



City of Sequim

Transportation Master Plan



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- Sequim Planning Commission
- Sequim City Council
- Clallam Transit
- Sequim School District
- Sequim Chamber of Commerce
- Washington State Department of Transportation
- Port of Port Angeles
- Downtown Merchants Group
- John Wayne Development



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EXECUTIVE SUMMARY

Over the past several years, Sequim has made a number of strategic investments in creating a more livable community. The downtown streetscape improvements, contributions to the 100-mile Olympic Discovery Trail, art installments, and the recent funding of a Downtown Plan are evidence of the City's steadfast commitment to creating an urban jewel on the Olympic Peninsula. This Transportation Master Plan (TMP) builds on these efforts and puts forth a transportation vision to meet Sequim's needs through 2032.

PURPOSE – TIE TO CITY VISION

The roots of this TMP stem back to the 2011 Downtown Plan, which re-envisioned land use and transportation planning in Sequim's core area. The plan spurred a number of staff exercises that resulted in a call to "rethink" Sequim's transportation system. Over the course of the past year, the City has also embarked upon its Comprehensive Plan update, Sequim 120. This TMP supports Sequim 120, by providing transportation planning and policy direction.

This TMP follows three main tenets –

- Apply **non-traditional engineering thought** to produce an effective and implementable TMP.
- Accommodate the movement of **people and commerce**, not just cars and trucks.
- Develop transportation standards and recommend infrastructure **servicing multi-modal goals**, including pedestrian, mobility scooter, and bicycle users.

This TMP attempts to fulfill not only the City's charter to "rethink" transportation, but it also identifies how this new transportation system fits into the larger regional context.

TRANSPORTATION NETWORK TODAY

Streets are a dominant feature in Sequim. They form the backbone of the transportation network, but also shape how community members respond to their environment, in terms of physical activity and social interaction. Most of Sequim's streets were designed with vehicular mobility as the primary objective, with little in the way of aesthetic amenity. While there are a growing number of dedicated non-motorized facilities (sidewalks, bike lanes, and separated trails), the City's non-motorized facilities still have a number of gaps.

To better understand travel patterns in Sequim, vehicle, bicycle, and pedestrian traffic counts were collected at key locations during the spring and summer of 2012. These counts provided some interesting insights about the uniqueness of Sequim's transportation system:

- **Midday is Sequim's Rush Hour.** Due to the City's unique demographic and high proportion of commercial retail space, the City's peak time for travel is midday.
- **Most Trips are Local.** An origin-destination study of vehicles entering the City (i.e., not traveling through on the US-101 bypass) indicates that the vast majority (95%) of trips make a stop in Sequim. This result is not surprising, as the US-101 bypass provides a direct route through Sequim for many travelers.



- **Washington Still the Main Drag.** Traffic volumes on Washington Street are some of the highest in the City, particularly in the west-end regional commercial center. Volumes on Washington remain high (over 10,000 daily vehicles) through Downtown. Alternate east-west roads (Fir, Hendrickson and Old Olympic Highway) only carry a fraction of the volume that Washington carries. Sequim Avenue is the prominent north/south road, with congestion experienced at the intersection of Washington and Sequim.

Transportation Challenges

The City's key mobility challenges are listed below.

Vehicle Mobility

The peak summer months bring significant congestion to Washington Street. During key festivals, queues can extend the entire length of Washington, and in some cases, back onto US 101.

Traffic congestion along Washington Street through downtown is related to its intersection with Sequim Avenue. Since traffic on Sequim Avenue is only interrupted at the Washington traffic signal and the roundabout at Old Olympic Highway, many east-west travelers concentrate onto Washington. Lengthy queues can be seen year-round at the intersection of Washington Street with Sequim Avenue. The lack of controlled intersections along Sequim Avenue serves as a barrier to east-west mobility. Shifting some traffic away from Washington by improving other Sequim Avenue intersections is a primary transportation goal.

Outside of the core area, particularly in new developments, the roadway network includes many cul-de-sacs and dead end streets. Vehicle trips that should be relatively short require users to travel longer distances. This design funnels traffic to a few key roadways instead of spreading traffic across multiple roadways. Future land use and roadway development should focus on connecting roadways that currently dead-end to provide a more connected network of roadways.

Transit

Clallam Transit and Jefferson Transit provide fixed-route and dial-a-ride (Clallam Transit only) in Sequim. These services are limited running only every hour or so and primarily only on weekdays. As a result, bus services tend to be underutilized. While public transit is a vital social service for those who do not drive, discussions with transit operators indicate that funding uncertainty makes additional transit service in Sequim unlikely.

Bicycle and Pedestrian

In examining the bicycle and pedestrian network, Sequim benefits from its location on the Olympic Discover Trail (ODT), a well-established street grid in the city center, existing bicycle facilities, and a community that is interested in active transportation. Challenges lie in creating more safe routes for cyclists into and through Sequim and providing a cohesive and ADA-compliant sidewalk network that improves mobility for pedestrians and mobility scooter users.

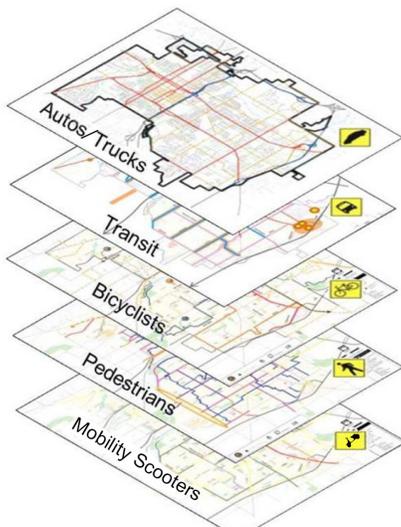


FUTURE TRANSPORTATION NETWORK

The City envisions a future transportation system that is inclusive and facilitates all modes of travel by offering a robust network of roadways, bicycle, and pedestrian facilities. This plan describes Sequim's vision for its future transportation network, as well as the infrastructure improvements that would be needed to get there.

The Layered Network

This plan focuses on developing an inclusive transportation system that reinforces Sequim 120's vision of a more walkable community, facilitates multimodal accessibility, and provides for overall network function. This plan recognizes that is difficult for a single roadway to meet the demands and expectations of all modes at any given time. In response to this challenge, this TMP introduces a layered network concept that plans the City's transportation network as a system to meet the needs of all users.



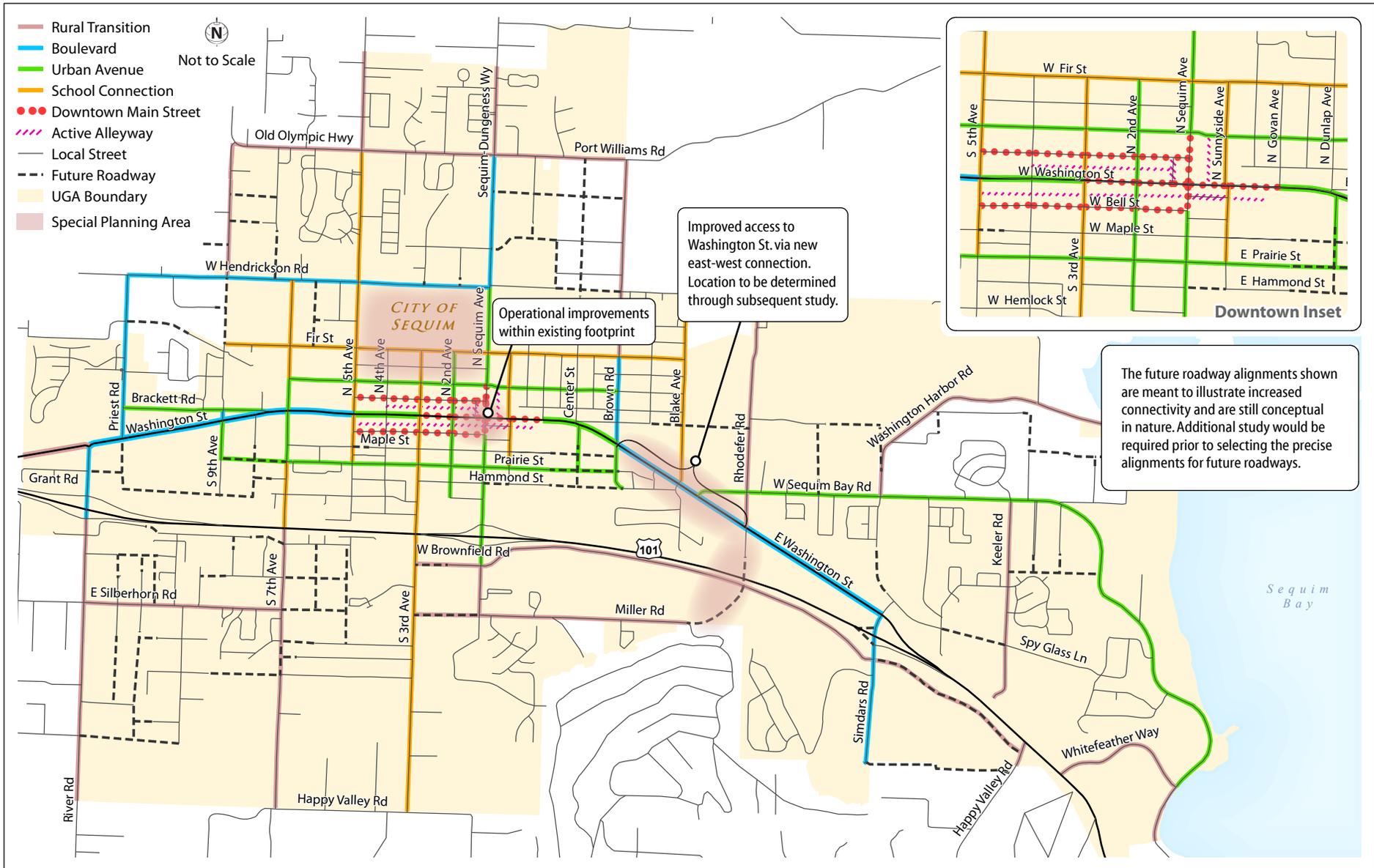
Layered Network Concept

In the layered network, individual travel modes are prioritized on different roadways throughout the overall network. The layered network is implemented through a set of roadway typologies that define each street's user priorities and infrastructure needs.

Roadway Typologies

The following street typologies dictate the form and intended functions of roadways in Sequim. While some roadways are intended to serve core vehicle circulation, other facilities are intended to provide for a more multimodal user base. **Figure ES-1** shows Sequim's Layered Network. The roadway types are as follows:

- **Boulevard** – Most conducive for cross-town trips and focus on auto and truck mobility.
- **Urban Avenue** – Signals the entry into a higher-density commercial or residential zone. Emphasize multimodal interaction and travel experience.
- **School Connection** – Provides a safe and enjoyable travel experience for bicycles, pedestrians, and school children.
- **Rural Transition** – Low volume facilities that focus on vehicular travel, but accommodate other modes through wide shoulders or separated trails.
- **Local Street** – Prioritizes local traffic and pedestrians. Bicycles share the roadway.





Two non-roadway facilities designed exclusively for non-motorized travelers are also identified in the layered network. These include **Active Alleyways**, which are alleyways in the downtown core repurposed to be appealing components of the pedestrian and mobility scooter networks, and **Cross Circulation Easements**, which shorten pathways for pedestrians by breaking up blocks and better connecting uses.

Together, these street typologies support specific modal networks and the movement of people and commerce in Sequim.

Truck Routes and Destinations

The truck routes layer was designed to facilitate both the movement of goods to retail destinations within the city and the shipment of goods from locations outside the city. Sequim's primary commercial districts are located along Washington Street nearby River Road, as well as east of downtown. Outside of Sequim, truck destinations include farms on the Olympic Peninsula, construction sites, as well as two nearby quarries. **Figure ES-2** shows the truck layer.

Bicycle Network

The bicycle network is designed to meet the demands of a wide range of users through a series of dedicated facilities, including separated trails, bicycle lanes, and bike boulevards. The proposed bicycle network is quite extensive, reflecting the City's commitment to becoming an even more bike-friendly community. **Figure ES-3** shows the bicycle layer.

