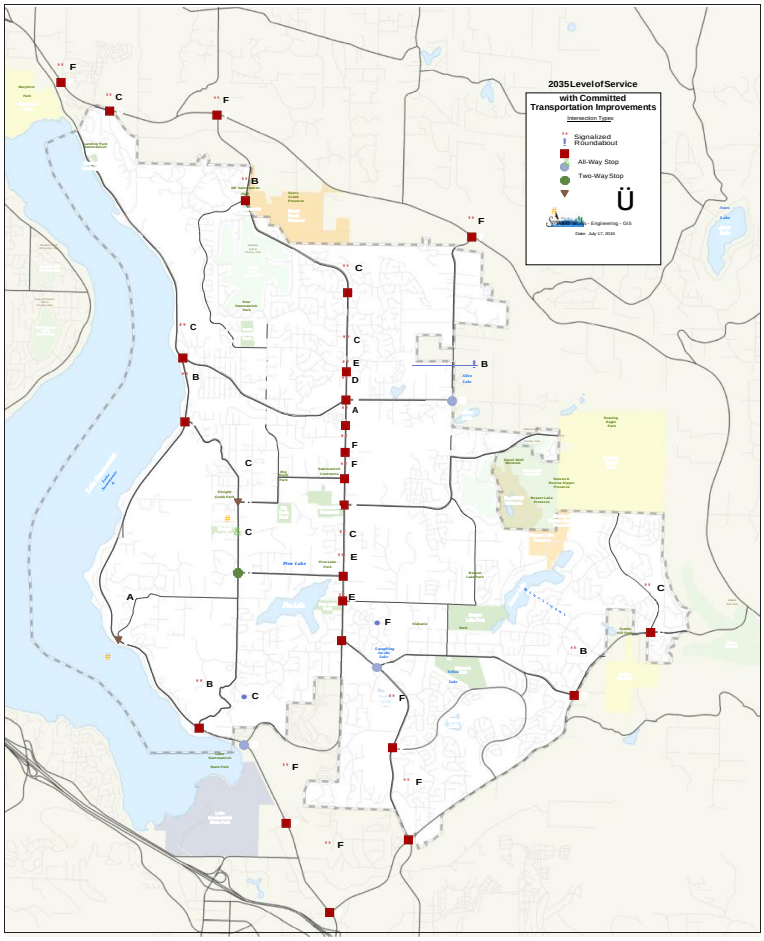
The committed improvements listed in ~~Background Table T–13~~ Background Table T–10 address several existing deficiencies identified in the 2012 existing conditions analysis. However, the future 2035 analyses show that the increase in traffic resulting from additional development would cause increased congestion at other locations, if no additional

Background Table T-~~13~~10
2035 Intersection LOS—PM Peak Hour—Committed Improvements Only

INTERSECTION	LOS STANDARD[1]	TRAFFIC CONTROL[2]	DELAY[3]	LOS[4]
228th Ave NE and NE 12th St	D	S	21	C
Sahalee Way NE and NE 37th St	D	S	21	C
228th Ave SE and SE 4th St	E	S	156	F*
228th Ave SE and SE 8th St	D	S	190	F*
228th Ave SE and SE 20th St	D	S	21	C
228th Ave NE and SE 24th St	E	S	77	E
228th Ave SE and Issaquah-Pine Lk Rd SE	E	S	69	E
Issaquah-Pine Lk Rd SE and SE Klahanie Blvd	D	S	83	F*
E Lk Sammamish Pkwy and NE Inglewood Hill Rd	C	S	20	C
E Lk Sammamish Pkwy and 212th Way SE	C	S	17	B
228th Ave NE and NE 8th St (NE Inglewood Hill Rd)	D	S	57	E*
192nd Drive NE and NE Redmond Fall City Rd (SR202)	D	S	23	C
Issaquah-Pine Lk Rd SE and SE 32nd Way	D	RAB	94	F*
E Lk Sammamish Pkwy and Louis Thompson Rd NE	C	S	17	B
212th Ave SE and SE 20th St	C	AWSC	25	C
SE Duthie Hill Rd and SE Issaquah-Beaver Lk Rd	D	S	19	B
Trossachs Blvd SE and SE Duthie Hill Rd	D	S	28	C
E Lk Sammamish Pkwy and SE 24th Way	C	S	7	A
244th Ave NE and NE 8th St	C	RAB	15	B
228th Ave NE and NE 25th St	D	S	22	C
228th Ave NE and NE 4th St	D	S	43	D
228th Ave NE and E. Main St	D	S	5	A
212th Ave SE and SE 8th St	C	TWSC	21	C
Sahalee Way NE and SR202[5]	E	S	131	F*
Issaquah-Pine Lk Rd SE and SE Issaquah-Fall City Rd[5]	E	S	203	F*
244th Ave NE and NE Redmond Fall City Rd (SR202)[5]	D	S	102	F*
E Lk Sammamish Pkwy and NE Redmond Fall City Rd (SR202)[5]	D	S	175	F*
E Lk Sammamish Pkwy and SE 56th St[5]	D	S	252	F*
E Lk Sammamish Pkwy and SE Issaquah-Fall City Rd[5]	E	S	216	F*
E Lk Sammamish Pkwy and SE 43rd Way[5]	D	RAB	31	C

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *Intersection Control: S = signalized; TWSC = two-way stop-controlled; AWSC = all-way stop-controlled; RAB = roundabout*
3. *Delay is measured in seconds per vehicle.*
4. *LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2010). (*) Denotes an LOS below the defined standard, indicating that the intersection is considered deficient.*
5. *Intersection is outside of the city limits.*

Background Figure T-~~14~~12
2035 Level of Service–2035 Land Use and Committed Transportation Improvements



improvements were made. On 228th Ave three signalized intersections are projected to operate above their LOS standard: SE 4th Street (LOS F), SE 8th Street (LOS F), and NE 8th Street (LOS E). The NE 8th Street intersection falls just above its LOS D standard by 2 seconds. On Issaquah-Pine Lake Road SE the signal at SE Klahanie Boulevard and the roundabout at SE 32nd Way are forecast to operate at LOS F.

Outside of the city limits six signalized intersections are projected to operate at LOS F. Continued coordination with Issaquah, Redmond and King County will be necessary.

~~Background Table T–14~~ Background Table T–11 summarizes the concurrency status for each of the 49 roadway segments, under the 2035 land use with only committed improvements, based upon the policy-defined AWDT thresholds previously described. Measuring the forecasted volumes against the policy-defined roadway segment concurrency thresholds and considering only the committed improvements documents above, three road corridors and eleven road segments will fail under the future land use scenario with the committed improvements only.

Travel Demand Forecast Accuracy–Implications to LOS Results

The LOS failures indicated in the 2035 forecast are generally less than 10% over the volume-to-capacity (v/c) thresholds assumed for the 2035 network. Given the accuracy of the forecast these failures could be worse than anticipated or may not materialize at all. The magnitude of the LOS failures (generally less than 10%) predicted for 2035 suggest the need for ongoing monitoring to determine if the LOS forecast is reasonably accurate or if future conditions are better or worse than projected. The city's concurrency management system is designed to monitor the cumulative impacts of growth and will provide an early warning of potential future problems.

Background Table T–~~14~~11
AWDT Concurrency Thresholds and 2035 Volumes for Roadway Segments—Committed Improvements Only

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	CONCURRENCY THRESHOLD	2035 PROJECTED *AWDT*	*Fails?*
1–3	**East Lk Sammamish Parkway North Corridor**		**25,877**	**22,000**	
1	E Lk Sammamish Pkwy, City limits–196th Ave NE (Weber Point)	Minor Arterial	24,330	21,900	
2	E Lk Sammamish Pkwy, 196th Ave NE–NE 26th Pl	Minor Arterial	24,330	21,800	
3	E Lk Sammamish Pkwy, NE 26th Pl–NE Inglewood Hill Rd	Minor Arterial	28,970	22,300	
4–6	**East Lk Sammamish Parkway Central Corridor**		**17,370**	**13,167**	
4	E Lk Sammamish Pkwy, Inglewood Hill Rd–Louis Thompson Rd	Minor Arterial	17,370	15,800	
5	E Lk Sammamish Pkwy, Louis Thompson Rd NE–SE 8th St	Minor Arterial	17,370	12,100	
6	E Lk Sammamish Pkwy, SE 8th St–SE 24th Way	Minor Arterial	17,370	11,600	
7–8	**East Lk Sammamish Parkway South Corridor**		**17,370**	**16,550**	
7	E Lk Sammamish Pkwy, SE 24th Way–212th Ave SE	Minor Arterial	17,370	13,600	
8	E Lk Sammamish Pkwy, 212th Ave SE–City Limit	Minor Arterial	17,370	19,500	X
11–14	**Louis Thompson Road–212th Corridor**		**10,786**	**7,100**	
11	Louis Thompson Rd, E Lk Sammamish Pkwy–SE 8th St	Collector Arterial	9,820	4,900	
12	212th Ave SE, SE 8th St–SE 20th St	Collector Arterial	11,425	9,000	
13	212th Ave SE, SE 20th St–SE 32nd St	Collector Arterial	11,350	7,800	
14	212th Ave SE, SE 32nd St–E Lk Sammamish Pkwy	Collector Arterial	10,550	6,700	
21–23	**Sahalee Way–228th Avenue North Corridor**		**20,077**	**22,533**	**X**
21	Sahalee Way/228th Ave NE, City Limit–220th Ave NE	Principal Arterial	22,010	23,200	X
22	Sahalee Way/228th Ave NE, 220th Ave NE–NE 25th Way	Principal Arterial	18,530	20,000	X
23	228th Ave, NE 25th Way–NE 12th St	Principal Arterial	19,690	24,400	X
24–25	**228th Avenue Central Corridor**		**34,950**	**36,100**	
24	228th Ave, NE 12th St–SE 4th St	Principal Arterial	34,950	33,500	
25	228th Ave, SE 4th St–SE 20th St	Principal Arterial	34,950	38,700	X
26–27	**228th Avenue South Corridor**		**28,726**	**28,850**	**X**
26	228th Ave, SE 20th St–Issaquah Pine Lake Rd SE	Principal Arterial	36,023	36,100	X
27	228th Ave, Issaquah Pine Lake Rd SE–SE 43rd Way	Principal Arterial	21,430	21,600	X
32–34	**Issaquah-Pine Lake Road Corridor**		**28,513**	**24,400**	
32	Issaquah-Pine Lk Rd, 228th Ave SE–SE 32nd Way	Principal Arterial	31,480	20,300	
33	Issaquah-Pine Lk Rd, SE 32nd Way–SE Klahanie Blvd	Principal Arterial	17,370	22,200	X
34	Issaquah-Pine Lk Rd, SE Klahanie Blvd–SE 48th St	Principal Arterial	36,690	30,700	