Pedestrian Priority Network and Mobility Scooter Priority Network

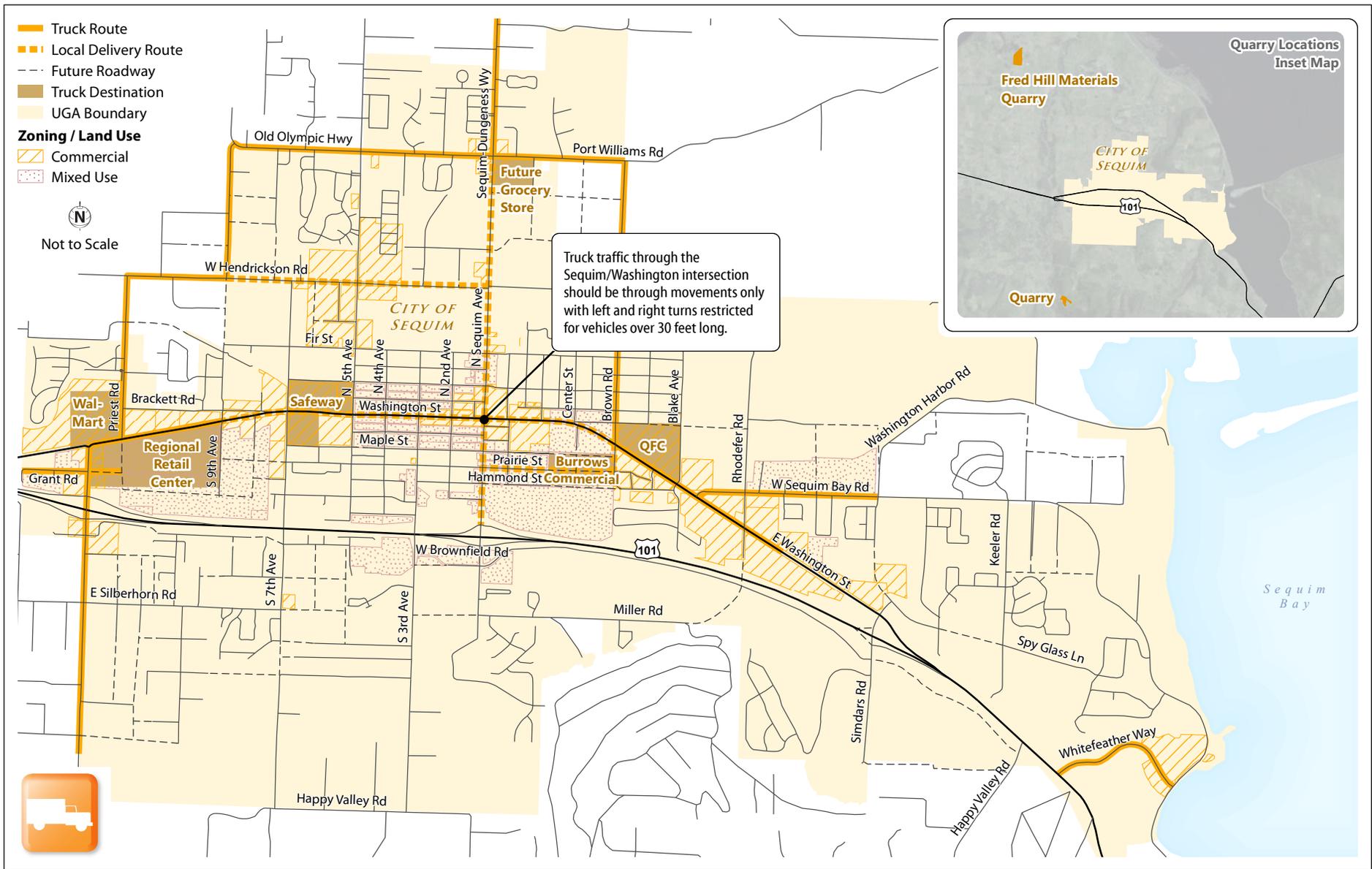
Sidewalks in Sequim are shared by pedestrians and mobility scooter users. A priority network layer was developed for these modes. This layer connects with Sequim's downtown core, commercial and retail zones, medical facilities, schools and parks, the ODT, and residential neighborhoods. **Figure ES-4** shows the Pedestrian and Mobility Scooter Network.

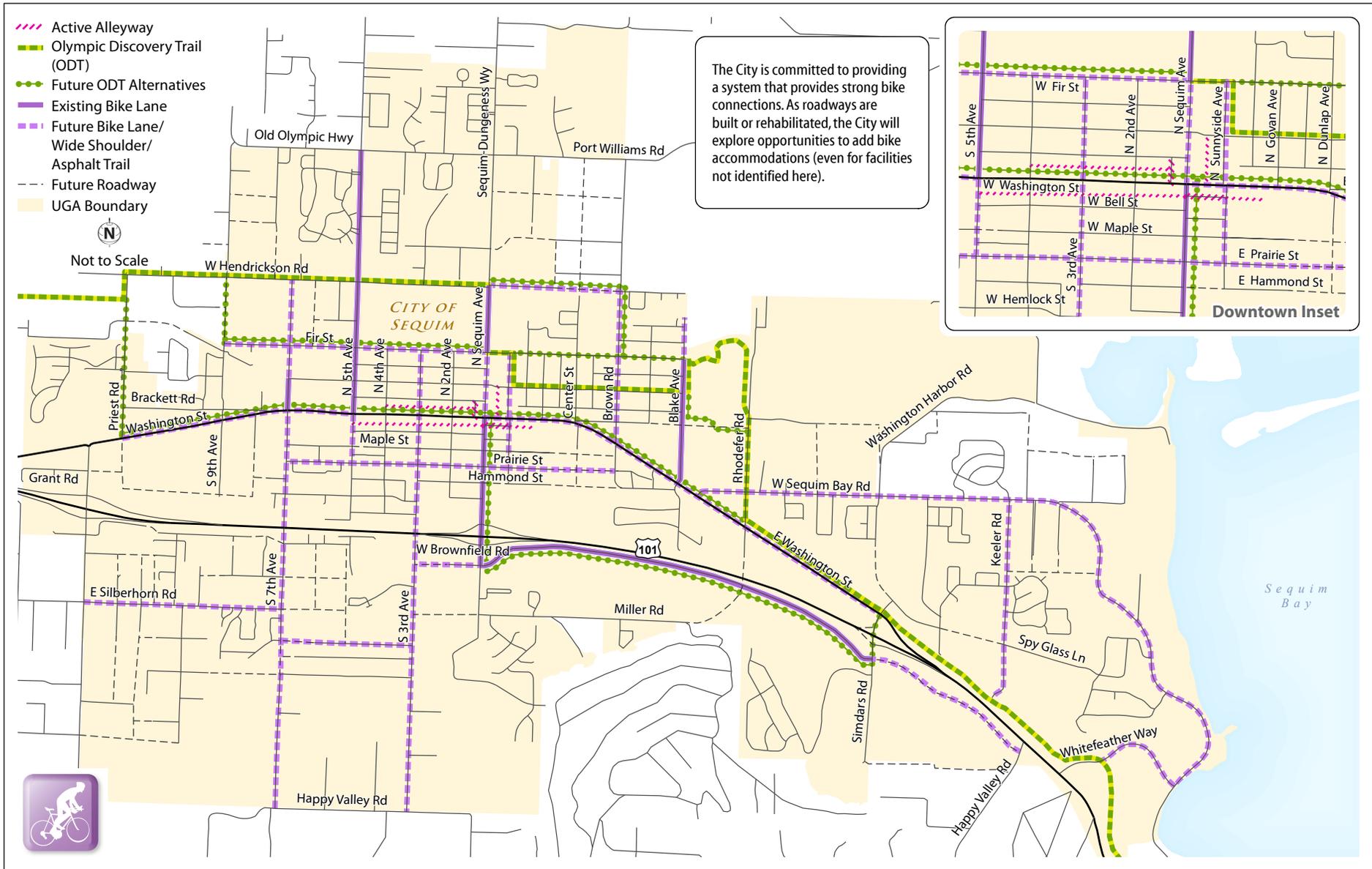
Level of Service Standards

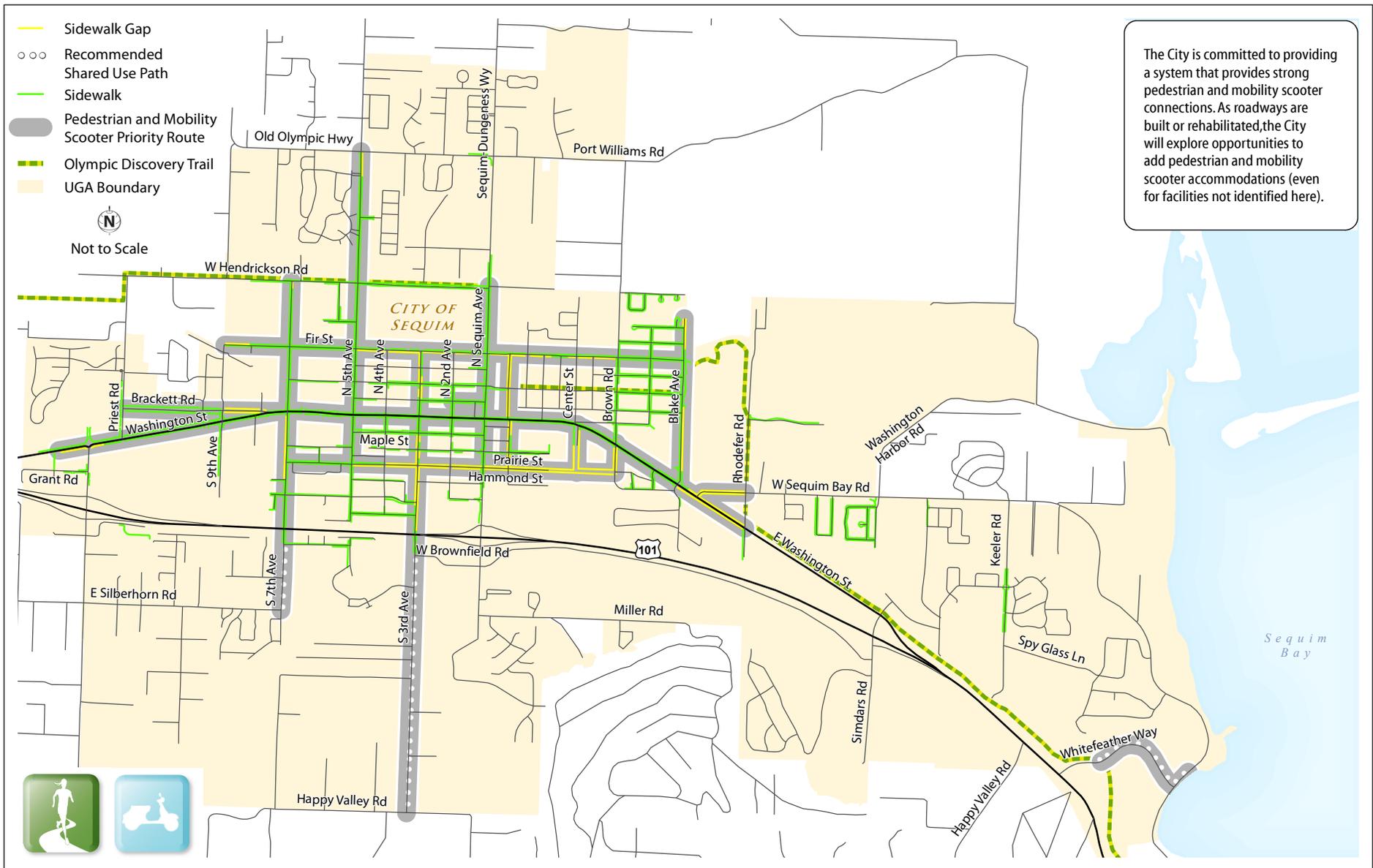
Most of the improvements in this TMP are focused on the development of a 'layered' transportation network, which emphasizes less on providing vehicular capacity and more on accommodating all modes of travel. To meet the City's vehicular LOS standard (a requirement of the Growth Management Act), four intersection improvements needed over the course of the plan:

- W Fir St / N 5th Ave
- E Washington St / W Sequim Bay Rd
- W Prairie St / S Sequim Ave
- SR 101 Ramps / S Sequim Ave

Future improvements focus more on creating a complete roadway grid and making improvements to the bicycle and pedestrian infrastructure as a means to improve multimodal mobility.









Twenty-Year Project List

In addition to projects prioritized in the six-year list, the TMP resulted in an additional list of projects to be completed over the later portion of the planning horizon (years 7 through 20 of this plan). These projects total to \$19.3 million in 2012 dollars and are summarized in **ES-2** and detailed in **Appendix E**.

Special Planning Areas

In addition to projects listed in the six and twenty-year project lists, the City identifies four special planning areas (SPAs) that will require additional study before designing specific improvements. These SPAs include:

- Washington Street and Sequim Avenue: intersection enhancements should reduce person delay and improve mobility while working within the bounds of the existing intersection right of way.
- School Planning Area: Bounded by Fifth Avenue (west), Hendrickson Road (north), Sequim Avenue (east), Spruce Street (south), this planning area will evaluate intersection treatments that balance school safety needs with east-west mobility enhancements.
- Washington Street between Brown Road and Rhodefer Avenue: Identify ways to accommodate a new east-west connection south of Washington Street through evaluation of existing signal locations and intersection configurations.
- Rhodefer Avenue crossing of US 101: Identify feasible alignments for a US 101 overcrossing that generally connects Rhodefer Avenue with Miller Road. Considerations should include land ownership, engineering constraints, and land acquisition costs.

Table ES-2. Summary of Twenty Year Projects

Type	Notes	Approximate Quantity	20 Year Cost (thousands)
Bicycle Projects	Shared-use paths, bike lanes, and sharrows	8.5 miles	\$455
Pedestrian/Mobility Scooter Projects	Sidewalk infill, paths, Active Alleyways	4.4 miles (new facilities only)	\$3,120
Intersection Improvements	Traffic signals, roundabouts, turning lanes, intersection modifications	4 locations	\$3,645
Roadway Enhancements	Widening, transit accommodations	2 projects	\$1,315
New Roadways	Completion of street grid and infill roadways	4 projects	\$10,115
TOTAL			\$19,310



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TOTAL			\$19,310



FUNDING THE TMP

At the heart of implementing the TMP is understanding how these projects could be funded. Implementing this TMP will require close coordination among City departments, the citizens and businesses of Sequim, and other agencies within the region. It should be noted that the TMP is a living document and will serve as the blueprint for transportation in Sequim over the next several years. Realistically, the actions in the plan are most useful over the next three to five years, at which point a plan update will be required. Several implementation steps should be initiated over the next couple of years to determine if changes are needed, or to reaffirm a particular strategy.

OVERVIEW OF COSTS AND REVENUES

A key GMA planning requirement is the concept of fiscal restraint in transportation planning. A fiscally constrained TMP must first allow for operation and maintenance of existing facilities and then capital improvements. To develop the fiscally constrained plan, an inventory of revenues and costs was undertaken to identify funds that are likely to be available for capital construction and operations. **Table ES-3** summarizes the City's revenues and expenditures assumptions that form the basis for this TMP. The table also describes how funds would be spent by travel mode.

Table ES-3. Overall Project Funding (in \$1,000s)

Funding Source	Total Available	Planned Expenditures (By Mode)		
		Bicycle	Pedestrian	Roadway
Transportation Benefit District	\$11,145	\$2,220	\$6,292	\$2,633
Utilities	\$3,600			\$3,600
General Fund/REET ¹	\$1,517		\$1,517	
Grants	\$4,586		\$56	\$6,030
Impact Fees	\$13,847			\$13,847
Total	\$36,195	\$2,220	\$7,865	\$26,111

¹ Real Estate Excise Tax



1. INTRODUCTION

Over the past several years, the City of Sequim has made a number of strategic investments in creating a more livable community. The downtown streetscape improvements, contributions to the 100-mile Olympic Discovery Trail, art installments, and the recent funding of a Downtown Plan are evidence of the City's steadfast commitment to creating an urban jewel on the Olympic Peninsula. This TMP builds on these efforts and puts forth a transportation vision to meet Sequim's needs through 2032.

PURPOSE – TIE TO CITY VISION

The roots of this Transportation Master Plan (TMP) stem back to the 2010-11 Downtown Plan, which the City hired a team led by LMN Architects to re-envision land use and transportation planning in the core area bounded by US Highway 101 (south), 5th Street (west), Fir Street (north), and Brown Street (east). The plan spurred a number of staff exercises in 2011, and resulted in a call to “rethink” Sequim's transportation system.

During 2012, the City also embarked upon updating its Comprehensive Plan, Sequim 120. This TMP update supports Sequim 120, by providing transportation planning and policy direction.

This TMP follows the guidance provided by City staff to –

- Apply **non-traditional engineering thought** to produce an effective and implementable TMP.

- Accommodate the movement of **people and commerce**, not just cars and trucks.
- Develop transportation standards and recommend infrastructure **servicing multi-modal goals**, including pedestrian, mobility scooter, and bicycle users.

This TMP attempts to fulfill not only the City's charter to “rethink” transportation, but it also identifies how this new transportation system fits into the larger regional context, including its interface with the state and county transportation systems.

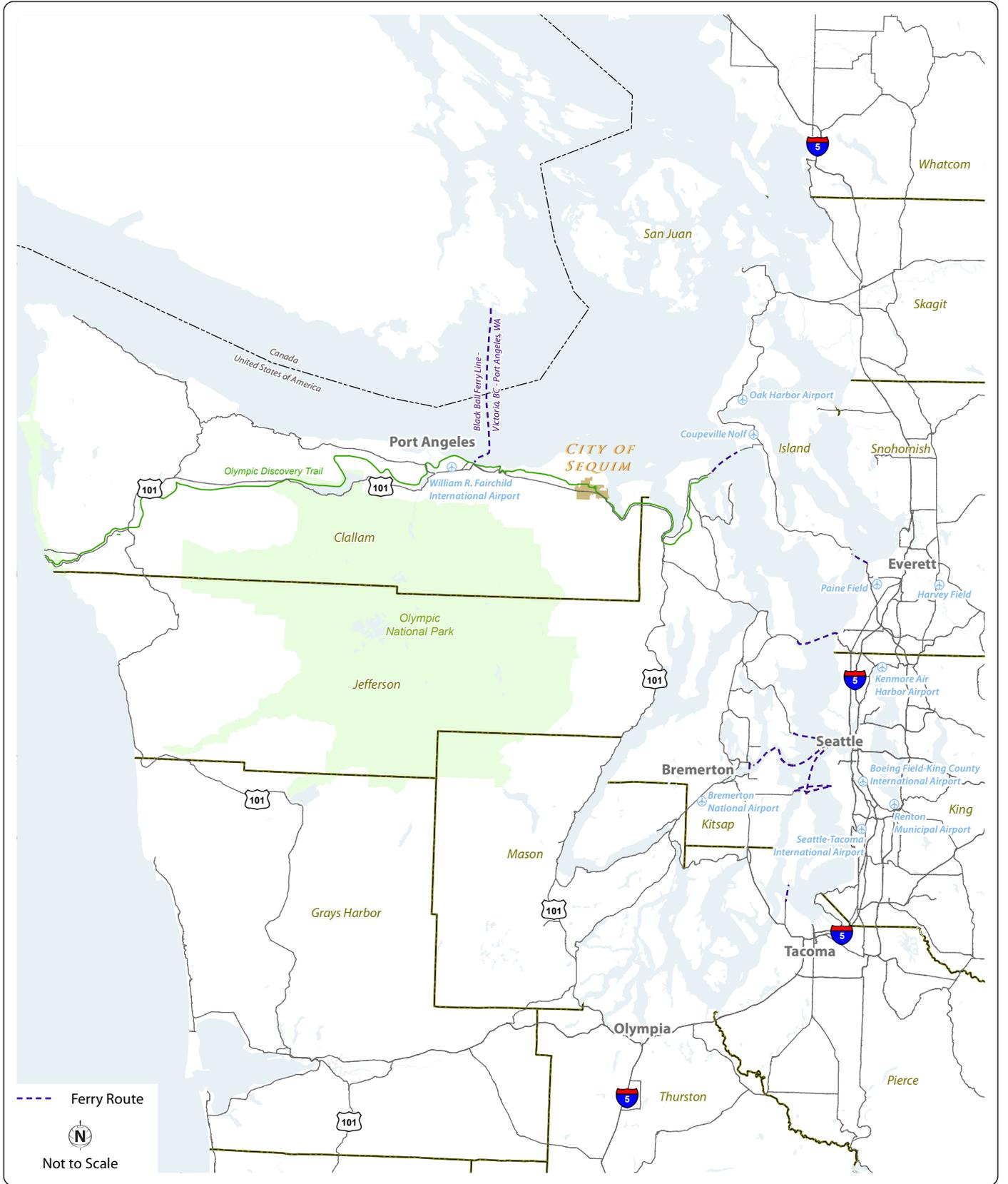
PLANNING REQUIREMENTS

Because of the overlapping boundaries of the transportation system, the City's planning effort takes place within requirements from the state, county and regional agencies. **Figure 1** shows how Sequim fits into this regional context.

Sequim is connected to other regional destinations on the Olympic Peninsula and the rest of Puget Sound via US-101 and the state ferry system. Additional connections through Fairchild International Airport are provided in neighboring Port Angeles.

State GMA Requirements

Washington's 1990 Growth Management Act (GMA) requires communities to prepare a transportation plan directly tied to the City's land use decisions and financial planning. This TMP fulfills this mandate.





Regional Plans

The Peninsula Regional Transportation Planning Organization (RTPO) is an association of cities, towns, counties, ports, tribes, transit agencies, and major employers that sets policy for Clallam, Jefferson, Kitsap, and Mason Counties. These policies and decisions relate to regional growth management, economic, and transportation issues.

The RTPO has identified five priorities related to promoting regional transportation system efficiency:

- **Preservation/Sustainability** – Maintain the existing system.
- **Safety** – Reduce collisions.
- **Economic Development/Freight Mobility** – Promote greater freight mobility on major regional corridors.
- **Multimodal** – Increase regional transportation linkages for all modes.
- **Mobility/Reducing Congestion** – Address bottlenecks and chokepoints along major corridors.

This plan is consistent with these priorities.

HOW THE CITY USES THE TMP

The TMP is a functional plan that will inform and support the Transportation Element of Sequim's upcoming Comprehensive Plan, Sequim 120. The TMP is needed to guide the City's transportation investments. It is also a coordination document, ensuring that transportation decision making is

coordinated with the adopted Land Use Element in Sequim 120 and includes ideas formulated through the City's other major planning processes, including the Water and Sewer Utility Plans.

At its core, the TMP informs the development of the Capital Improvement Program, by identifying the types of projects that are needed to support future travel trends. The TMP also evaluates how these projects fit within the community's values and fiscal resources.

PUBLIC OUTREACH

This TMP included public outreach, as a part of the Comprehensive Plan Update, with the following components:

- **Stakeholder Input** – A number of stakeholders, including Chamber of Commerce and downtown representatives, the School District, and prominent development representatives, were interviewed throughout this process. In addition, the TMP included a Technical Advisory Committee (TAC) comprised of community residents, who reviewed the progress and interim deliverables of the TMP at key points to ensure that the plan remained on target.
- **Visioning and Scoping Workshop** – In March 2012, the City hosted a series of weekend visioning workshops aimed at getting the public's input on what should be Sequim's planning priorities over the next 20 years. The workshops included three stations – a mapping exercise to understand participants' key destinations in the City; a pulse-pad exercise polling participants on their overall perceptions of what the Sequim community is today and should aspire to be in the future; and



a TMP-focused mapping exercise aimed at understanding participants' views of the existing transportation system. The TMP-focused mapping exercise solicited feedback on the parts of the transportation system that work well, that should be improved, and transportation projects that participants would like to see included in the TMP.

- **Capacity Topics Workshop** – Meetings were held with the TAC in June and July 2012 that focused on transportation system performance and infrastructure needed to support the Sequim 120's land use vision. During these workshops, participants discussed topics like transportation level of service (LOS) and developing a citywide transportation network that accommodates all types of travel. At the workshop, participants discussed the trade-offs between roadway expansion and pedestrian amenities.
- **Planning Commission and Council Implementation Workshops** – In Spring 2013, the City hosted two final workshops that rolled out the draft TMP project list and funding plan. Participants were able to provide input on whether the plan achieved the goals and objectives expressed at the prior workshops.

REGIONAL COORDINATION

In addition to the public outreach efforts, the City also reached out to a number of agencies and adjacent jurisdictions. These agencies include Clallam County, Clallam Transit, Port of Port Angeles, and Washington State Department of Transportation (WSDOT).

PLAN ORGANIZATION

This plan includes the Introduction (Chapter 1), and five additional chapters, as summarized below:

- **Chapter 2 - Conditions and Trends:** Describes the existing transportation system, including conditions for all travel modes. The chapter also discusses anticipated land use development and modifications to the regional transportation system that influence future travel trends.
- **Chapter 3 - Transportation Policies:** Provides the most recent set of transportation policies, which tie to the City's vision and serve as the basis for the Transportation Element of Sequim 120.
- **Chapter 4 - Multimodal Transportation System:** Introduces a layered network concept that forms the foundation of this plan to accommodate all modes of travel and creates a complete transportation network in the City. Provides details on how each travel mode would be accommodated and establishes the City's level of service metrics.
- **Chapter 5 - Near Term and Long Term Capital Plans:** Provides near-term and long-range project priorities, based on the community values expressed in the transportation policies and layered network, which forms the foundation of the plan.
- **Chapter 6 - Implementing the TMP:** Evaluates the City's financial reality over the planning horizon and identifies priority criteria for project funding. This chapter also links to the fee program update, a separate document which is intended to help fund implementation of this plan.



2. CONDITIONS AND TRENDS

This chapter summarizes existing conditions and current trends of Sequim’s transportation network.

EXISTING CONDITIONS

Transportation Network Overview

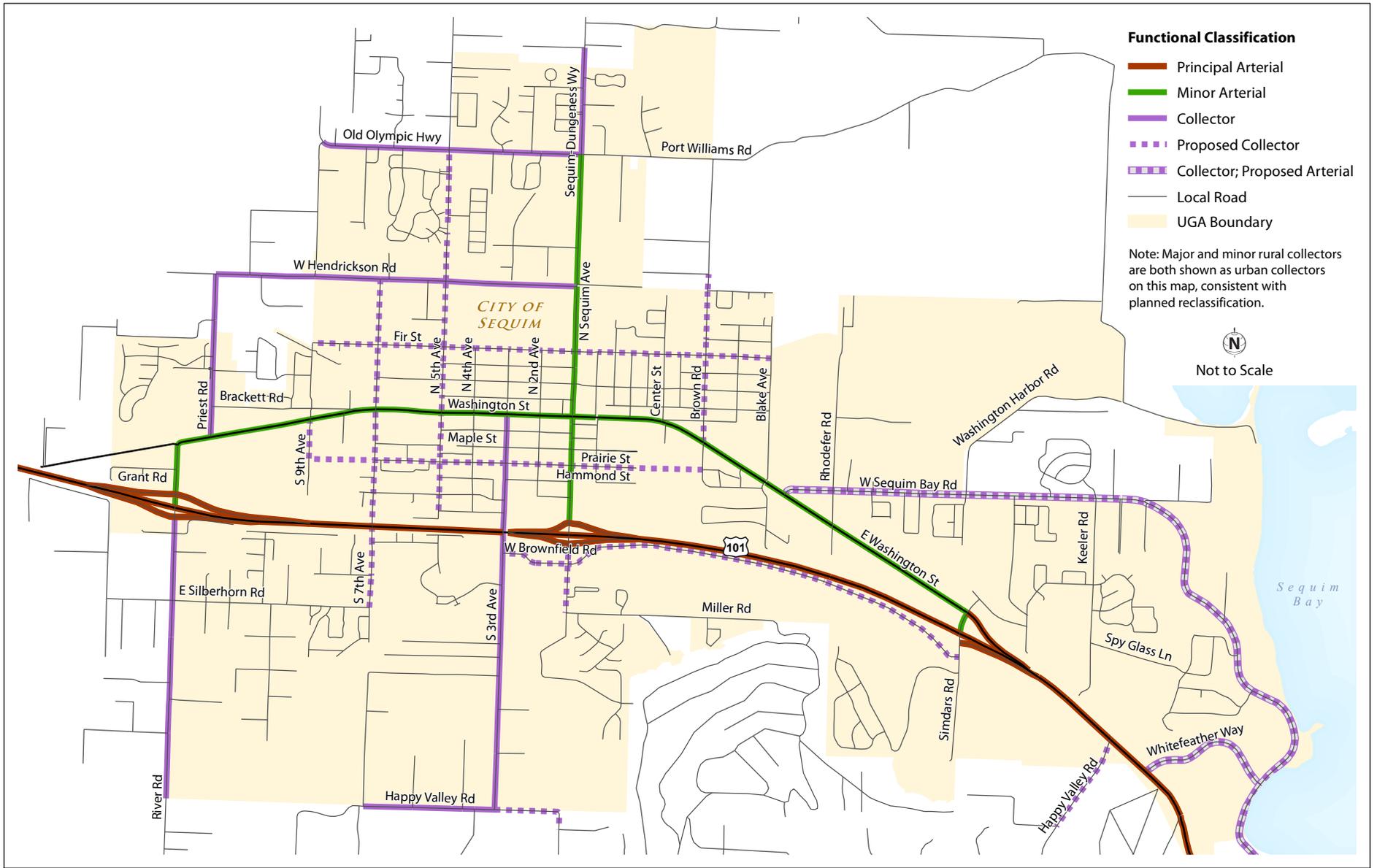
Streets are a dominant feature in Sequim. They form the backbone of the transportation network, but also shape how community members respond to their environment, in terms of physical activity and social interaction. Most of Sequim’s streets were designed primarily for vehicular mobility, sized for general purpose traffic, freight, and transit, but include little aesthetic amenity. While there are a growing number of dedicated non-motorized facilities (sidewalks, bike lanes, and separated trails), the City’s non-motorized facilities still have a number of gaps.