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Background Table T–~~14~~11
AWDT Concurrency Thresholds and 2035 Volumes for Roadway Segments—Committed Improvements Only (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	CONCURRENCY THRESHOLD	2035 PROJECTED *AWDT*	*Fails?*
35–37	**224th Avenue North Corridor**		**17,370**	**12,600**	
35	244th Ave NE, NE 30th Pl–NE 20th St	Minor Arterial	15,050	11,900	
36	244th Ave NE, NE 20th St–NE 8th St	Minor Arterial	15,050	15,500	X
37	244th Ave NE, NE 8th St–SE 8th St	Minor Arterial	22,010	10,400	
39	**244th Avenue South Corridor**		**16,330**	**11,100**	
39	244th Avenue, SE 24th St–SE 32nd Way	Minor Arterial	16,330	11,100	
9	SE 24th St, E Lk Sammamish Pkwy–200th Ave SE	Collector Arterial	9,420	1,100	
10	SE 24th St, 200th Ave SE–212th Ave SE	Collector Arterial	9,420	2,600	
15	NE Inglewood Rd, E Lk Sammamish Pkwy–216th Ave NE	Minor Arterial	16,790	14,400	
16	NE Inglewood Rd, 216th Ave NE–228th Ave NE	Minor Arterial	17,370	12,600	
17	SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Collector Arterial	9,430	6,900	
18	SE 4th St, 218th Ave SE–228th Ave SE	Minor Arterial	22,010	23,000	X
19	SE 20th St, 212th Ave SE–219th Pl SE	Collector Arterial	11,070	6,500	
20	SE 20th St, 219th Pl SE–228th Ave SE	Collector Arterial	11,070	7,300	
28	NE 8th St, 228th Ave NE–244th Ave NE	Minor Arterial	21,430	15,000	
29	SE 8th St, 228th Ave SE–244th Ave SE	Minor Arterial	20,730	14,700	
30	SE 24th St, 228th Ave SE–244th Ave SE	Collector Arterial	10,550	11,000	X
31	SE 24th St, 244th Ave SE–W Beaver Lk Dr SE	Collector Arterial	10,550	6,600	
38	248th Ave SE, SE 24th St–SE 14th S	Collector Arterial	9,420	400	
40	SE 32nd Way, Issaquah-Pine Lk Rd–244th Ave SE	Minor Arterial	16,790	12,700	
41	SE 32nd St, 244th Ave SE–W Beaver Lk Dr SE	Minor Arterial	16,790	12,600	
42	Issaquah-Beaver Lk Rd, W Beaver Lk Dr SE–SE Duthie Hill Rd	Minor Arterial	17,950	9,000	
43	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–266th Ave SE	Principal Arterial	16,790	19,600	X
44	SE Duthie Hill Rd, 266th Ave SE–Trossachs Blvd SE	Principal Arterial	16,790	19,500	X
45	Trossachs Blvd SE, SE 9th St–SE Duthie Hill Rd	Collector Arterial	13,680	11,600	
46	218th Ave NE, SE 4th St–SE 8th St	Collector Arterial	9,420	6,800	
47	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–SE Issaquah-Fall City Rd	Principal Arterial	22,010	18,600	
48	SE Issaquah-Fall City Rd, SE Duthie Hill Rd–Klahanie Dr SE	Principal Arterial	22,010	24,100	X
49	SE Issaquah-Fall City Rd, Klahanie Dr SE–Issaquah-Pine Lk Rd	Principal Arterial	36,690	33,600	

Recommended Plan

Based upon evaluation of existing conditions, travel demand forecast and evaluation of future conditions that result from the 2035 land use forecast, and the concurrency standards and priorities stated by the city, the Recommended Plan contains the following elements:

- Recommended Transportation Improvements
- Functional Classification Assessment
- Connectivity Assessment
- Roadway Design Guidelines
- Traffic Calming Program
- Transportation Demand Management
- Transit Service and Facilities
- Non-Motorized Facilities

Recommended Transportation Improvements

Based upon the analysis of 2012 and 2035 level of service, a list of recommended improvement projects was developed for the 2035 planning horizon. The list of improvement projects is summarized in ~~Background Table T–15~~Background Table T–12.

Planning level estimates were prepared for each of the projects under consideration. The cost estimates (in current dollars) are included in the City of Sammamish Capital Facilities Plan.

Background Table T–~~15~~12
Summary of Recommended Transportation Improvements

PROJECT	2015–2035 TIP PRIORITY	LOCATION	IMPROVEMENT	CONCURRENCY	PROJECT COST (X $1,000)[1]
1		E Lk Sammamish Pkwy SE, 212th Ave SE–South City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	10,935
2	3	Issaquah-Pine Lk Rd SE, SE 48th St–SE Klahanie Blvd	Widen to 5 lanes with bike lanes, curb, gutter and sidewalk	X	21,315
3	2	Issaquah-Pine Lk Rd SE, SE Klahanie Blvd–SE 32nd Way	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	21.651
4	1	SE 4th St, 218th Ave SE to 228th Ave SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	18,981
5		Sahalee Way NE, 220th Ave NE–North City Limits	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	12,327
6	5	Sahalee Way NE, NE 25th Way–220th Ave NE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	4,474

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Background Table T–~~15~~12
Summary of Recommended Transportation Improvements (cont.)

PROJECT #	2015–2035 TIP # PRIORITY	LOCATION	IMPROVEMENT	CONCURRENCY PROJECT?	PROJECT COST (X $1,000)[1]
7	4	E Lk Sammamish Pkwy SE at SE 24th St Intersection	Construct traffic signal, turn lanes, curb, gutter, and sidewalk		13,716
8		SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–"notch"	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk on west side, 8-foot shoulder on east side	X	13,230
9		SE Duthie Hill Rd, West side of "notch" to Trossachs Blvd SE	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk on west side, 8-foot shoulder on east side	X	13,230
10	8	228th Ave	Public Works Trust Fund Loan Repayment (remaining loan balance)	X	3,808
11		Issaquah-Pine Lake Rd SE, SE Issaquah- Fall City Rd–SE 48th St	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk	X	7,882
12	7	SE Issaquah-Fall City Rd, SE 48th St– Klahanie Dr SE	Widen to 5 lanes with bike lanes, curb, gutter, and sidewalk	X	17,321
13		SE Issaquah-Fall City Rd, Klahanie Dr SE–SE Issaquah-Beaver Lk Rd	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	15,917
14		SE Belvedere Way, E Beaver Lk Rd–263rd Pl SE	New roadway connection, extend SE Belvedere Way to E Beaver Lk Dr SE		761
15		New Roadway Connection to E Beaver- Lk Dr SE at 266th Way SE	Extend 266th Way SE to E Beaver Lk Dr SE and widen E Beaver Lk Dr SE, 266th Way SE to Beaver Lk Way SE		8,498
16		212th Way SE (Snake Hill), E Lk Sammamish Pkwy SE–212th Ave SE	Improve 2 lanes with left-turn pockets, curb, gutter, and sidewalk		13,738
17		SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Widen to 3 lanes with bike lanes, curb, gutter, and sidewalk	X	10,117
18	11	Sidewalk Projects	Various sidewalk projects, includes gap projects, extensions, safety improvements		5,000
19	10	Transit Program	Provide funding for capital project matching funds and/or provide for additional transit service.		10,000
20	13	Neighborhood CIP	Various capital improvement including safety improvements, gap projects, bike routes, pedestrian safety enhancements, and school zone safety improvements.		2,000
21		Street Lighting Program	Provide street lighting at high priority locations with significant safety issues that can be addressed through better street lighting		400
22	12	Intersection Improvements	Various intersection and other spot improvement as needed, including channelization, signing, safety improvements, signalization, or other control devices.		5,000
		TOTAL EXPENDITURES			237,071

X Indicates that project addresses an identified deficiency.
1. All project costs are in 2014 dollars.