Street Classification

The City of Sequim classifies its street system as shown in **Table 1** and **Figure 2**. Each classification indicates the types of uses that the roadway is intended to serve. For example, US-101 is considered to be a principal arterial meant to serve all types of local and regional traffic including freight. Washington Street and Sequim Avenue serve as minor arterials providing both local connections and serving through traffic. Finally, local collectors and access streets, such as Alder Street, Sunnyside Avenue, and Dunlap Street, are geared toward slower speeds and more local traffic and provide a calmer environment supporting pedestrian and bicycle travel. Note that Table 1 shows the typical characteristics of each type of roadway. Individual road characteristics will vary. The City is also in the process of re-classifying several roadways to match current levels of development and roadway function. These are shown in Figure 2 as proposed classifications.

Table 1. Street Classification – Typical Characteristics

Type	Description / Purpose	Example
Principal Arterial	A limited access, high-speed roadway that connects Sequim with the rest of the Olympic Peninsula and state.	US-101
Minor Arterial	Minor arterial streets provide intra-neighborhood connections and predominantly serve through trips.	Washington Street
Collector	Collectors distribute trips between local streets and arterials and serve as transitions roads to or from residential areas.	3 rd Avenue
Local	Local streets provide circulation and access within residential neighborhoods.	Dunlap Avenue



- Functional Classification**
- █ Principal Arterial
 - █ Minor Arterial
 - █ Collector
 - - - Proposed Collector
 - █ Collector; Proposed Arterial
 - Local Road
 - UGA Boundary

Note: Major and minor rural collectors are both shown as urban collectors on this map, consistent with planned reclassification.



Not to Scale



Traffic Volumes

To better understand travel patterns in Sequim, vehicle, bicycle, and pedestrian traffic counts were collected at key locations during the spring and summer of 2012. These counts provided some interesting insights about the uniqueness of Sequim's transportation system:

- **Midday is Sequim's Rush Hour.** Due to the City's unique demographic make-up and high proportion of commercial retail space, the City's peak time for travel is midday.
- **Most Trips are Local.** An origin-destination study of vehicles entering the City (i.e., not traveling through on the US-101 bypass) indicates that the vast majority (95%) of trips make a stop in Sequim. This result is not surprising, as the US-101 bypass provides a direct route through Sequim for most travelers with the exception of those who live north of the City and must travel through Sequim to reach US-101.
- **Washington Still the Main Drag.** Traffic volumes on Washington are some of the highest in the City, particularly in the west-end regional commercial center. Volumes on Washington remain high (over 10,000 daily vehicles) through Downtown, but steadily decrease traveling east. Alternate east-west roads (Fir, Hendrickson and Old Olympic Highway) only carry a fraction of the volume that Washington carries. Sequim Avenue is the prominent north/south road, with congestion experienced at the

intersection of Washington and Sequim (aka the "100% corner").

As shown in **Figure 3**, the volume bandwidth map, the most heavily travelled roadways in town are River Road and Washington Street. In particular, volumes peak near the west end regional commercial center at the River Road interchange with US-101.

Sequim Avenue and 5th Avenue are the major north-south routes. There are two alternative routes for traffic heading north out of Sequim: Old Olympic Highway and Sequim-Dungeness Way. These two routes serve approximately equal volumes.

To understand travel patterns, a license plate origin-destination study tracked 5,184 vehicles entering and leaving Sequim within a midday two hour window.

- 5% of vehicles traveled through the city without making any stops (through traffic).
- 15% of vehicles entered Sequim and dwelled somewhere before leaving.
- The remaining 80% of vehicles either originated or had a destination within Sequim (local traffic¹).

¹ Note that local traffic largely represents people that live, work, or spend substantial time (2 hours plus) in Sequim.



Traffic Operations

Roadway traffic operations are typically assessed using intersection level of service (LOS), which is a measure of vehicular delay.

Vehicle delay is typically reported for the busiest hour of each day. In many communities, the peak hour is usually the PM commute hour. However, in Sequim, due to the higher percentage of retirees and concentration of regional commercial shopping, the peak hour occurs between 12:30 and 1:30 PM.

Sequim’s current LOS standard is LOS D or better, and all intersections currently meet this requirement. LOS results for all evaluated intersections are provided in **Appendix A** and LOS evaluation sheets are available electronically as **Appendix B**.

Vehicle Level of Service (LOS)	
A:	Free-flow conditions
B:	Stable operating conditions
C:	Stable operating conditions, but individual motorists are affected by the interaction with other motorists
D:	High density of motorists, but stable flow
E:	Near-capacity operations, with speeds reduced to a low but uniform speed
F:	Over capacity, with delays

Transit Network

Transit service in Sequim includes both fixed-route and dial-a-ride service. As shown in

Figure 4, the City is served by five routes, which are operated by either Jefferson Transit or Clallam Transit. Four of these routes connect to regional destinations outside of Sequim, while one functions as an in-town circulator (Route 40, the Sequim Shuttle). All of these routes have a stop at the Transit Center on the corner of 2nd Avenue and Cedar Street.



Clallam Transit Route 30 at the Sequim Transit Center

Table 2 lists the destinations and the service frequency for each route. Only the routes to Port Angeles and Port Townsend operate on Saturday, and none of the routes run on Sunday. The trip frequencies are shown either as the total number of trips each day or the time interval between buses. For routes 30 and 40, the frequency is consistent throughout the day.

Discussions with Clallam Transit indicate that the Sequim Shuttle has low ridership. This route has recently been modified to serve destinations like Wal-Mart, the medical center, and higher-density residential developments, but none of these changes have resulted in substantial increases in ridership.

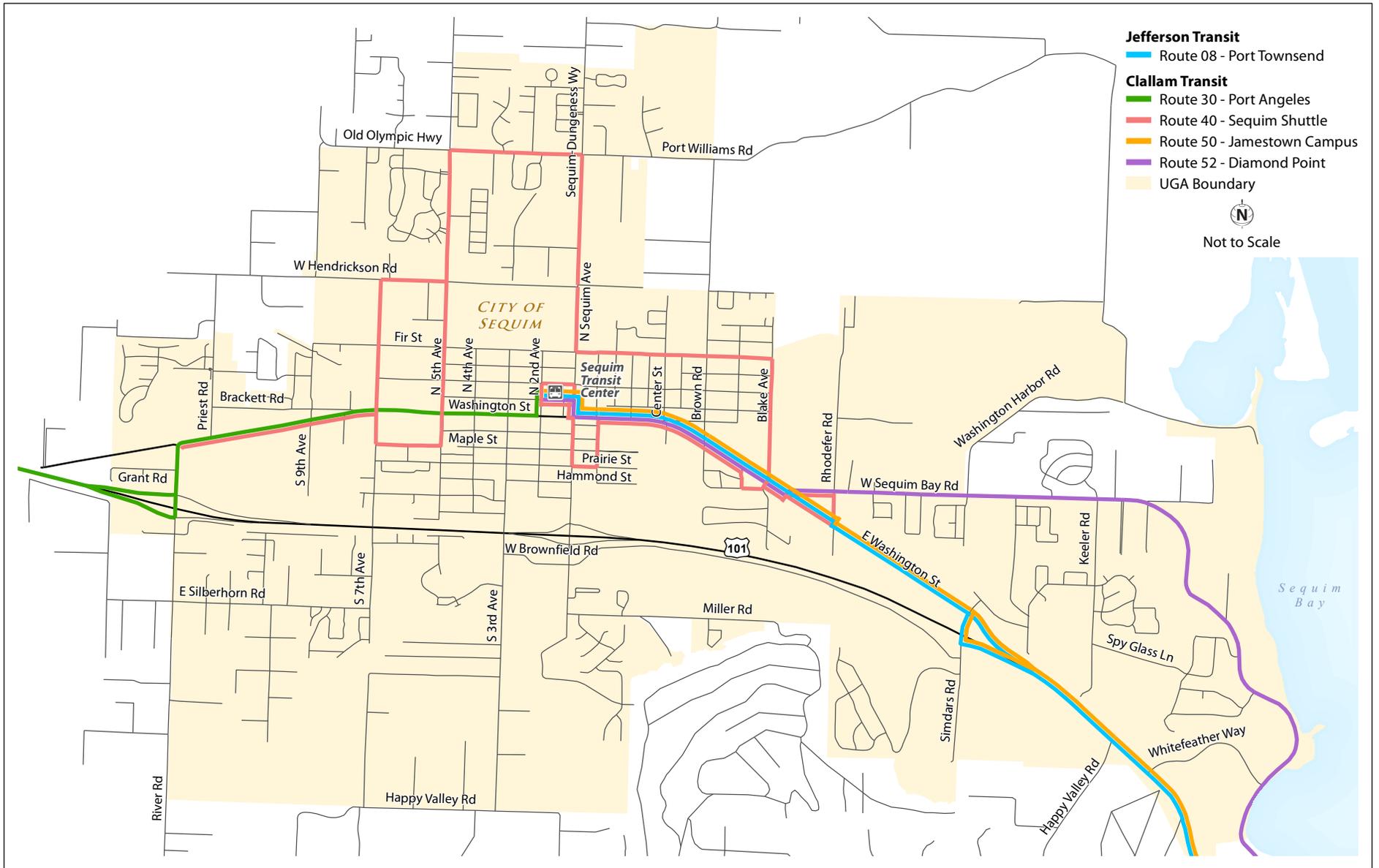




Table 2. Sequim Transit Service Summary

Route	Operator	Destination	Weekday Frequency ¹	Saturday Frequency ¹
8	Jefferson Transit	Port Townsend	5 trips	2 trips
30	Clallam Transit	Port Angeles	30 min	60 min
40	Clallam Transit	Sequim Shuttle	60 min	-
50	Clallam Transit	Jamestown Campus	4 trips	-
52	Clallam Transit	Diamond Point	3 trips	-

¹Frequency defined as number of trips per days or time in minutes between buses.

Source: Jefferson Transit and Clallam Transit

Clallam Transit tries to keep its costs low by utilizing small buses for intra-Sequim services and expanding service only incrementally, but still has a low fare box recovery rate on the Sequim Shuttle.

Clallam Transit is further confined by structuring service to only roadways with an ADA-compliant landing and, in some cases, where bus pull-outs are available. For example, as the posted speed limit is 40 mph on portions of E Washington Street, Clallam Transit's service guidelines dictate that pull-outs are needed to accommodate stops.

Private Shuttle Service

Another important component of Sequim's transportation system is private shuttle services affiliated with the numerous senior communities and assisted living centers. While the total number of riders these private shuttles carry is uncertain, it is important to recognize the role that these services play in providing mobility to populations that otherwise would not be able to drive. Without

these private shuttle services, public transit would be in higher demand.



Private Shuttle in Sequim

Bicycle, Pedestrian, and Mobility Scooter Network

The bicycle, pedestrian, and mobility scooter network varies widely throughout the City. Sidewalks are present on the major arterials in Sequim (Washington, Fir, Hendrickson, 7th, 5th and Sequim), though gaps do exist. The downtown core has relatively complete sidewalk coverage. One exception is the residential neighborhood west of Carrie Blake Park, which largely lacks sidewalks. While pedestrian/mobility scooter facilities are



available in many parts of the city, the sidewalks are not universally compliant with ADA standards. This has been expressed as a major concern along Washington Street, where sidewalk width varies and driveway ramps are especially steep. Outside of Sequim’s core and off of major roads, very few sidewalks exist.



Existing Bicycle Lane on Brownfield Road
Sequim’s bicycle network includes a portion of the Olympic Discovery Trail (ODT) and local facilities. The ODT currently utilizes city streets and shared use paths within Sequim. The City is continuing to evaluate and develop facilities for the ODT that will best serve trail users and city residents. There are bicycle lanes on 5th Avenue, 7th Avenue, Sequim

Avenue (with a gap between Fir and Washington), Blake Avenue and Brownfield Road. These existing facilities provide connections to the downtown core, schools and the ODT. **Figure 5** shows existing bicycle, pedestrian, and mobility scooter facilities.

Transportation Network Safety

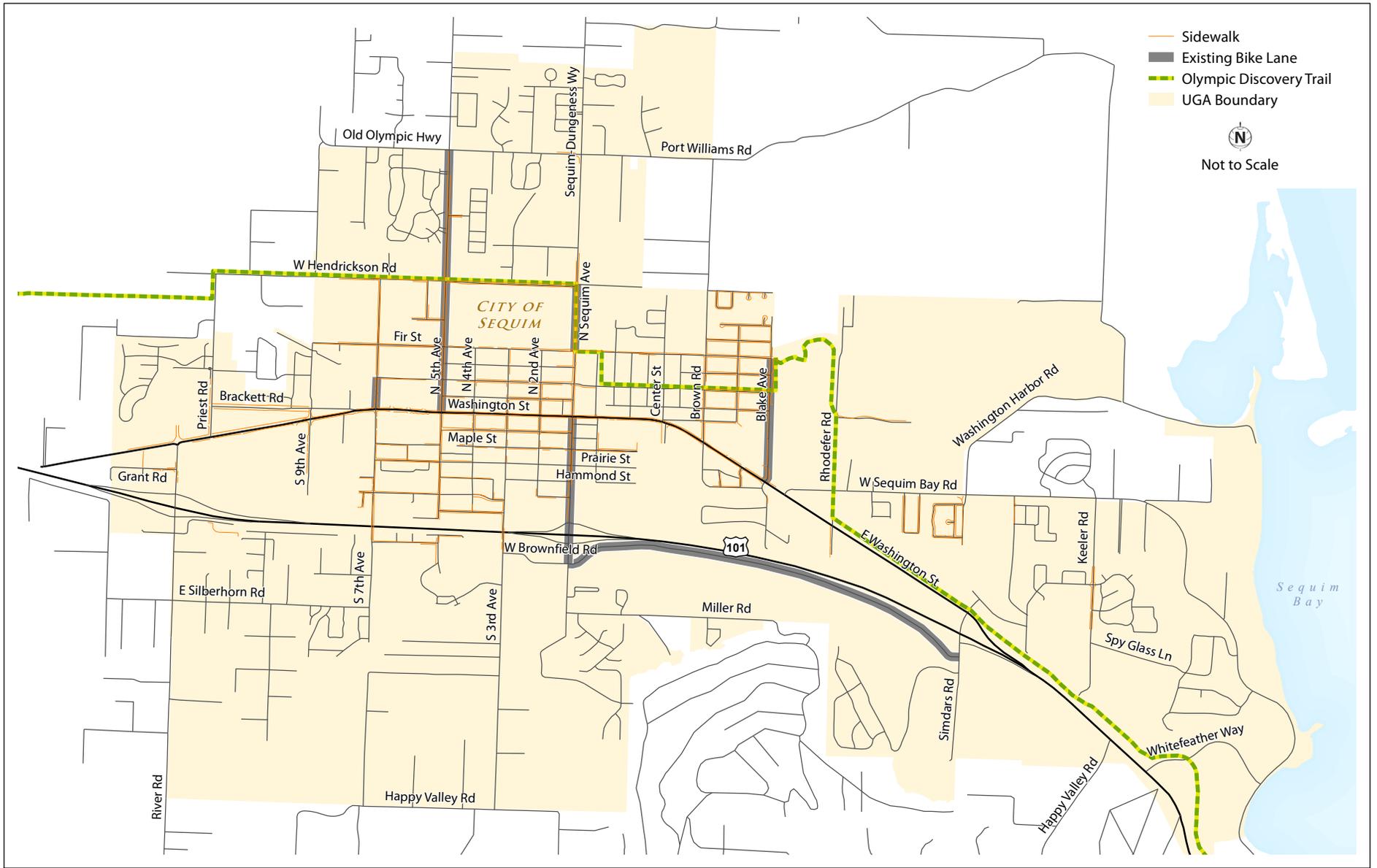
Motor vehicle collisions that occurred in Sequim between July 2008 and June 2011 were reviewed to identify facilities that merited additional safety analysis. Based on an analysis of collision rates and severity no locations were identified as associated with high collision risk.

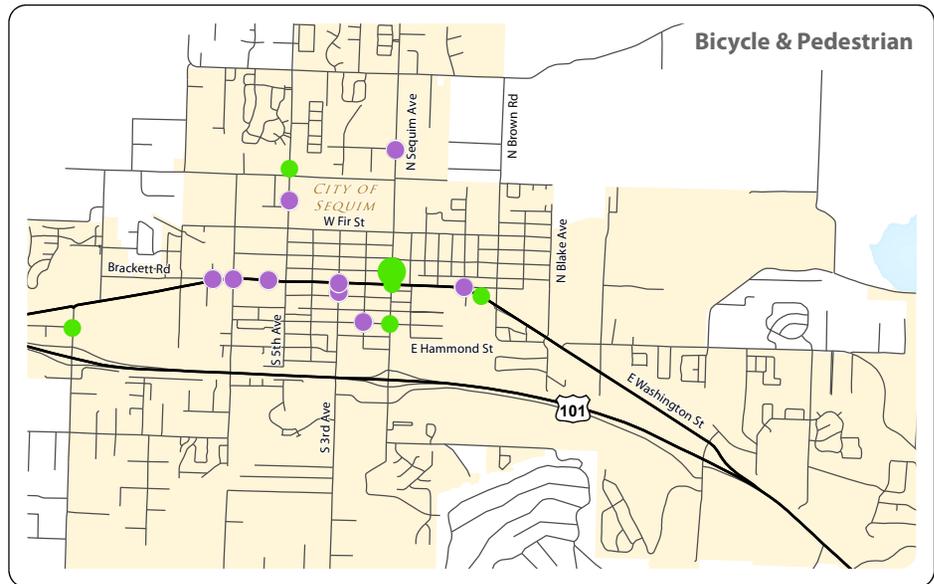
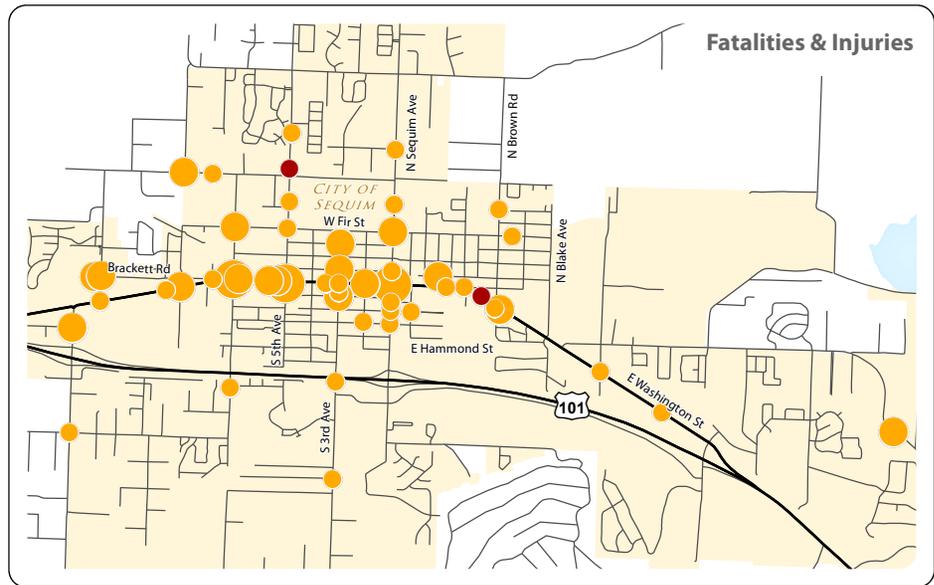
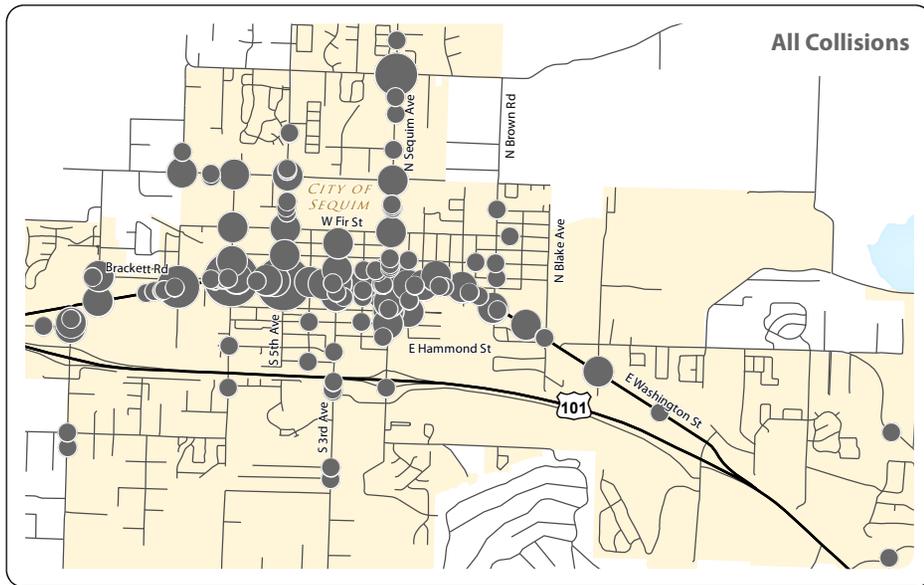
The standard method for identifying intersections with safety concerns is calculating the number of collisions per million entering vehicles (MEV). WSDOT does not have a standard to evaluate intersections based on collision rates. A general guideline is that locations with rates higher than 1.0 per MEV be further analyzed. All intersections in

Table 3. Intersection Collision Analysis Summary

Intersection	Control	Average Daily Entering Traffic	Collisions within 3 Years	Collision Rate
Hendrickson Road & N Kendall Road	Side-Street Stop	5,438	5	0.84
Old Olympic Highway & Sequim Avenue	Roundabout	9,538	8	0.77
Washington Street & Sequim Avenue	Signal	20,225	15	0.68
Washington Street & 5 th Avenue	Signal	21,000	14	0.61
Washington Street & 7 th Avenue	Signal	18,325	11	0.55
Washington Street & 9 th Avenue	Roundabout	16,250	9	0.51

Source: WSDOT





UGA Boundary

Not to Scale

Collision Sum

- 1
- 2 - 5
- 6 - 10
- 11 - 15

Fatalities & Injuries

Collision Type

- Fatality
- Injuries
- 1
- 2 - 5
- 6 - 10

Bicycle & Pedestrian

Collision Type

- Bicycle
- Pedestrian
- 1
- 2



Transportation Challenges for Sequim Today

Current intersection operations meet Sequim's LOS standards, but there are still several key mobility challenges.

Vehicle Mobility

During peak summer months and festivals, there is significant congestion on Washington Street. During key festivals, queues can extend along the entire length of Washington Street, and in some cases, back onto US 101.

Traffic congestion along Washington Street through downtown is related to its intersection with Sequim Avenue. Since traffic on Sequim Avenue is only interrupted at the Washington Street traffic signal and the roundabout at Old Olympic Highway, many east-west travelers concentrate onto Washington Street. Lengthy queues can be seen year-round at the intersection of Washington Street with Sequim Avenue. Essentially, the lack of controlled intersections along Sequim Avenue serves as a barrier to east-west mobility.

As Washington Street and Sequim Avenue pass through the downtown core with few options for expansion, shifting some traffic away from the Washington Street and Sequim Avenue intersection by improving other roadways is the City's primary transportation goal.

Outside of downtown Sequim, particularly near new developments, the roadway network consists of many cul-de-sacs and dead end streets. Vehicle trips that should be relatively short instead require users to travel

longer distances. This design also funnels traffic to a few key roadways as opposed to spreading traffic across multiple roadways. Future land use and roadway development should focus on connecting roadways that currently dead-end to provide a more comprehensive network of roadways.



Traffic Congestion on Washington Street



Current Dead End on 9th Avenue

Transit

At least in the near term, given funding uncertainty for Clallam Transit, there will likely be no additional transit service in



Sequim and service levels are generally outside the City's direct control.

Bicycle, Pedestrian, and Mobility Scooter

In examining the bicycle, pedestrian, and mobility scooter network, Sequim benefits from its location on the ODT, a well-established street grid in the city center, existing bicycle facilities, and a community that is interested in active transportation.

Challenges lie in creating more safe routes for cyclists into and through Sequim and providing a cohesive and ADA-compliant sidewalk network that improves mobility for pedestrians and mobility scooter users. This network development should include multiple routes for ODT users to travel through Sequim and access local destinations.

TRENDS

The previous sections described existing trends in land use development and traffic volumes. This section discusses the growth assumptions used to forecast traffic demand over the next 20 years.

Recent Trends – Development and Traffic Growth

The 2010 U.S. census found that Sequim has 6,606 residents, roughly 24 percent more than it did four years prior. Similarly, the census found number of households increased by almost 30 percent during those four years to 3,767 households in 2010. Moreover, development has continued in the portions of unincorporated Clallam County that are served by Sequim's jobs, commerce, and education resources.

While Sequim and the surrounding area has seen high levels of growth, traffic volumes over the past six years have decreased. Peak hour traffic volumes were compared from the 2006 plan to those collected in 2012 and, with the exception of Priest Road and Washington Street (which showed a 10% increase), all locations showed traffic volume decreases between 10% and 20%. This includes a 15% decrease in volume at the intersection of Sequim Avenue and Washington Street.

While it is impossible to fully explain the decrease in vehicle travel since the mid 2000's, it is likely that economic conditions paired with the continued growth in the older demographic (many of whom do not drive or drive less than the general population) have contributed to this trend of declining traffic volumes.

Anticipated Land Use Growth

The City of Sequim is largely a single family residential community with commercial development in the downtown core and at the west end regional commercial center. The downtown core has an interconnected street grid with little room for additional development. Outside the city center however, there is available space for future residential development. Many of the existing neighborhoods outside of the downtown core are master planned housing subdivisions with cul-de-sacs and dead-end roadways. A major challenge for the City of Sequim in the future is to provide development guidance to ensure improved connectivity (both automobile and pedestrian) between new and existing properties.



Over the next 20 years, the City of Sequim anticipates adding approximately 2,000 households. The city also expects to add approximately 1 million square feet of retail space to the existing 2.2 million square feet. The average annual growth rate over this time period is 2.1% for households and 1.9% for commercial space.

With the exception of the vacant land north of US 101 and southeast of downtown (often referred to as the Burrowes Property), most new developments will occur at the city's edge. Some of the major planned residential developments are: Burrowes Development southeast of downtown, Solana Development near Simdars Road, and the John Wayne Marina Plan. These developments would add residential homes (and some commercial properties) over the next 20 years.

In addition to residential growth, the City also anticipates commercial expansion of throughout the city. Most of this commercial growth will occur nearby existing commercial uses, including the downtown core and the west end regional commercial center.

Battelle Plan

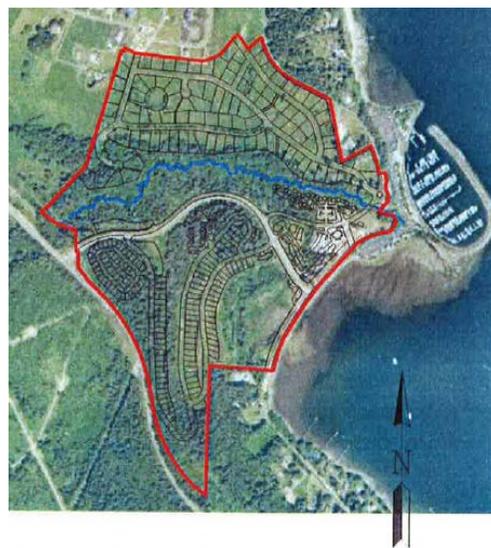
The National Marine Sciences Laboratory (MSL) in Sequim, operated by Pacific Northwest National Laboratory (PNNL) and commonly known as Battelle is located off of West Sequim Bay Road and employs approximately 75 people. A regional effort is underway to develop federal, state, and local funding for the construction of a 20 acre composite manufacturing demonstration facility south of the Battelle property. This additional facility could add substantial new employment to the Battelle site and would

need to be supported by infrastructure improvements along West Sequim Bay Road.