2035 Level of Service Analysis with Recommended Improvements

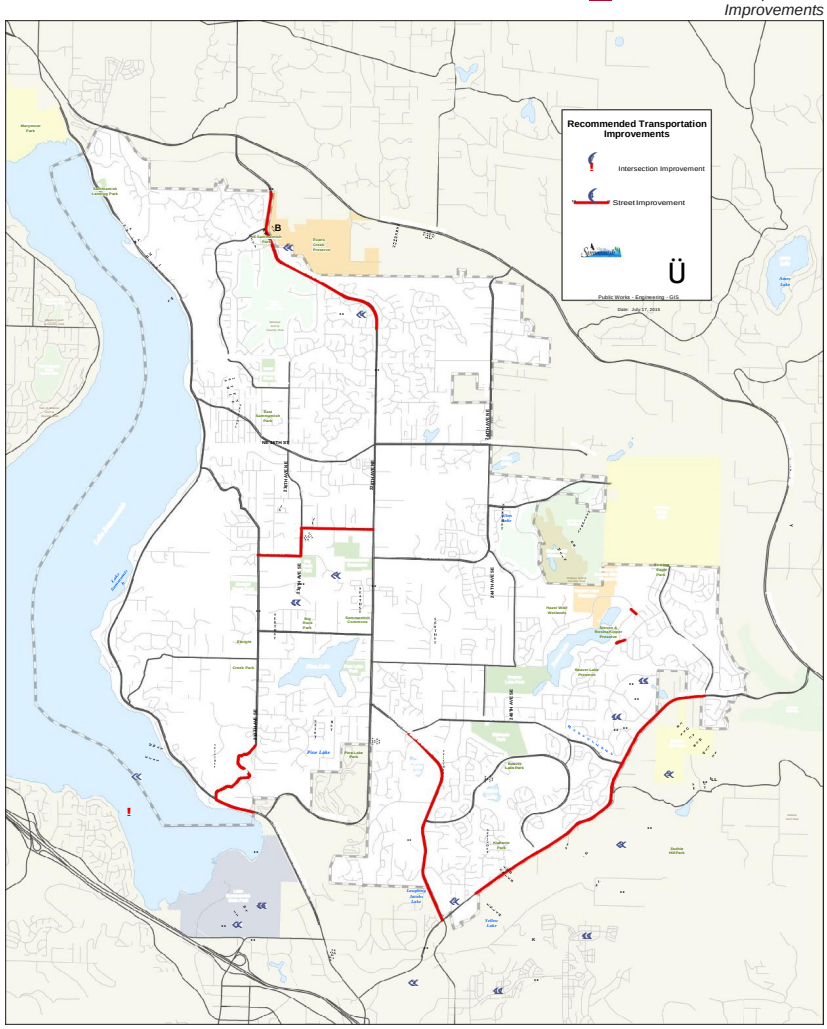
The recommended projects included in the long range plan are illustrated in ~~Background Figure T–15~~Background Figure T–13. This list was developed after review of concurrency requirements.

~~Background Table T-16~~ Background Table T–13 summarizes the expected levels-of-service at the 30 designated major intersections with the recommended long range transportation improvements in place. The table includes two future alternative analyses with Sahalee Way NE widened to 3-lanes and to 5-lanes. Analysis shows that 18 of the 30 intersections are expected to operate at an LOS at or better than the intersection concurrency thresholds. On 228th Avenue the six signalized intersections projected at LOS E or worse are at: SE 4th Street, SE 8th Street, SE 24th Street, Issaquah-Pine Lake Road SE, NE 8th Street, and NE 4th Street. On Issaquah-Pine Lake Road SE the signal at SE Klahanie Boulevard and the roundabout at SE 32nd Way are forecast to operate at LOS E. The intersection LOS for the 2035 land use is illustrated in ~~Background Figure T–16~~Background Figure T–14.

Outside of the city limits six signalized intersections are projected to operate at LOS E and LOS F. The LOS deficiencies discussed above are not significantly affected by the proposed widening on Sahalee Way NE.

~~Background Table T-17~~ Background Table T–14 summarizes the roadway segment concurrency status for the 2035 Land Use assumed in the Comprehensive Plan, with the recommended transportation improvements in place. The table includes two future alternative analyses with Sahalee Way NE widened to 3-lanes and to 5-lanes. The table shows that with the 3-lane Sahalee Way NE improvement there are six road segments and three corridors forecast to fail concurrency. With the 5-lane Sahalee Way NE improvement there are five road segments and two corridors forecast to fail concurrency.

Background Figure T–~~15~~ 13 Recommended Transportation Improvements

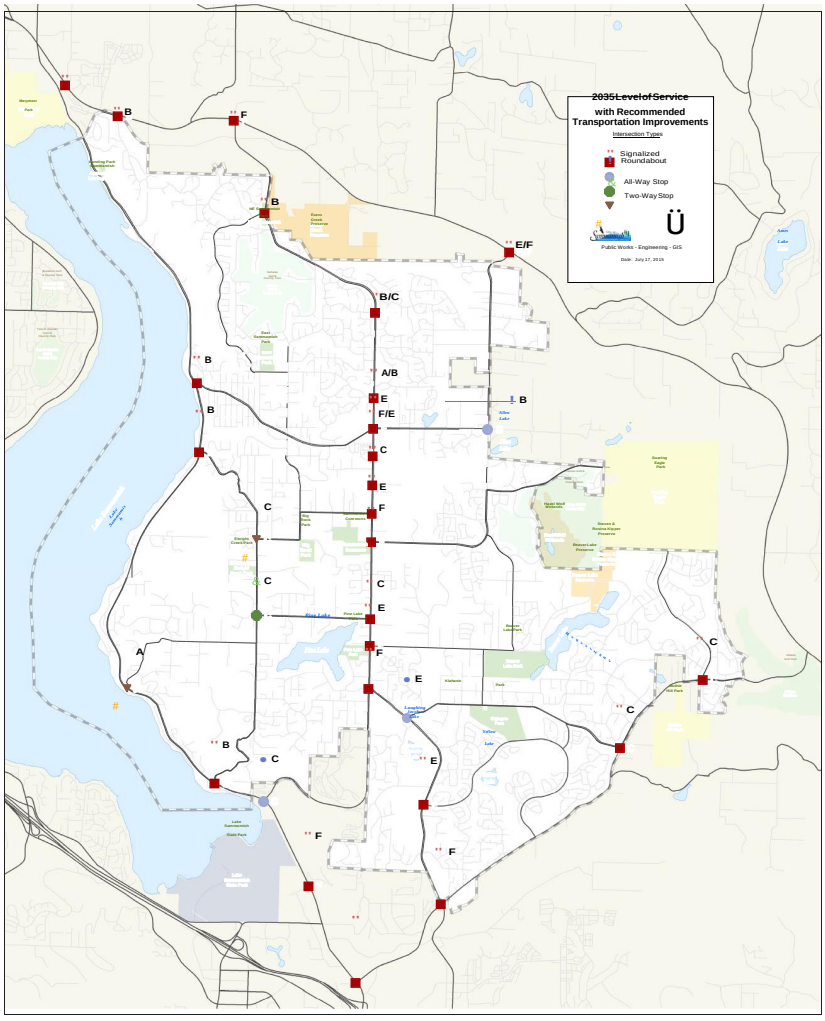


Background Table T–~~16~~13
2035 Intersection LOS—PM Peak Hour—With Recommended Improvements

INTERSECTION	LOS STD[1]	TRAFFIC CONTROL[2]	3-LANE SAHALEE WAY		5-LANE SAHALEE WAY	
			Delay[3]	*LOS[4]*	*Delay[3]*	*LOS[4]*
228th Ave NE and NE 12th St	D	S	20	B	9	A
Sahalee Way NE and NE 37th St	D	S	21	C	13	B
228th Ave SE and SE 4th St	E	S	70	E	77	E
228th Ave SE and SE 8th St	D	S	109	F*	114	F*
228th Ave SE and SE 20th St	D	S	23	C	24	C
228th Ave NE and SE 24th St	E	S	61	E	60	E
228th Ave SE and Issaquah-Pine Lk Rd SE	E	S	84	F*	83	F*
Issaquah-Pine Lk Rd SE and SE Klahanie Blvd	D	S	64	E*	63	E*
E Lk Sammamish Pkwy and NE Inglewood Hill Rd	C	S	17	B	16	B
E Lk Sammamish Pkwy and 212th Way SE	C	S	14	B	13	B
228th Ave NE and NE 8th St (NE Inglewood Hill Rd)	D	S	57	E*	65	E*
192nd Drive NE and NE Redmond Fall City Rd (SR202)	D	S	11	B	11	B
Issaquah-Pine Lk Rd SE and SE 32nd Way	D	RAB	73	E*	75	E*
E Lk Sammamish Pkwy and Louis Thompson Rd NE	C	S	17	B	16	B
212th Ave SE and SE 20th St	C	AWSC	16	C	15	C
SE Duthie Hill Rd and SE Issaquah-Beaver Lk Rd	D	S	22	C	21	C
Trossachs Blvd SE and SE Duthie Hill Rd	D	S	27	C	26	C
E Lk Sammamish Pkwy and SE 24th Way	C	S	7	A	7	A
244th Ave NE and NE 8th St	C	RAB	14	B	12	B
228th Ave NE and NE 25th St	D	S	20	C	12	B
228th Ave NE and NE 4th St	D	S	63	E*	82	F*
228th Ave NE and E. Main St	D	S	28	C	28	C
212th Ave SE and SE 8th St	C	TWSC	19	C	18	C
Sahalee Way NE and SR202[5]	E	S	89	F*	119	F*
Issaquah-Pine Lk Rd SE and SE Issaquah-Fall City Rd[5]	E	S	180	F*	178	F*
244th Ave NE and NE Redmond Fall City Rd (SR202)[5]	D	S	67	F*	62	E*
E Lk Sammamish Pkwy and NE Redmond Fall City Rd (SR202)[5]	D	S	170	F*	169	F*
E Lk Sammamish Pkwy and SE 56th St[5]	D	S	263	F*	260	F*
E Lk Sammamish Pkwy and SE Issaquah-Fall City Rd[5]	E	S	207	F*	208	F*
E Lk Sammamish Pkwy and SE 43rd Way[5]	D	RAB	27	C	25	C