John Wayne Marina Plan

The Wayne Enterprises Residential and Resort Development will be a comprehensively planned development centered around the existing John Wayne Marina. The development will include approximately 250 homes, 200 condo units, 25 cabins and 50 thousand square feet of commercial space. Johnson Creek divides the site into north and south regions, with the Johnson Creek Valley serving as a park and recreational area for residents and guests.

The development will incorporate the ODT as it runs through the property, as well as modifications to Whitefeather Way at US-101 and West Sequim Bay Road to accommodate higher traffic volumes. The planned infrastructure improvements to West Sequim Bay Road from E Washington Street must also interface with the planned community at the John Wayne Marina.



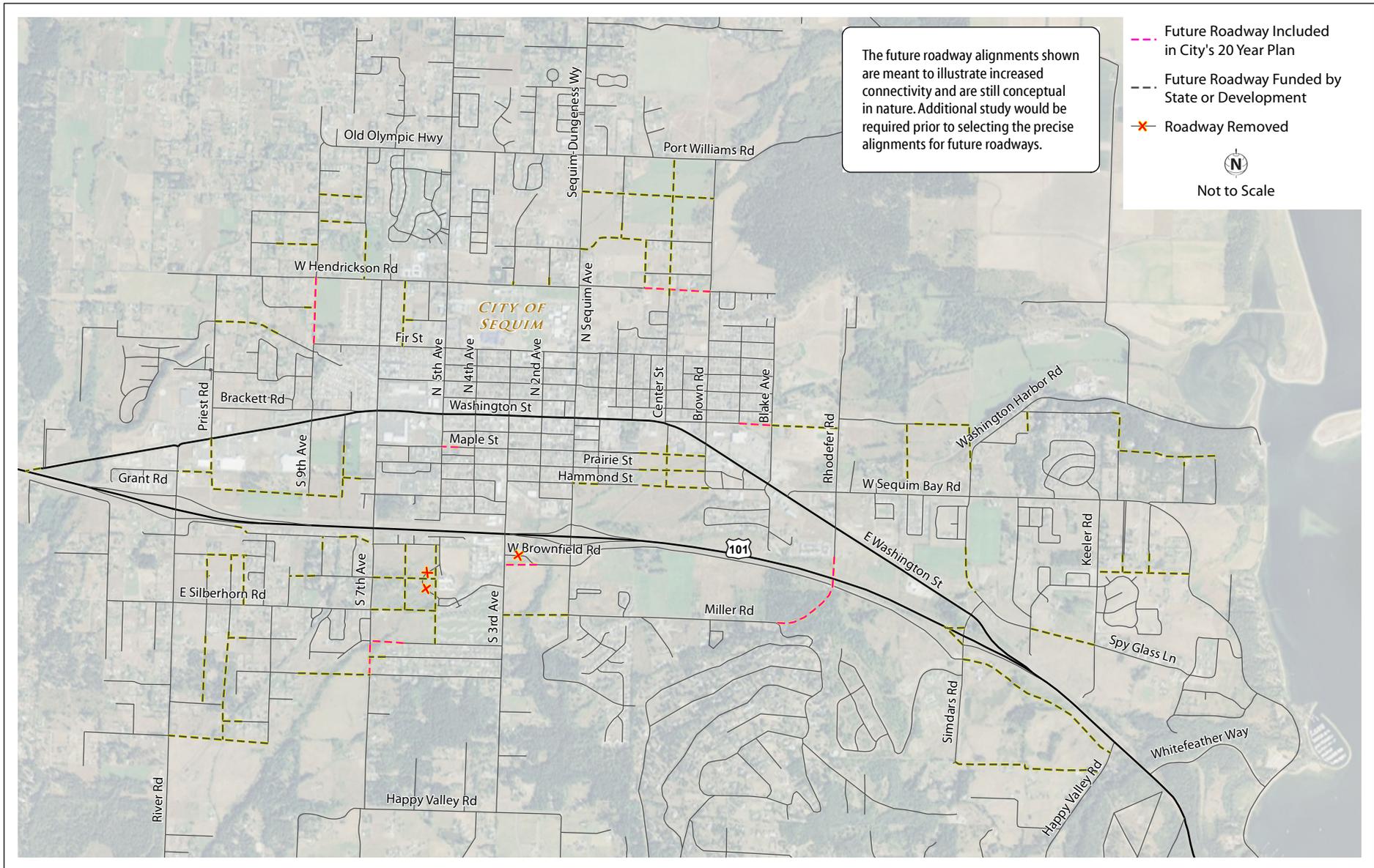
Wayne Development Plan Map (NTI Engineering, 2007)



Future Changes in the Roadway Network

In addition to land use growth, the City of Sequim also plans to complete its roadway network as growth occurs. **Figure 7** shows a future roadway network that includes improved connectivity within neighborhoods and commercial centers, as well as the completion of the Simdars Road Interchange with US-101. Many of the additional roadway connections would only be built as development moves forward; however, they illustrate the City's commitment to increased mobility within neighborhoods as well as connections for pedestrian and bicycle routes.

In addition to improved roadway connectivity, a major change anticipated in the future is a shift in traffic from Washington Street and Sequim Avenue to other east-west and north-south roads. Ways to facilitate this more even utilization of Sequim's roadway network include constructing additional signals, roundabouts, and improving roadway designs to accommodate additional users (of all modes).





3. TRANSPORTATION POLICIES

The Transportation Master Plan identifies transportation issues that face Sequim today and that are anticipated in the future, as well as how these challenges can be addressed.

In creating this Plan, the City's existing goals and policies for transportation were revisited to see if they still represent Sequim120's vision for the future. As part of this process, the City compared the function of its current transportation system with stated desires for its form and function in the future. This evaluation served as the basis for refining the Plan's goals and policies.

POLICIES FOR COMPREHENSIVE PLAN

Below is a set of goals and policies which establish an overall vision for the future development of Sequim's transportation system. These represent a streamlined update of prior goals and policies where elements are categorized, with goals providing the overarching ideal and policies providing actionable items.

Transportation Vision

Goal 1: Provide a safe, balanced and efficient multi-modal transportation system that is consistent with the City of Sequim's Vision Statement and will adequately serve the future growth and development of the City and its Urban Growth Area.

Network Consistency

Goal 2: Provide a complete transportation network that safely accommodates all modes

of travel while increasing efficiency and safety for all users.

Policy 1: Develop and maintain a *Layered Network* recognizing that not all streets provide the same quality of travel experience and as such, classifies streets as *Boulevards, Urban Avenues, Downtown Main Streets, School Connections, Active Alleyways, Local Streets* and *Rural Transitions*.

Policy 2: Ensure the *Layered Network* continues to provide for all varieties of street uses including: regional mobility and cross-town trips, commuting, shopping and recreational travel, property access, vehicle storage, parking, transit use, walking, biking and use of mobility scooters.

Policy 3: Develop and enforce design standards consistent with the *Layered Network Street Typologies* for all City and residential subdivision streets.

Policy 4: Enhance traffic flow through the Downtown Core by prioritizing development that improves East-West travel alternatives in the *Layered Network*.

Policy 5: Guide development of new *Local Streets* to form a well-connected network that provides for safe, direct and convenient access to the existing roadway network for automobiles, bicycles and pedestrians. New residential developments should be consistent with the *Future Roadway Network*. Cul-de-sac construction requires the approval of the City Engineer.

Policy 6: Develop a *Neighborhood Traffic Calming Policy* which recognizes and balances the competing needs of mobility and safety in residential neighborhoods.



Policy 7: Develop a transportation system that achieves the following level of service (LOS) metrics:

Vehicular LOS: all City streets and intersections, except for Washington Street, are developed and maintained to provide a minimum of LOS D. Washington Street has a LOS F standard within downtown (5th to Brown) and must maintain a minimum of LOS E outside of downtown.

Pedestrian LOS: sidewalks or separated paths will be provided along all *Pedestrian Priority Routes*.

Bicycle LOS: bike lanes, separated paths or “sharrows” will be provided on all facilities in the *Bicycle Network*.

Mobility Scooter LOS: a minimum of 5 foot buffered sidewalks that meet all Americans with Disabilities (ADA) requirements and have sufficient clearance from utilities and other obstructions will be provided on all facilities in the *Mobility Scooter Network*.

Multi-Modal Transportation

Goal 3: Promote the development of safe and convenient pedestrian, bicycle, and mobility scooter user networks that encourage multi-modal access to and from residential neighborhoods, parks, schools, civic buildings and the City’s commercial and employment areas.

Policy 8: Require all future development and improvement to be consistent with the

Layered Network, Bicycle Network, Pedestrian and Mobility Scooter Priority Routes, as well as ADA requirements.

Policy 9: Obtain and preserve public right-of-ways or easements from developers to provide for a highly connected transportation network as well as for the implementation of the Bicycle Network and Pedestrian and Mobility Scooter Priority Routes.

Policy 10: Require development to assist in the funding and/or construction of traffic control devices deemed necessary by City staff to accommodate access into projects and preserve safe access to and through the rest of the City.

Policy 11: Identify locations for cross-circulation easements between buildings in the Downtown Core and surface parking lots elsewhere in the City that will help create a more walkable environment, provide shorter travel distances between destinations and promote a safe and enjoyable experience for pedestrians, bicycles, and mobility scooter users.

Policy 12: Design roads within the freight mobility network to accommodate truck standards. Discourage truck travel outside of the freight mobility network to minimize truck intrusion in the downtown core and within residential neighborhoods.

Transit

Goal 4: Facilitate the creation of a public transportation system that provides an alternative to vehicle travel and mobility alternatives for users without a vehicle at their disposal.



Policy 13: Encourage transit system use by providing bus turnouts, transit signage and bus stop improvements where adjacent land uses warrant such investments.

Policy 14: Explore provision of alternative transit services, such as express taxi service, which may be well-suited to the unique needs of Sequim's older demographic.

Parking

Goal 5: Balance the demand for parking with the availability of on-street and off-street parking facilities to support an attractive urban form and ensure the needs of businesses, drivers and pedestrians are all equally met.

Policy 15: Continue to develop and enforce guidelines for on-street and off-street parking facilities as specified in the Development Code.

Policy 16: Update the City's study of residential and commercial/retail parking supply adequacy periodically and update parking requirements as necessary.

Policy 17: Encourage shared parking agreements in the Downtown Core to ensure that parking is not oversupplied and that the Downtown Core remains a pedestrian friendly zone.

Policy 18: Provide convenient, safe and accessible public parking for vehicles and recreational vehicles close to the Downtown Core.

Policy 19: Develop festival-specific plans to address parking and circulation needs for recurring festivals.

Funding

Goal 6: Pursue project funding from all potential sources aggressively and in an efficient and equitable manner.

Policy 20: Prioritize project funding according to the priorities of the Capital Facilities Element and the Six Year Transportation Improvement Plan (TIP).

Policy 21: Develop a schedule of funding mechanisms to ensure new development contributes its fair share to the financing of needed transportation improvements and expansions consistent with the Layered Network and concurrency requirements of this Comprehensive Plan.

Policy 22: Review the transportation study annually to evaluate the need to update the TIP based on the consequences of increasing development in the City and its UGA.

Regional Coordination

Goal 7: Coordinate with regional transportation entities to ensure maximum connectivity and interoperability of transportation systems in the region.

Policy 23: Coordinate transportation system operations, planning and project implementation Clallam County, Jefferson County, the Peninsula Regional Transportation Planning Organization (PRTPO) and Washington State Department of Transportation (WSDOT).

Policy 24: Coordinate with Clallam Transit and Jefferson Transit relative to the planning and operation of public transit services and facilities within the City.



Policy 25: Coordinate with WSDOT and Clallam County to provide convenient linkages between existing and planned regional paths and trails.

Policy 26: Encourage WSDOT to anticipate needs for future off-ramps and interchanges along the US-101 By-Pass from Palo Alto Road to the Dungeness River.

Policy 27: Encourage and support the provision of regional express transportation services that provide connections to airports and ferry terminals.

Overall

Goal 8: Create an intuitive, user-friendly transportation system whereby engineering, education, and enforcement are all aligned.

Policy 28: Coordinate user education and law enforcement activities to reinforce the proper usage of the transportation facilities designed as a part of this plan.



4. CITY'S FUTURE TRANSPORTATION VISION

The City envisions a future transportation system that is inclusive and facilitates all modes of travel by offering offers a robust network of roadways, intersections, bicycle, and pedestrian facilities. This chapter describes Sequim's vision for its future transportation network, as well as the infrastructure improvements that would be needed to get there.

As identified in this plan, most of the improvements are focused on the development of a 'layered' transportation network, which focuses less on providing vehicular capacity and more on accommodating all modes of travel. In order to meet the City's vehicular LOS standard, there are only four intersection improvements needed. Future improvements focus more on creating a complete roadway grid and making improvements to the bicycle, pedestrian, and mobility scooter infrastructure as a means to improve multimodal mobility.

FUTURE VEHICLE TRAFFIC VOLUMES

To ensure that that this plan adequately accommodates vehicular needs and meets the intent of the GMA, and future traffic operations were analyzed. This evaluation considered local and regional land use growth as well as planned changes to the regional transportation system. Growth was analyzed using a citywide travel model, and **Figure 8** identifies the projected 2032 roadway traffic volumes.