1. *LOS standards are based upon the functional classifications of the intersecting roadways. Intersections that include Principal Arterials have a standard of LOS D. Intersections that include Minor Arterials or Collectors have a standard of LOS C.*
2. *Intersection Control: S=signalized; TWSC=two-way stop-controlled; AWSC=all-way stop-controlled; RAB = roundabout.*
3. *Delay is measured in seconds per vehicle.*
4. *LOS is the level-of-service based on the methodology outlined in the Highway Capacity Manual (HCM 2010). (*) Denotes an LOS below the defined standard, indicating that the intersection is considered deficient.*
5. *Intersection is outside of the city limits.*

Background Figure T–~~16~~ 14 2035 Level of Service—2035 Land Use with Recommended Transportation Improvements



Background Table T–~~17~~14
2035 Segment Concurrency Status—With Recommended Improvements

		ROAD	3-LANE SAHALEE WAY			5-LANE SAHALEE WAY		
	SEGMENT	FUNCTIONAL CLASSIFICATION	*Concurrency Threshold*	*AWDT*	*Fails?*	*Concurrency Threshold*	*AWDT*	*Fails?*
1–3	**East Lk Sammamish Parkway North Corridor**		**25,877**	**21,100**		**25,877**	**20,300**	
1	E Lk Sammamish Pkwy, City limits–196th Ave NE (Weber Point)	Minor Arterial	24,330	21,000		24,330	20,200	
2	E Lk Sammamish Pkwy, 196th Ave NE–NE 26th Pl	Minor Arterial	24,330	20,900		24,330	20,100	
3	E Lk Sammamish Pkwy, NE 26th Pl–NE Inglewood Hill Rd	Minor Arterial	28,970	21,400		28,970	20,600	
4–6	**East Lk Sammamish Parkway Central Corridor**		**17,370**	**13,533**		**17,370**	**13,300**	
4	E Lk Sammamish Pkwy, Inglewood Hill Rd–Louis Thompson Rd	Minor Arterial	17,370	16,000		17,370	15,700	
5	E Lk Sammamish Pkwy, Louis Thompson Rd NE–SE 8th St	Minor Arterial	17,370	12,700		17,370	12,500	
6	E Lk Sammamish Pkwy, SE 8th St– SE 24th Way	Minor Arterial	17,370	11,900		17,370	11,700	
7–8	**East Lk Sammamish Parkway South Corridor**		**19,690**	**16,700**		**19,690**	**16,400**	
7	E Lk Sammamish Pkwy, SE 24th Way–212th Ave SE	Minor Arterial	17,370	14,000		17,370	13,700	
8	E Lk Sammamish Pkwy, 212th Ave SE–City Limit	Minor Arterial	22,010	19,400		22,010	19,100	
11–14	**Louis Thompson Road–212th Corridor**		**12,150**	**6,650**		**12,150**	**6,600**	
11	Louis Thompson Rd, E Lk Sammamish Pkwy–SE 8th St	Collector Arterial	12,150	4,700		12,150	4,600	
12	212th Ave SE, SE 8th St–SE 20th St	Collector Arterial	12,150	8,100		12,150	8,000	
13	212th Ave SE, SE 20th St–SE 32nd St	Collector Arterial	12,150	7,400		12,150	7,400	
14	212th Ave SE, SE 32nd St–E Lk Sammamish Pkwy	Collector Arterial	12,150	6,400		12,150	6,400	
21–23	**Sahalee Way–228th Avenue North Corridor**		**22,010**	**23,667**	**X**	**36,690**	**28,567**	
21	Sahalee Way/228th Ave NE, City Limit–220th Ave NE	Principal Arterial	22,010	24,500	X	36,690	28,700	
22	Sahalee Way/228th Ave NE, 220th Ave NE–NE 25th Way	Principal Arterial	22,010	21,300		36,690	26,300	
23	228th Ave, NE 25th Way–NE 12th St	Principal Arterial	22,010	25,200	X	36,690	30,700	
24–25	**228th Avenue Central Corridor**		**34,950**	**36,250**	**X**	**34,950**	**37,450**	**X**
24	228th Ave, NE 12th St–SE 4th St	Principal Arterial	34,950	35,500	X	34,950	37,300	X
25	228th Ave, SE 4th St–SE 20th St	Principal Arterial	34,950	37,000	X	34,950	37,600	X

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Background Table T–14~~7~~
2035 Segment Concurrency Status—With Recommended Improvements (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	3-LANE SAHALEE WAY Concurrency Threshold	AWDT	Fails?	5-LANE SAHALEE WAY Concurrency Threshold	AWDT	Fails?
26–27	**228th Avenue South Corridor**		**29,016**	**29,050**	**X**	**29,016**	**29,300**	**X**
26	228th Ave, SE 20th St–Issaquah Pine Lake Rd SE	Principal Arterial	36,023	35,900		36,023	36,400	X
27	228th Ave, Issaquah Pine Lake Rd SE–SE 43rd Way	Principal Arterial	22,010	22,200	X	22,010	22,200	X
32–34	**Issaquah-Pine Lake Road Corridor**		**30,060**	**22,333**		**30,060**	**22,600**	
32	Issaquah-Pine Lk Rd, 228th Ave SE–SE 32nd Way	Principal Arterial	31,480	20,500		31,480	21,000	
33	Issaquah-Pine Lk Rd, SE 32nd Way–SE Klahanie Blvd	Principal Arterial	22,010	21,100		22,010	21,400	
34	Issaquah-Pine Lk Rd, SE Klahanie Blvd–SE 48th St	Principal Arterial	36,690	25,400		36,690	25,400	
35–37	**224th Avenue North Corridor**		**22,010**	**12,400**		**22,010**	**12,133**	
35	244th Ave NE, NE 30th Pl–NE 20th St	Minor Arterial	22,010	11,700		22,010	11,500	
36	244th Ave NE, NE 20th St–NE 8th St	Minor Arterial	22,010	15,300		22,010	14,800	
37	244th Ave NE, NE 8th St–SE 8th St	Minor Arterial	22,010	10,200		22,010	10,100	
39	**244th Avenue South Corridor**		**15,630**	**10,500**		**15,630**	**10,300**	
39	244th Avenue, SE 24th St–SE 32nd Way	Minor Arterial	15,630	10,500		15,630	10,300	
9	SE 24th St, E Lk Sammamish Pkwy–200th Ave SE	Collector Arterial	9,420	900		9,420	900	
10	SE 24th St, 200th Ave SE–212th Ave SE	Collector Arterial	9,420	2,400		9,420	2,400	
15	NE Inglewood Rd, E Lk Sammamish Pkwy–216th Ave NE	Minor Arterial	22,010	12,300		22,010	11,900	
16	NE Inglewood Rd, 216th Ave NE–228th Ave NE	Minor Arterial	22,010	12,800		22,010	11,200	
17	SE 8th St/218th Ave SE, 212th Ave SE–SE 4th St	Collector Arterial	9,420	6,400		9,420	6,400	
18	SE 4th St, 218th Ave SE–228th Ave SE	Minor Arterial	15,390	6,500		15,390	6,500	
19	SE 20th St, 212th Ave SE–219th Pl SE	Collector Arterial	22,010	17,700		22,010	18,100	
20	SE 20th St, 219th Pl SE–228th Ave SE	Collector Arterial	15,390	6,500		15,390	6,200	
28	NE 8th St, 228th Ave NE–244th Ave NE	Minor Arterial	15,390	7,200		15,390	7,000	
29	SE 8th St, 228th Ave SE–244th Ave SE	Minor Arterial	22,010	13,400		22,010	13,400	
30	SE 24th St, 228th Ave SE–244th Ave SE	Collector Arterial	20,730	11,000		20,730	10,800	

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Background Table T–14~~7~~
2035 Segment Concurrency Status—With Recommended Improvements (cont.)

	SEGMENT	ROAD FUNCTIONAL CLASSIFICATION	3-LANE SAHALEE WAY Concurrency Threshold	AWDT	Fails?	5-LANE SAHALEE WAY Concurrency Threshold	AWDT	Fails?
31	SE 24th St, 244th Ave SE–W Beaver Lk Dr SE	Collector Arterial	10,550	8,500		10,550	8,300	
38	248th Ave SE, SE 24th St–SE 14th S	Collector Arterial	10,550	6,400		10,550	6,500	
40	SE 32nd Way, Issaquah-Pine Lk Rd–244th Ave SE	Minor Arterial	9,420	400		9,420	400	
41	SE 32nd St, 244th Ave SE–W Beaver Lk Dr SE	Minor Arterial	16,790	12,200		16,790	12,200	
42	Issaquah-Beaver Lk Rd, W Beaver Lk Dr SE–SE Duthie Hill Rd	Minor Arterial	16,790	12,100		16,790	11,900	
43	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–266th Ave SE	Principal Arterial	17,950	9,500		17,950	9,400	
44	SE Duthie Hill Rd, 266th Ave SE–Trossachs Blvd SE	Principal Arterial	22,010	20,000		22,010	19,900	
45	Trossachs Blvd SE, SE 9th St–SE Duthie Hill Rd	Collector Arterial	22,010	19,600		22,010	19,400	
46	218th Ave NE, SE 4th St–SE 8th St	Collector Arterial	13,680	11,600		13,680	11,600	
47	SE Duthie Hill Rd, SE Issaquah-Beaver Lk Rd–SE Issaquah-Fall City Rd	Principal Arterial	22,010	18,700		22,010	18,500	
48	SE Issaquah-Fall City Rd, SE Duthie Hill Rd–Klahanie Dr SE	Principal Arterial	22,010	24,400	X	22,010	24,300	X
49	SE Issaquah-Fall City Rd, Klahanie Dr SE–Issaquah-Pine Lk Rd	Principal Arterial	36,690	34,100		36,690	33,900	

Actions to Meet LOS Standards

Both the 2035 3-lane Sahalee Way NE and 2035 5-lane Sahalee Way NE road networks experience some segment capacity and intersection LOS deficiencies. The LOS and segment capacity deficiencies may be slightly worse or not materialize at all based upon the accuracy of the travel demand model and 2035 land use forecast.

The deficiencies on 228th Ave SE are a result of significant institutional uses in a concentrated area along 228th Ave SE including, Town Center to the south, Sammamish City Hall, the Community Center, the King County Library, Skyline High School, and two churches. On a positive note the institutional nature of these uses lend themselves to Transportation Demand Management (TDM) strategies that smaller individual uses may not be able to achieve.

Infrastructure improvements could also be considered to improve LOS including:

~~Background Table T–16~~ Background Table T–13 identified the following intersection LOS deficiencies with the 2035 recommended improvements and with both Sahalee Way NE widening alternatives.

- Within the city there are seven intersections forecast to operate at LOS E or F and above their LOS respective thresholds. Monitoring programs are recommended at all key city intersections, including those projected to operate at failure to justify future improvement needs. Intersections that do not meet their LOS thresholds are outlined below along with physical or strategic future improvement options:
  - *228th Avenue SE at SE 8th Street* operates at LOS F; LOS D threshold—add turn lanes or a connector roadway to SE 10th Street to reduce the vehicle demand.
  - *228th Avenue SE at SE Issaquah-Pine Lake Rd SE* operates at LOS F; LOS E threshold—add capacity to the south leg of the intersection.
  - *Issaquah-Pine Lake Road SE at SE Klahanie Boulevard* operates at LOS E; LOS D threshold—add turn lanes.
  - *228th Avenue NE at NE 8th Street/NE Inglewood Hill Road* operates at LOS E; LOS D threshold—add turn lanes or consider modifying the LOS threshold to keep intersection more pedestrian friendly.
  - *Issaquah-Pine Lake Road SE at SE 32nd Way* operates at LOS E; LOS D threshold—add bypass lanes.
  - *228th Avenue NE at NE 4th Street* operates at LOS E; LOS D threshold—through monitoring determine the future LOS when the actual Town Center land uses are identified.
- Six intersections outside of the city limits operate above their LOS thresholds. Similar to intersections within the city limits, monitoring programs are also recommended and in addition the monitoring should be coordinated with adjacent agencies to facilitate long term improvement solutions, support enhanced transit service and consider community wide TDM education. Intersection outside of the city limits operating at LOS E or F include:
  - *Sahalee Way NE at NE Redmond-Fall City Road (SR202)* operates at LOS F.
  - *Issaquah-Pine Lake Road SE at SE Issaquah-Fall City Road* operates at LOS F.
  - *244th Avenue NE at NE Redmond-Fall City Road (SR202)* operates at LOS F under the 3-lane Sahalee Way NE and LOS E under the 5-lane Sahalee Way NE alternatives.

- *East Lake Sammamish Parkway at Redmond-Fall City Road (SR202)* operates at LOS F.
- *East Lake Sammamish Parkway at SE 56th Street* operates at LOS F.
- *East Lake Sammamish Parkway at SE Issaquah-Fall City Road* operates at LOS F.

~~Background Table T–17~~ Background Table T–14 identified the following road segment capacity deficiencies with the 2035 recommended improvements and with both Sahalee Way NE widening alternatives:

- *Sahalee Way*—228th Avenue North Corridor (North City Limits to 12th St) is overcapacity with the 3-lane Sahalee Way NE alternative and operates sufficiently under the 5-lane Sahalee Way NE alternative.
- *228th Avenue Central Corridor (NE 12th St to SE 20th St)* is overcapacity—through monitoring determine future AWDT volume impacts when the actual Town Center land uses are identified.
- *228th Avenue South Corridor (SE 20th St–SE 43rd Way)*—through monitoring determine the future AWDT volume impacts when the actual Town Center land uses are identified.
- *SE Issaquah Fall City Road from SE Duthie Hill Road-Klahanie Drive SE*—through monitoring determine the future AWDT volume impacts when the actual Town Center land uses are identified and also consider additional improvements.

3- Lane and 5-Lane Sahalee Way NE Widening

The projected 2035 volumes exceed capacity of the 3-lane Sahalee Way NE section as proposed. A future 3-lane Sahalee Way NE improvement does not meet city LOS standard for concurrency. This results in traffic diverting to other arterials and local streets.

The 5-lane Sahalee Way NE section has sufficient capacity to meet city LOS standards for 2035 and beyond. The additional capacity attracts traffic off of East Lake Sammamish Parkway, 244th Avenue NE and other residential collectors west of Sahalee Way NE. With the 5-lane Sahalee Way NE improvement alternative the following AWDT volume changes are projected when compared to the 3-lane alternative:

- Reduces AWDT volume on East Lake Sammamish Parkway north of Inglewood Hill Road by 850 vehicles per day (vpd)
- Reduces AWDT volume on 205th Place NE near Elizabeth Blackwell Elementary School by 1,000 vpd
- Reduces AWDT volume on 216th Avenue SE north of NE Inglewood Hill Road by 1,600 vpd

- Reduces AWDT volume on NE Inglewood Hill Road west of 228th Avenue NE by 1,400 vpd
- Reduces AWDT volume on 244th Avenue NE north of NE 8th Street)by 450 vpd
- Increases AWDT volume on 228th Avenue NE north of NE 8th Street by 4,900 vpd
- Increases AWDT volume on 228th Avenue NE south of SE 4th Street by 650 vpd
- Reduces traffic volumes in neighborhoods to the west of Sahalee Way NE

Additionally, the 5-lane Sahalee Way NE alternative reduces or eliminates the need for future improvements on East Lake Sammamish Parkway north of NE Inglewood Hill Road and on 244th Avenue NE north of NE 8th Street.

Flexibility in Roadway Design Guidelines

Essential functions of streets in Sammamish include vehicle mobility, pedestrian access, bicycle access, and aesthetics. City standards specify lane widths of 11 feet. Left-turn lanes increase capacity, reduce vehicular collisions, and improve access to adjacent property. Bicycle lanes should be provided along major traffic corridors, and when striped should be a minimum of 5 feet in width. Sidewalk widths should be a minimum of 6 feet. Landscaped medians are especially important to soften wide expanses of pavement, to provide a haven for crossing pedestrians, and to provide aesthetic treatment to streets.

Often when designing streets, obstacles are encountered that require modification in design approach. Impediments might include topographic features that make road construction difficult or very expensive; inadequate available right-of-way to allow for all desired features; or environmentally sensitive areas that require modification to avoid adverse impacts. Additionally, funding or grant sources may require specific features or dimensions.

Traffic CalmingProgram

The City of Sammamish has a comprehensive traffic calming program in place with the Neighborhood Traffic Management Program (NTMP) described in the Existing Conditions section of this Transportation Element. Thus, it is recommended that the city continue the NTMP in its current form, as already adopted by City ordinance.

Transportation Demand Management

Transportation Demand Management (TDM) consists of strategies that seek to maximize the efficiency of the transportation system by reducing demand on the system. The results of successful TDM can include:

- Travelers switch from single-occupancy-vehicle (SOV) to HOV
  modes such as transit, vanpools or carpools,
- Travelers switch from driving to non-motorized modes such as bicycling or walking,
- Travelers change the time they make trips from more congested to less congested times of day,
- Travelers eliminate trips altogether through such means as compressed workweeks, consolidation of errands, or use of telecommunications.