Summer Volumes

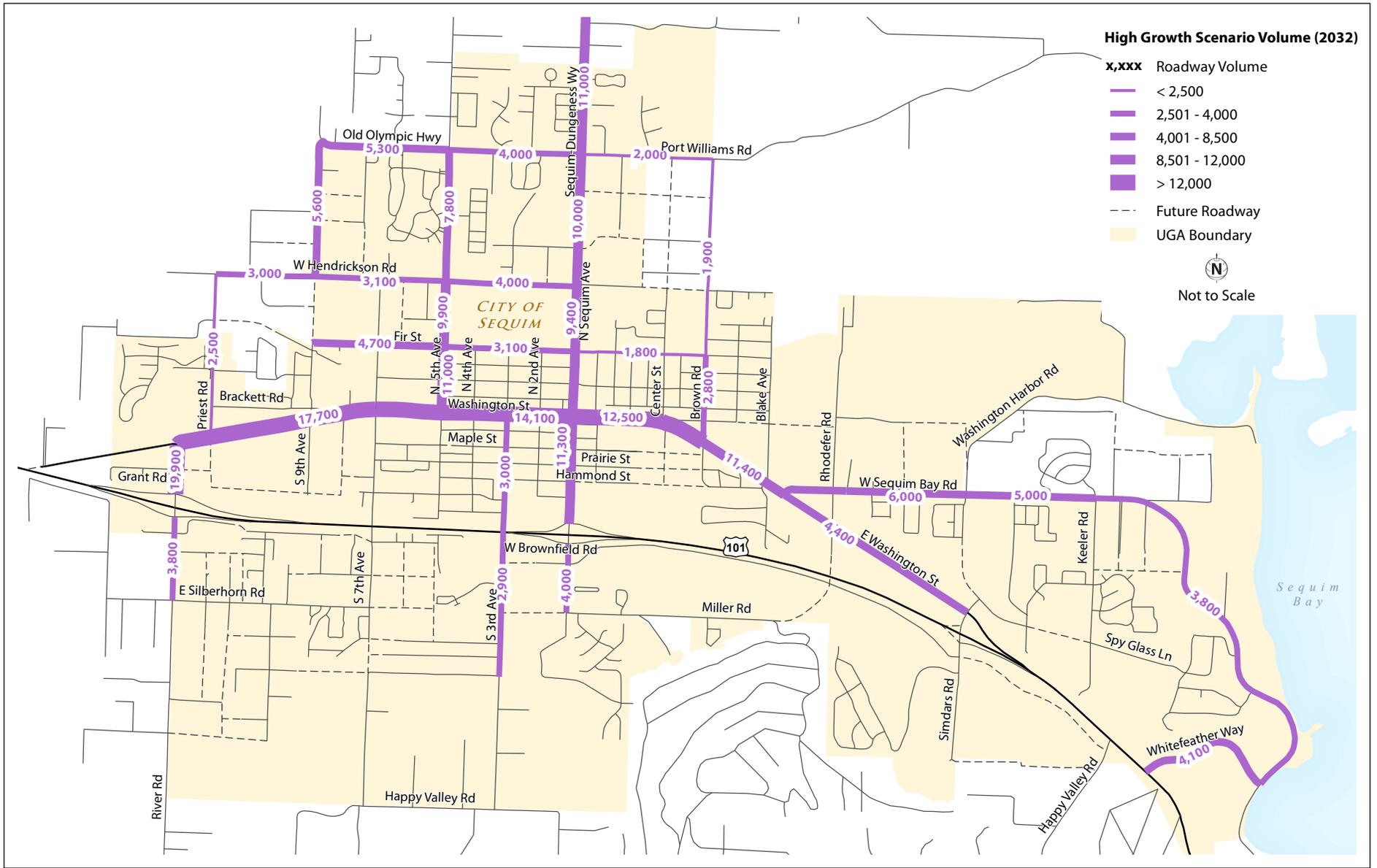
As part of this planning effort, early spring counts were compared to traffic volumes observed during the summer months. Compared to spring, summer saw a 10% increase in volume along Sequim Avenue and Washington Street. This increase did not trigger additional LOS deficiencies.

Long-Range Volumes

An analysis of available roadway capacity shows that the streets in Sequim could handle twice the traffic volume that is anticipated by 2032 under a High Growth scenario. Traffic would need to be more evenly dispersed along five east-west roads and four north-south roads. Intersection enhancements along Sequim Avenue could help ensure efficient mobility and more even utilization of cross-town routes.

Level of Service Standards

This plan identifies a vehicular LOS standard of LOS D for most roadways, LOS E for Washington Street outside the core area, and LOS F for Washington Street within the core area (5th to Brown). The lower standard for Washington Street recognizes Washington Street's passage through Downtown Sequim, where capacity enhancements may be incongruent with other roadway priorities such as providing wide sidewalks, on-street parking, and minimizing pedestrian crossing distances. As such, improvements are proposed for Prairie and Fir streets to ensure these roadways can carry more east-west local traffic thus reducing congestion along Washington Street.





Traffic Improvement Needs

Without improvement, the following intersections would not meet the City's vehicular LOS standard in 2032:

- W Fir St / N 5th Ave
- E Washington St / W Sequim Bay Rd
- W Prairie St / S Sequim Ave
- SR 101 Ramps / S Sequim Ave

As identified in **Figure 9**, these locations are currently unsignalized, and should be signalized to meet LOS requirements. In addition, the signal at Washington Street and Sequim Avenue (the 100% corner) should be modified to remove the current split phase configuration and reduce excessive delays.

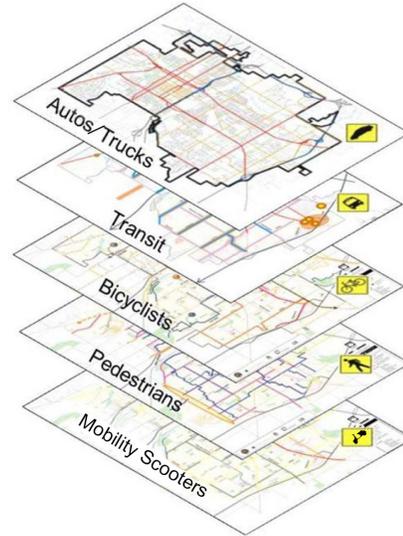
INTRODUCTION TO THE LAYERED NETWORK CONCEPT

As there are only minor improvements needed to achieve the City's vehicular LOS standard, the remainder of this plan focuses on developing an inclusive transportation system that reinforces Sequim120's vision of a more walkable community, facilitates multimodal accessibility, and provides for overall network function.

It can be a challenge for a single roadway to meet the demands and expectations of all modes at any given time. This is also generally not desirable from a user or a planning perspective.

In response to this challenge, the City of Sequim has adopted a layered network concept that focuses on how the City's transportation network can function, as a system, to meet the needs of all users. In such a system, individual travel modes are

prioritized on different roadways throughout the overall network.



Layered Network Concept

This layered network is implemented through a system of roadway typologies that define each street's user priorities and associated infrastructure needs.

The following sections detail the roadway typologies in Sequim, including the transportation users each is meant to serve.

ROADWAY TYPOLOGIES

The following street typologies dictate the form and intended functions of roadways in Sequim. While some roadways are intended to serve core vehicle circulation, other facilities are intended to provide for a more multimodal user base.

The roadway types are as follows:

- **Boulevard** – Most conducive for cross-town trips and focus on auto and truck mobility.



- **Urban Avenue** – Signals the entry into a higher-density commercial or residential zone. Emphasize multimodal interaction and travel experience.
- **School Connection** – Provides a safe and enjoyable travel experience for bicycles, pedestrians, and school children.
- **Rural Transition** – Low volume facilities that focus on vehicular travel, but accommodate other modes through wide shoulders or a parallel mixed use trail.
- **Local Street** – Prioritizes local traffic and pedestrians. Bicycles share the roadway.

Main Streets are called out, which include portions of Sequim Avenue, Washington, Bell, and Cedar streets in the downtown core, which received streetscape investments in the early 2000s and for which this plan does not recommend any modifications. Another two facility types are Active Alleyways and Cross Circulation Routes, which are non-motorized facilities focused on providing improved bicycle and pedestrian mobility in Downtown Sequim.

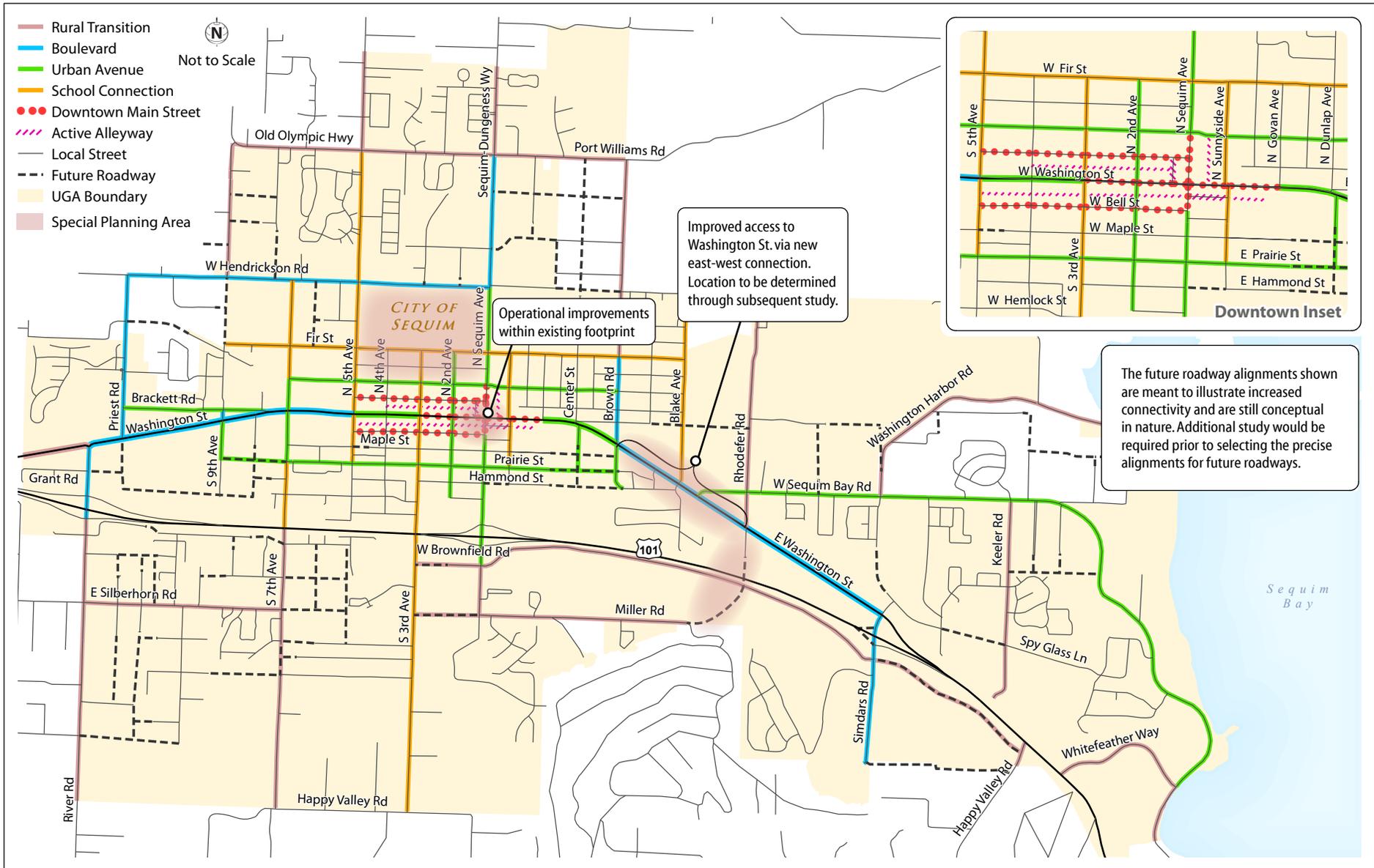
Figure 10 identifies how each of the City's streets fit into a roadway typology and **Appendix C** contains fact sheets describing the recommended design standards for each roadway type. **Table 4** crosslinks these typologies to traditional functional classifications, which are retained for federal classification purposes.

In addition to the roadway types, Downtown

Table 4. Relationship between Layered Network and Functional Classification

	Boulevard	Urban Avenue ¹	School Connection	Rural Transition	Local Street	Cross-Circulation Routes	Active Alleyways
Minor Arterial							
Collector							
Local Street							
Non-Motorized Facility							

¹ Includes Downtown Main Street





COMPONENTS OF THE LAYERED NETWORK

In the following pages, we describe how each mode is accommodated through this layered network concept.

Truck Routes and Destinations

The truck routes layer was designed to facilitate both the movement of goods to retail destinations within the city and the shipment of goods from locations outside the city. Sequim's primary commercial districts are located along Washington Street nearby River Road, as well as just east of downtown. Outside of Sequim, truck destinations include farms on the Olympic Peninsula, construction sites including the planned water reclamation facility site, as well as two quarries located due north and south of the City.

The truck routes simultaneously allow for the movement of goods both locally and regionally while limiting truck traffic on key streets, such as Washington Street within the downtown core. To further encourage truck travel on these routes, roads should be designed to meet truck standards. This plan's layered network concept supports this goal by ensuring that all truck routes are designed as Boulevards or Rural Transition streets, which emphasize vehicular movement. **Figure 11** shows truck routes and local delivery routes as well as the location of the two quarries on the peninsula.