Within the State of Washington, alternative transportation solutions are further necessitated by the objectives of the Commute Trip Reduction (CTR) Law. Passed in 1991 as a section of the Washington Clean Air Act (RCW 70.94), the CTR Law seeks
to reduce workplace commute trips in the nine most populous counties in the state. This law requires that in designated high population counties, each city within the county adopt a commute trip reduction plan requiring private and public employers with 100 or more employees implement TDM programs. Programs provide various incentives or disincentives to encourage use of alternative transportation modes, other than the SOV. The purpose of CTR is to help maintain air quality in metropolitan areas by reducing congestion and air pollution.

The city can promote TDM through policy and/or investments that may include, but are not limited to, the following:

- Public Education related to the benefits of TDM and individual
  actions to reduce vehicle trips
- Commute Trip Reduction (CTR) Ordinances
- Voluntary Compliance with CTR requirements by the city
- Managed access to facilities and activity centers
- Transit-oriented and pedestrian-friendly design
- Parking management

Transit Service and Facilities

As supported by the Goals, Objectives and Policies of the Transportation Element, public transportation has long-range benefits for the community because it offers:

See Volume I, Transportation Element Policy T.2.8–Policy T.2.10 on page 88.

See Volume I, Transportation Element Policy T.2.15–Policy T.2.22 on page 89.

- Primary mobility for those who cannot drive, including many of our youth, seniors, and citizens with disabilities,
- Mobility options for people who choose not to drive, either to avoid congestion, save money, or support the environment,
- Preservation of the quality of our environment by conserving energy, supporting better air quality, and reducing congestion on our roadways.

Central to the success of a public transportation system is the development of a compatible land use plan. Low-density suburbs and strip development are not designed to accommodate public transportation services. Changing the land use or traditional transit services is difficult and special attention is required to increase the effectiveness of transit by controlling development; modifying the existing arterial street system; and modifying pedestrian facilities to bring passengers to the transit system.

The City of Sammamish can influence compatibility with public transportation by considering the following development issues:

- Pedestrian access and facilities,
- Amount, cost, and location of parking,
- Location of higher density residential developments,
- Location and design of commercial and employment activities,
- Location of transit facilities,
- Location of community activity centers,
- Design of building complexes and their surroundings.

228th Avenue provides the primary corridor to support activity centers and more transit-oriented development. New development, redevelopment, or in-fill development that occurs in major activity centers can be designed to incorporate features that are compatible with public transportation. These features include:

- Land use that creates densities to support transit,
- Facilities that are oriented toward transit service,
- Walking distances that are on a reasonable pedestrian scale,
- Site design that encourages transit riders.

Zoning provisions are the primary means of implementing transportation-related land use policy. In order to accomplish this, the zoning code for major activity centers can be reviewed to ensure transit friendly design in these areas. Some factors that may be considered are:

- Encourage public transportation-compatible in-fill development on areas near transit routes and stops,

- Support the development of park-and-ride lots along transit routes,
- Encourage pedestrian uses at street-level buildings to stimulate activity and interest,
- Support increased residential densities along transit routes,
- Support increased employment densities in activity centers.

In addition, transit can be made more compatible with pedestrian travel by observing the following design guidelines:

- Provide sidewalks and safe crosswalks for access to the transit system,
- Include provisions for weather protection of the pedestrian,
- Eliminate barriers that discourage pedestrian access,
- Keep walking distances to a quarter-mile or less,
- Provide curb ramps and other facilities conforming to the Americans with Disabilities Act (ADA),
- Provide lighting to improve pedestrian safety and security,
- Provide design guidelines to foster and encourage pedestrian activity.

Special emphasis should be placed on the identification and public awareness of the transit system. Specific tasks could include improved signing, identification, and improved transit stops; route and schedule information provided at all transit stop sites; and shelters provided at some sites. Shelters provide a visual reminder of transit availability and provide an incentive for residents and visitors to use the transit system. Shelters can be installed only in locations with adequate public right-of-way and where appropriate pads can be constructed.

The success of the public transportation system is dependent on integrating key elements that comprise the overall plan. Integration of the transit system with streets, bicycle facilities, and pedestrian facilities is critical to transit's success.

Non-Motorized Plan

The Trails, Bikeways and Paths Plan is a comprehensive planning document for the City of Sammamish addressing a 20-year vision for development of recreational trails and non-motorized transportation facilities within the city. The dual focus on recreational trails and public right-of-way non-motorized facilities is an intentional effort to create a well-integrated system for pedestrians, bicyclists, equestrians, and other trail users in the city. The title of the plan is also a reflection of the desire for an

See Volume I, Transportation Element Policy T.2.8, Policy T.2.9 and Policy T.2.10 on page 88.

See Volume I, Transportation Element Policy T.2.12 and Policy T.2.13 on page 89.

integrated system. “Trails, Bikeways and Paths” is a melding of terminologies to de-emphasize the differences between recreation- based and transportation-based facilities, and to underscore the common themes and the benefits of an integrated system.

A vital aspect of the plan and a key part of the message is that this vision is for an integrated system. It was decided early on to
pursue a system that avoided the historical, but somewhat arbitrary, distinctions between a non-motorized and a trails plan. This more holistic approach will provide additional flexibility in implementing the overall vision to connect key destinations that in many instances may not be possible to connect using one type of route or the other. It will also provide opportunities for interdepartmental coordination and will bring a greater efficiency to the effort. The benefits far outweigh the inconveniences of developing the plan in such a manner. The resulting system will be greatly enhanced as a result of this integrated approach.

This vision has been developed through a concentrated community outreach effort and through consistent dialogue and involvement of a citizen advisory committee called the Trails, Bikeways and Paths (TBP) Subcommittee. This advisory committee was formed to assist in guiding the development of this plan and reports to the Parks and Recreation Commission regarding the progress of the plan. In addition, community input was gathered at multiple points during the planning process and through the review and adoption process by the City Council.

The development of a vision for the future required an extensive effort to document existing trail and non-motorized facilities to provide a current picture and identify gaps in the system. An existing conditions inventory was completed for all trail and non-motorized facilities in the city, including private trail systems. Documentation of private trail systems was done to provide an understanding of how
a proposed public system could integrate with private neighborhood facilities. In addition, key challenges and obstacles were identified to assist in developing proposed system improvements.

Key survey data was collected from the public regarding use of trails, destinations, locations, intensity of use, etc.

This information, along with feedback from the TBP Subcommittee and guidance from state and regional policy on non-motorized facilities, provided the basis for the development of TBP goals and policies. Then, basic overall trail corridors were identified to
provide for east/west and north/south connectivity through the city.

With consideration of state, regional, and local design standards a hierarchy of pathways and trail types, as well as bicycle facility types, was created to specifically address the needs and conditions on the Sammamish Plateau. Each facility type description includes detailed information on facility width, height clearances, appropriate location, and surfacing.

The pathway and trail facility types range from paved multi-use trails to primitive soft surface trails, and also include all of the standard sidewalk facilities along streets and roadways. The bicycle facility types are consistent with state and regional standards for signed and striped bike lanes, designated shared bike routes, and multi-use shared paths.

Next, the identified corridors and field conditions were taken into consideration in assigning the hierarchy of facility types to all of the proposed routes. Considerations in this process included existing right-of-way and obstacles, topography, community destinations, and types of potential users. This process resulted in a 20-year pathways and trail system plan and bicycle system plan.

The overall vision is a direct reflection of the community's desire to use trails, bikeways, and paths for travel and recreation purposes. Please see the City of Sammamish *Trails, Bikeways and Paths Master Plan*.

Concurrency

See Volume I, Transportation Element Policy T.1.1–Policy T.13 on page 85.

A Concurrency Management System (CMS) is a policy procedure designed to enable a City or County to determine whether adequate facilities are available to serve new development. The transportation element of the Growth Management Act (GMA) requires each City and County planning department to incorporate a Concurrency Management System into their comprehensive plan. In a Concurrency Management System, local jurisdictions must adopt and enforce ordinances that prohibit development approval if the development causes the LOS on a transportation facility to decline below the standard adopted in the Transportation Element of the Comprehensive Plan. Transportation improvements or strategies that accommodate the impacts of development can be made concurrent with the development. (State of Washington Growth Management Act, RCW 36.70A, 1990)

The city of Sammamish Concurrency Management System must be adopted as ordinance, and will involve the following components.

Identification of facilities to be monitored

The City of Sammamish has identified both segments and intersections for concurrency monitoring. All intersections with functionally classified roadways within the city will be monitored. Additionally, all roadway segments, as identified in Background Figure T–9, will be monitored for concurrency.

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Establishment of LOS standards

In order to monitor concurrency, the city must adopt standards by which deficiencies may be identified, which were presented earlier in this plan. While GMA requires that LOS standards be adopted for concurrency, it does not mandate how those standards should be defined. Thus, the city is free to adopt by ordinance whatever standards it deems appropriate. The LOS standards that will be used to evaluate the transportation impacts of long-term growth and concurrency are defined as follows:

- **Roadway intersections.** Intersection LOS is calculated using standard HCM analysis procedures and for the AM or PM peak hour, whichever is worse. For intersections, the city shall adopt a standard of LOS D for intersections that include principal arterials and LOS C for intersections that include minor arterial or collector roadways.

  Attaining LOS D at major intersections with high approach volumes can result in large intersections with exclusive right-turn lanes, double left-turn lanes and additional through lanes. These improvements improve LOS for vehicles, but result in very long crosswalks and increased potential for pedestrian- vehicle conflicts at free right turns.

  The LOS for intersections with principal arterials should be LOS D, when LOS D can be attained with maximum of three approach lanes per direction. For example, a typical intersection of two five-lane roadways. The LOS for intersections with principal arterials may be reduced to E for intersections that require more than three approach lanes in any direction.

- **Roadway segments.** Segment LOS is based on allowable AWDT on a roadway segment as a function of roadway characteristics, as described earlier in this Transportation Element. The AWDT thresholds for each of these roadway segments, based upon the roadway characteristics, are defined in Background Table T–7. These thresholds would be adopted as ordinance by the City Council.

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- **Corridor LOS.** Roadway LOS will be based upon performance of key corridors.

  Corridor LOS will be determined by averaging the incremental corridor segment volume over capacity (v/c) ratios within each adopted corridor. This has the effect of tolerating some congestion in a segment or more within a corridor while resulting in the ultimate completion of the corridor improvements. The average v/c of the segment s comprising a corridor must be 1.00 or less for the corridor to be considered adequate. All corridors must pass the Corridor LOS standard for the transportation system to be considered adequate. Corridors comprised of one concurrency segment segments must have a v/c of 1.0 or less to be considered adequate.

See Volume I, Transportation Element Policy T.3.3 on page 90.

The following corridors comprised of the concurrency segments shown on the Background Figure T–9 will be monitored:

- East Lake Sammamish Parkway North Corridor
  Concurrency segments 1, 2 and 3
- East Lake Sammamish Parkway Central Corridor
  Concurrency segments 5 and 6
- East Lake Sammamish Parkway South Corridor
  Concurrency segments 7 and 8
- Sahalee Way—228th Avenue North Corridor
  Concurrency segments 21, 22, and 23
- 228th Avenue Central Corridor
  Concurrency segments 24 and 25
- 228th Avenue South Corridor
  Concurrency segments 26 and 27
- Issaquah-Pine Lake Road Corridor
  Concurrency segments 32, 33 and 34
- 244th Corridor North Corridor
  Concurrency segments 35, 36 and 37
- 244th Corridor South Corridor
  Concurrency segments 39
- Louis Thompson Road—212th Corridor
  Concurrency segments 11, 12, 13 and 14
- NE Inglewood Hill Road Corridor
  Concurrency segments 15 and 16
- NE 8th Street
  Concurrency segment 28
- SE 32nd Way—Issaquah Beaver Lake Road Corridor
  Concurrency segments 40, 41 and 42
- SE Duthie Hill Road—Trossachs Boulevard Corridor
  Concurrency segments 43, 44 and 45

- SE 4th Street
  Concurrency segments 17 and 18
- SE 8th Street
  Concurrency segments 29
- SE 20th Street
  Concurrency segments 19 and 20
- SE 24th Street West Corridor
  Concurrency segments 9 and 10
- SE 24th Street East Corridor
  Concurrency segments 30 and 31

Monitoring

On a continuing basis, monitor and evaluate the adequacy of the concurrency policies and established LOS standards as new development occurs and as traffic levels grow. Analyze external
influences on the Concurrency Management System. Make periodic adjustments to LOS standards as part of the annual Comprehensive Plan amendment process, based on the on-going evaluation.

Mitigation Fee System

The City has adopted a transportation impact fee.

Financing

See Volume I, Transportation Element Policy T.3.12–Policy T.3.21 on page 92.

The Growth Management Act requires that the transportation-related provisions of comprehensive plans address the financing of the local transportation system. The multiyear financing plans serve as the basis for the six-year street, road, or transit program for cities, counties, and public transportation systems and should
be coordinated with the state's six-year transportation improvement program.

Total revenue available to the City of Sammamish for concurrency projects over a 20-year period is estimated in Background Table ~~T–18~~T–15. The estimated revenue projection is $237,000,000 (year 2015 dollars). The projected revenue presented in Background ~~Table T–18~~ Table T–15 provides a revenue stream for the expenditures proposed for the next 20 years, based upon these preliminary estimates.

Background Table T–1~~5~~~~8~~
Transportation Capital Improvement Funding: 2015–2035

FUNDING SOURCE	AMOUNT (2015 DOLLARS)
Transportation Fund Revenue (REET)	25,000,000
Road Impact Fees (includes beginning fund balance)	35,000,000
Anticipated grants	15,000,000
Funding to be determined	162,000,000
TOTAL REVENUE	237,000,000

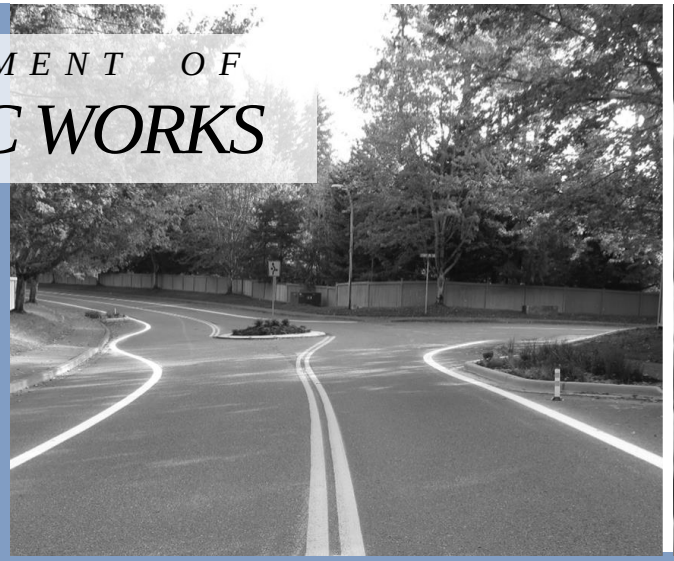
Contingency Plans in the Event of Revenue Shortfall

Some of the revenue forecasts are for revenues that are very secure, and highly reliable. However, other revenue forecasts are for sources that are volatile, and therefore difficult to predict
with confidence, including grants, joint agency funding, the motor vehicle registration fee, general obligation bonds, and mitigation payments (which have not been enacted), and which fluctuate with the amount of new development.

In the event that revenues from one or more of these sources is not forthcoming, the city has several options: add new sources of revenue or increase the amount of revenue from existing sources; require developers to provide such facilities at their own expense; reduce the number of proposed projects; change the Land Use
Element to reduce the travel demand generated by development; or change and/or lower the LOS standard.

See Volume I, Transportation Element Policy T.3.19 on page 92.

DEPARTMENT OF
PUBLIC WORKS



Comprehensive Plan Transportation Element Update

Joint City Council/Planning Commission Meeting

April 30, 2018

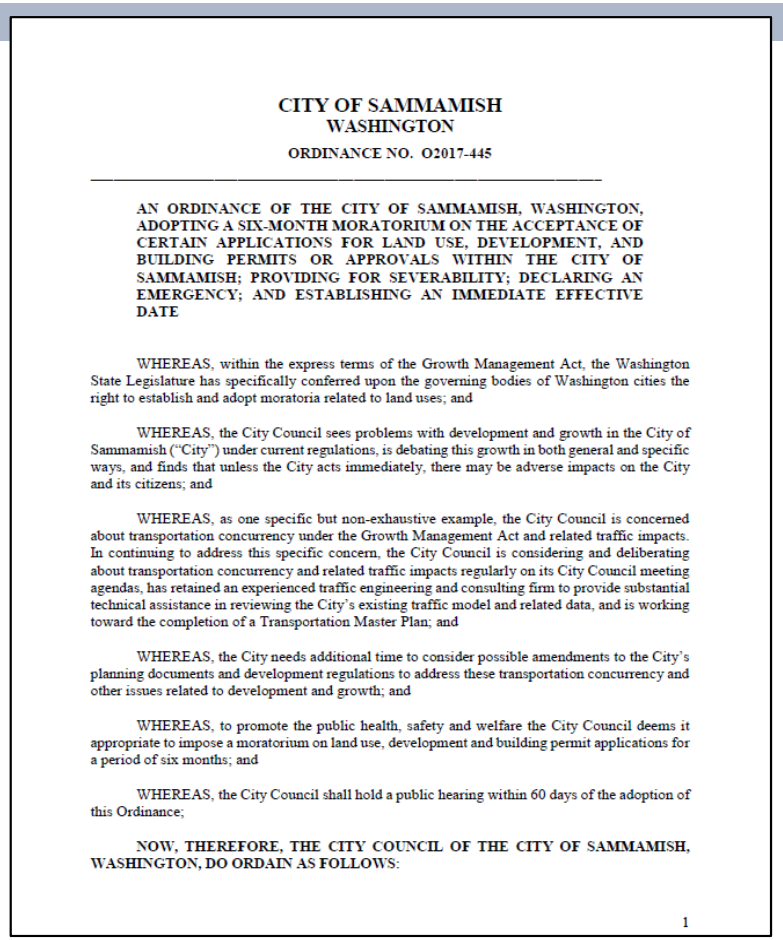
City of Sammamish Washington

Agenda

- Background
- Major changes
  - Transportation Element Policies
  - Transportation Element – Background
- Next Steps

Background

- Council directed staff to revise concurrency and Level of Service policies and established a building moratorium
  - O2017-445 (10/3/17)
  - O2017-445A (11/21/17)
  - O2017-445B (12/5/17)
  - O2018-458 (4/3/18)
- Council affirmed preferred concurrency policy and LOS standards
  - R2018-782 (3/6/18)
  - R2018-789 (4/17/18)



CITY OF SAMMAMISH
WASHINGTON

ORDINANCE NO. O2017-445

AN ORDINANCE OF THE CITY OF SAMMAMISH, WASHINGTON, ADOPTING A SIX-MONTH MORATORIUM ON THE ACCEPTANCE OF CERTAIN APPLICATIONS FOR LAND USE, DEVELOPMENT, AND BUILDING PERMITS OR APPROVALS WITHIN THE CITY OF SAMMAMISH; PROVIDING FOR SEVERABILITY; DECLARING AN EMERGENCY; AND ESTABLISHING AN IMMEDIATE EFFECTIVE DATE

WHEREAS, within the express terms of the Growth Management Act, the Washington State Legislature has specifically conferred upon the governing bodies of Washington cities the right to establish and adopt moratoria related to land uses; and

WHEREAS, the City Council sees problems with development and growth in the City of Sammamish ("City") under current regulations, is debating this growth in both general and specific ways, and finds that unless the City acts immediately, there may be adverse impacts on the City and its citizens; and

WHEREAS, as one specific but non-exhaustive example, the City Council is concerned about transportation concurrency under the Growth Management Act and related traffic impacts. In continuing to address this specific concern, the City Council is considering and deliberating about transportation concurrency and related traffic impacts regularly on its City Council meeting agendas, has retained an experienced traffic engineering and consulting firm to provide substantial technical assistance in reviewing the City's existing traffic model and related data, and is working toward the completion of a Transportation Master Plan; and

WHEREAS, the City needs additional time to consider possible amendments to the City's planning documents and development regulations to address these transportation concurrency and other issues related to development and growth; and

WHEREAS, to promote the public health, safety and welfare the City Council deems it appropriate to impose a moratorium on land use, development and building permit applications for a period of six months; and

WHEREAS, the City Council shall hold a public hearing within 60 days of the adoption of this Ordinance;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAMMAMISH, WASHINGTON, DO ORDAIN AS FOLLOWS:

1

Intersection LOS

- **LOS D** for intersections on **Principal Arterials**, except where LOS D cannot be obtained with three approach lanes per direction. **In these cases, LOS E is assigned.**
- **LOS C** for intersections that include **Minor Arterial** or **Collector** roadways.

Table 1 Intersection LOS Criteria (Average delay in seconds per vehicle)

Level of Service	Signalized Intersections and Roundabouts	Two-way* and all-way Stop-Controlled Intersections
A	< 10	< 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

* Two-way stop controlled intersections measure delay based on worst approach.

Comprehensive Plan Transportation Element Edits

Highlights of key updates

- Concurrency policy edited to focus on AM and PM peak hour intersection operations
- Eliminated discussion of corridors and segments
- Updated tables to incorporate 2016 data
- Minor wording changes and moving of text for readability

Transportation Element Policy Chapter – Key Updates

- Page 84

  Functional classification map updated to show 218th Ave SE as a collector arterial south of Inglewood Hill Road.

- Page 85
  - Policy T.1.1: Concurrency policy edited to focus on AM & PM peak hour intersection operations only.
  - Policy T.1.2: Eliminates mention of concurrency policy.

Transportation Element Policy Chapter – Key Updates

Page 86

- Policy T.1.3: Eliminated since it related to Arterial Corridor Level of Service (LOS).

- Policy T.1.4: Renumbered to become T.1.3 and updated to reference both AM & PM peak hour conditions in the intersection LOS calculations. Side bar references the specific times when AM & PM peak hour LOS is measured.

Transportation Element Background – Key Updates

Pages T.9 – T.14

Background Figure T-1, Background Table T-1, and text under Roadway Inventory. Updated to reflect revised functional classification and corrections to street names.

Pages T.14 – T.16

- Traffic Signal and Roundabout Intersection Inventory text and Background Figures T-2 and T-3. Updated to reflect current inventory.

- Roadway Design Standards text: revised to reference 2016 Public Works Standards (PWS), removed standalone Background Figure T-4 which showed example ROW cross sections. Those cross sections are in the PWS.

Transportation Element Background – Key Updates

Page T.17

Created new section called Traffic Counts, which describes 2016 daily and peak hour counts. Intended to describe segment counts without including them in level of service discussion.

Pages T.20-T.22

Background Table T-2 and Background Figure T-6. Updated to include 2016 counts.

Transportation Element Background – Key Updates

Pages T.23-T.27

- Traffic Level of Service Analysis Section. Updated to remove discussion of segment analysis and focus on intersection LOS.

- Background Table T-5 and Background Figure T-7. Updated to reflect 2016 counts and level of service analysis, to reflect AM and PM peak hour conditions, and to focus on the 43 in-city concurrency intersections.

Transportation Element Background – Key Updates

Pages T.28-T.29

Moved up Concurrency discussion from end of Background document for clarity. Included separate discussion of key intersections outside of City.

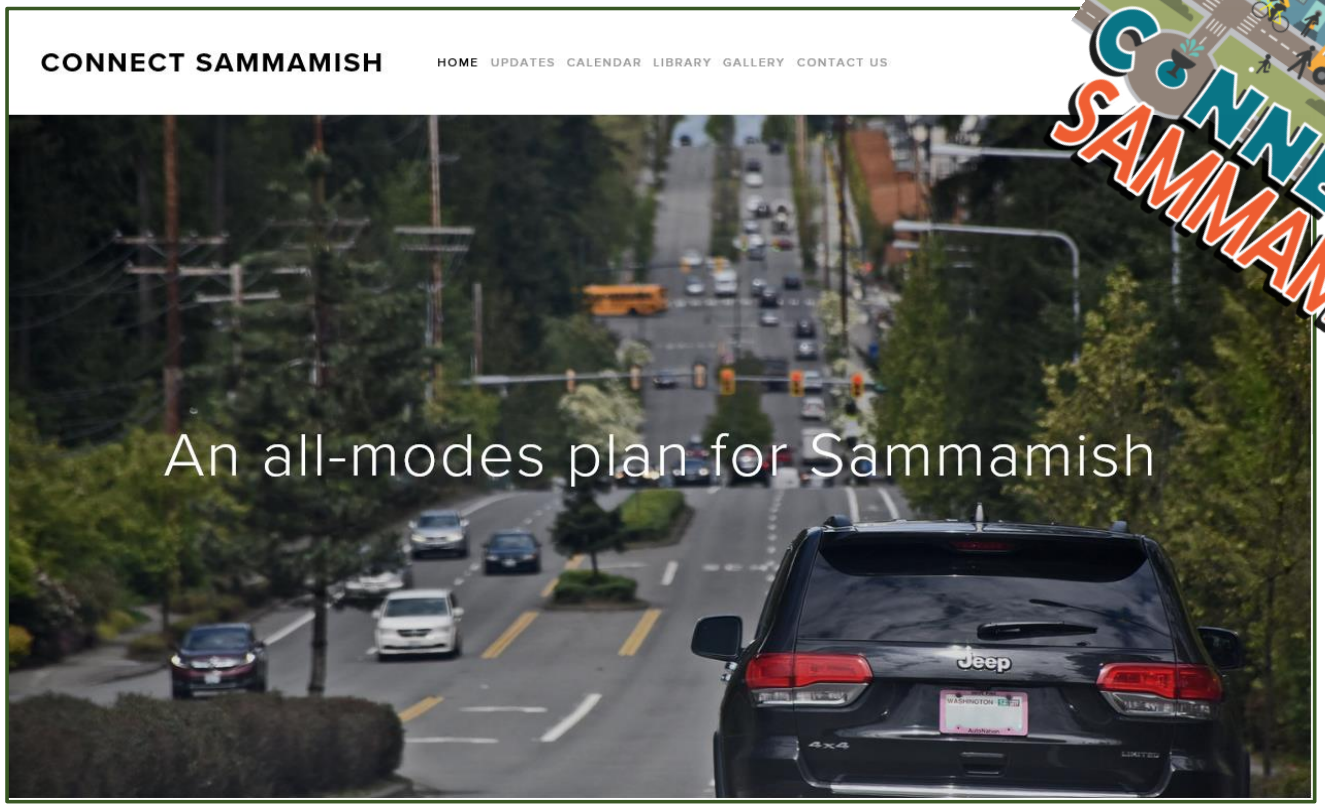
Pages T.37-T.67

The remainder of the chapter relates to the long range plans through 2035 and will be updated in 2019, as part of the Transportation Master Plan. Other than figure and table number references, no changes have been made to these sections.

Next Steps

Task	Date
Joint PC/CC Mtg: Review Proposed Code Revisions	May 15
Joint PC/CC Mtg: Review Comprehensive Plan Transportation Element Amendments and Code Revisions	June 4
CC Mtg: Draft 2019-2024 TIP presentation	June 5
CC Mtg: Draft 2019-2024 TIP – continue discussion if needed	June 12
CC Mtg: Resolution adopting the 2019-2024 TIP	June 19
PC Public Hearing: Comprehensive Plan Updates and Code Revisions	June 21
CC Public Hearing: Comprehensive Plan Transportation Element Amendments	July 10
CC Public Hearing: Code Revisions	July 17

Thank You



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