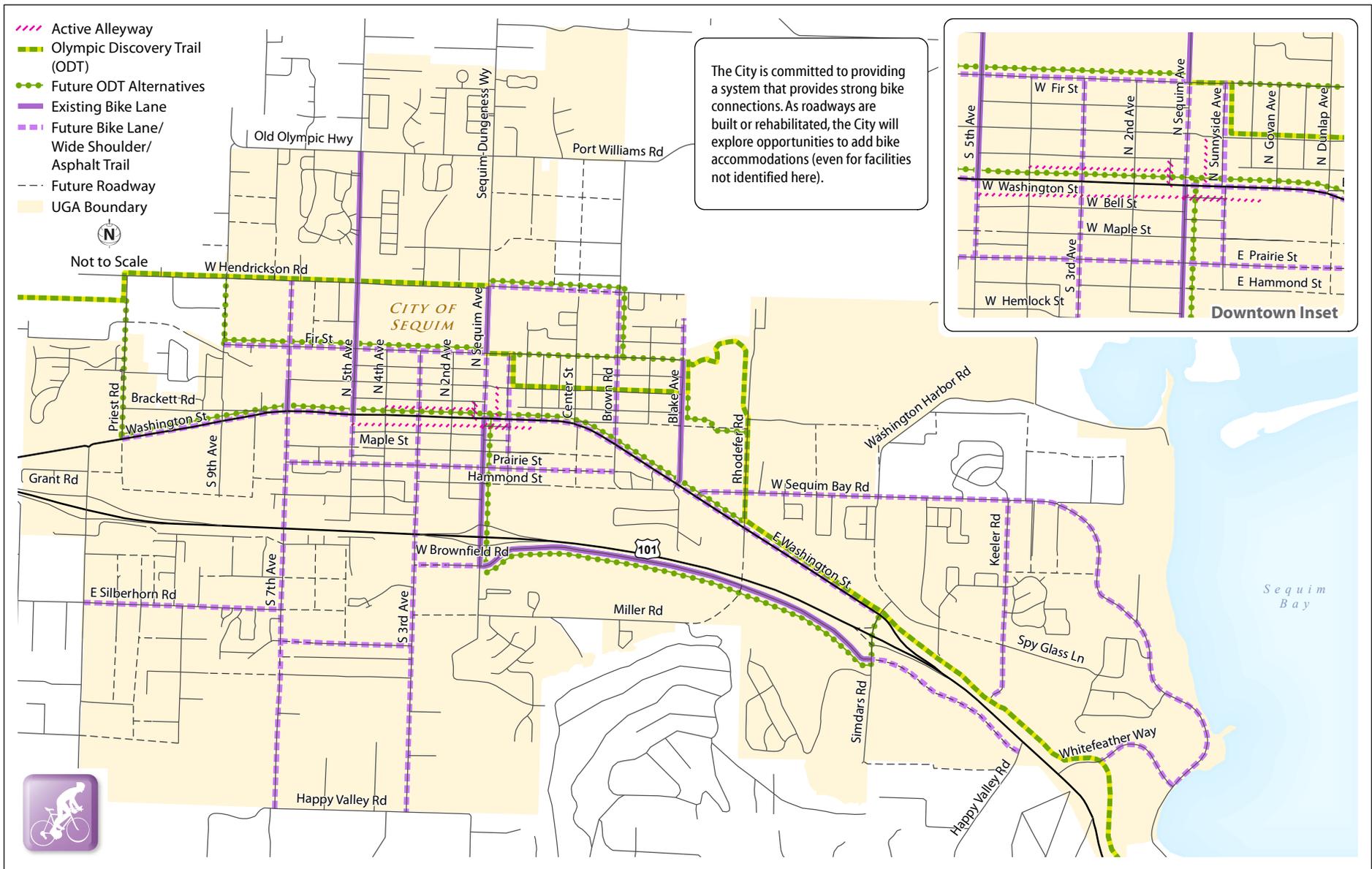
Bicycle Network

The bicycle network, identified in **Figure 12**, is designed to meet the demands of a wide range of facility users. As the figure shows,

the proposed bicycle network is quite extensive, reflecting the City's commitment to becoming an even more bike-friendly community.

The bicycle network provides connections to the Olympic Discovery Trail (ODT – described in Chapter 2), schools and parks, and the downtown core from the residential neighborhoods across the city. It also provides regional connectivity to the north and south of Sequim along 7th, 5th and 3rd Avenues. The ultimate bicycle network is intended to form a network of paths, lanes, and shared streets that collectively provide "ODT Alternatives" that will allow cyclists to proceed through Sequim using various routes, including some that pass through downtown Sequim.

Within the densest parts of the city, including residential neighborhoods and the downtown core, the bicycle plan envisions bike lanes or "sharrows" within the vehicular ROW. In more rural portions of the city, including south of US-101 and along West Sequim Bay Road, the ideal solution is a separated path that runs parallel to the existing roadway. All of the roadway typologies could incorporate a context-appropriate bicycle accommodation, including bike-lanes, sharrows, wide-shoulders, and off-street trails.





Pedestrian Priority Network and Mobility Scooter Priority Network

Sidewalks in Sequim are shared by pedestrians and mobility scooter users. A priority network layer was developed for these modes and is shown in **Figure 13**. The pedestrian/mobility scooter priority layer provides connections to Sequim’s downtown core, commercial and retail zones, medical facilities, schools and parks, the ODT, and residential neighborhoods.

These priority routes are served by a variety of street topologies but all of them include provisions for sidewalks or shared use paths. **Table 5** summarizes these provisions. Sidewalks in the mobility scooter priority network should include a park strip between

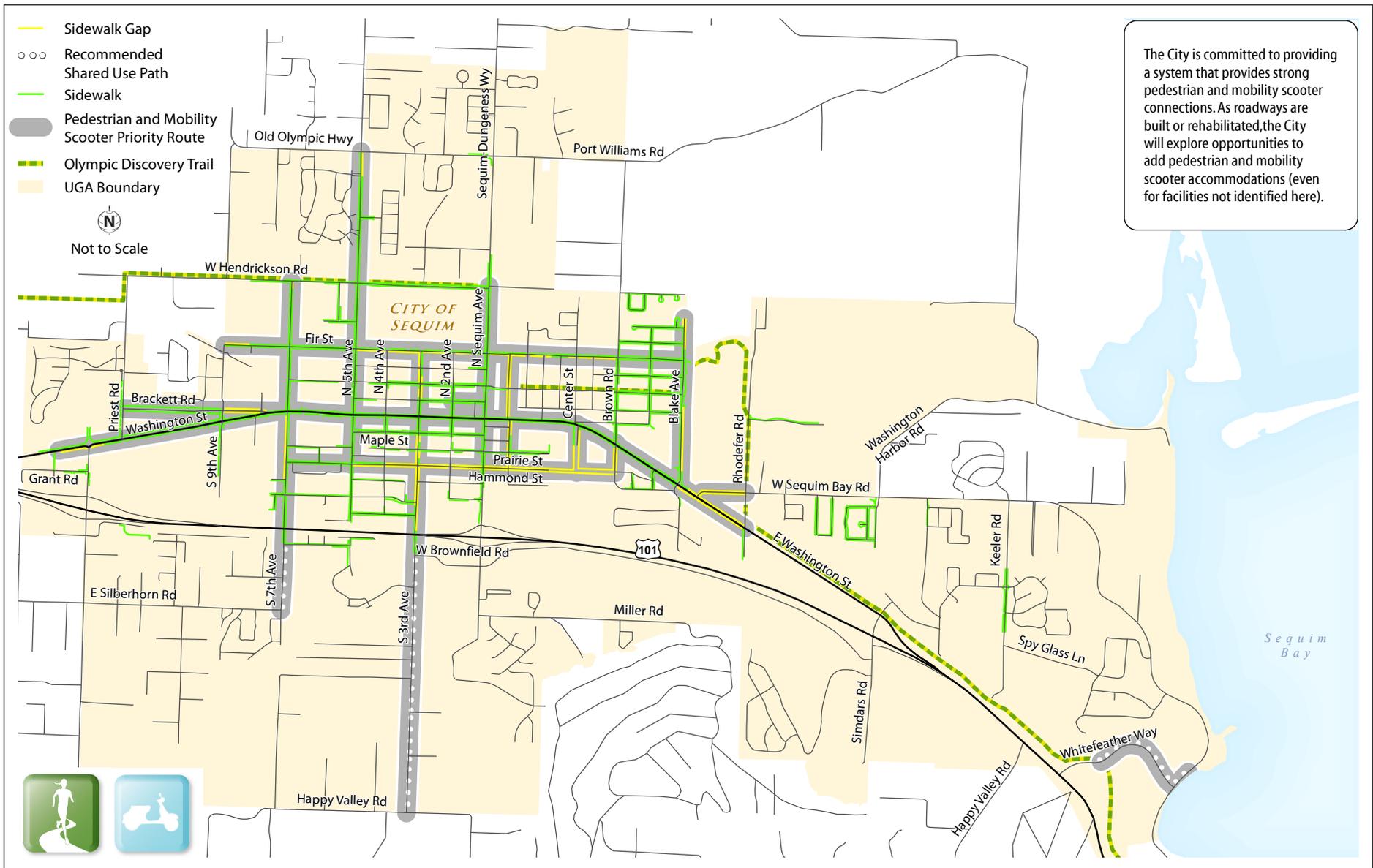
the sidewalk and travel lane. Where practical, this park strip would include landscaping, but could also be hardscape. All future and existing facilities will be constructed or improved to meet current ADA standards. Sidewalk and trail projects within the pedestrian/ mobility scooter layer will receive higher priority than projects outside this area. Existing sidewalk gaps within the pedestrian priority network are also identified in Figure 13.

Table 5. Pedestrian/Mobility Scooter Accommodation Standards in Layered Network

Street Type	Sidewalk Width	Park Strip ¹	Other
Boulevard (1-2)	5-12'	4'	-
Urban Avenue (1-3)	5-12'	4'	-
School Connector (1)	5-12'	4'	-
School Connector (2)	-	4'	8' separated trail
Rural Transition (1)	-	-	5' shoulder
Rural Transition (2)	-	5'	5' separated trail
Local Street	4'	4'	-
Active Alleyway	-	-	22' non-motorized facility
Cross-Circulation Easement	-	-	10' non-motorized facility

1. Where practical, park strips include landscaping, but may also be hardscape.

¹ Where practical a park strip includes landscaping, but can in





POLICY IMPLEMENTATION GUIDELINES

Sequim's new comprehensive plan, Sequim 120, envisions continued growth as the activity and civic/cultural heart of the Sequim-Dungeness Valley while maintaining the community's lifestyle, "small-town" convenience, and high quality of life. The following section provides guidance for implementing specific transportation policies to meet the broader goals of Sequim 120.

The goals and policies provided in Chapter 3 can be implemented by updating the city's development code and adopting standalone planning documents specifically focused on these policies. As Sequim adds new residential and commercial properties, new growth must cohesively integrate with the existing transportation network, optimize connectivity, and help the city achieve its multi-modal vision. The following recommendations focus on increasing safety, building residential connections and providing access to local businesses.

Goal 2, Policy 5: Well-Connected Street Grid

A well-connected street grid enhances traffic flow and provides safe and convenient access for all (including people travelling on foot, by bicycle, and mobility scooter). This is particularly important in the more urban portions of the city, where it is anticipated that people will be traveling by means other than a personal automobile. However, even outside of the city center, it is critical that the transportation system be constructed to encourage the most efficient travel patterns possible.

Table 6 on the next page provides measurable design guidelines for creating a well-connected street grid. In order to be sensitive to the surrounding neighborhood context, two sets of guidelines have been established – one developed for Sequim's city center and another for the City's more rural and suburban districts. Many of these guidelines have been successfully implemented in other cities to create more walkable and connected communities.

Goal 2, Policy 6: Traffic Calming

While a connected street grid distributes traffic flow onto multiple routes and minimizes travel distances for walking and biking, it can also lead to cut-through traffic and increased vehicle speeds on residential streets. Traffic calming can address these potential problems while retaining all of the good attributes of an interconnected roadway system.

Traffic calming utilizes physical features to alter driver behavior as a means to improve safety for all roadway users and reduce impacts to adjacent land uses. It is a well-established practice worldwide, backed by substantial quantitative evidence of its benefits in reducing travel speeds and enhancing safety.

Figure 14 provides a toolbox of traffic calming applications for potential use in Sequim. In selecting a traffic calming application, it is important that a variety of factors be considered, including roadway characteristics, emergency service needs, available funding, and community acceptance.



Table 6. Connectivity Design Guidelines

Metric	Purpose	City Center ¹	Outside City Center
Arterial Intersection Spacing	Intersections that are appropriately spaced encourage walking while maintaining reasonable traffic flow.	500-700 feet	500-1,000 feet
Residential Intersection Spacing	Intersections that are appropriately spaced encourage walking and biking.	200-600 feet	200-600 feet
Cross Circulation Routes	Encourage travel by non-auto modes by shortening travel distances between uses.	Provided on all commercial blocks that are longer than 500 feet, connect surface parking lots wherever feasible	No standard, but used to provide connections for pedestrians and bicyclists at cul-de-sacs and dead end streets, connect surface parking lots wherever feasible
Cul-De-Sac Length	To increase connectivity, cul-de-sacs should be prohibited in the city center and discouraged elsewhere. Where approved, cul-de-sacs should be limited to a maximum length.	Not permitted	200-400 feet and must be approved by city engineer
Intersection Angles	Intersections that meet at right angles prohibit excessive vehicle speed and improve safety for all modes. Within the city center, all intersections should be “squared up”.	90°	60-90°

¹The city center is the area bounded by: Fir Street (north), 5th Street (west), US-101 (south), and Blake Street (east).

Type	Treatment		Cost	Arterial Streets	Local Streets
Intersection Improvements	Roundabout		\$\$\$	✓	
	Raised Intersection ¹		\$\$\$	✓	✓
	Traffic Circle ²		\$\$		✓
	Painted Intersection ³		\$		✓
Lane Narrowing	Travel Lane Width Reduction		\$	✓	✓
	On-street Parking ³		\$	✓	✓
	Speed Kidney ⁴		\$\$	✓	✓
	Chicanes		\$\$		✓
Pedestrian Infrastructure	Raised Crosswalk/Speed Table		\$\$	✓	✓
	Pedestrian Refuge		\$\$	✓	
	Pedestrian Bulbout		\$\$	✓	
Other	Speed Watch Sign ⁵		\$	✓	✓
	Enforcement ⁵		\$\$	✓	✓
	Tree Canopy		\$	✓	✓
	Neighborhood Traffic Action Plans ⁶		\$	✓	✓

Image credits: ¹Yarger Engineering, ²City of Kirkland, ³City of Seattle, ⁴ScienceKnowledge.org, ⁵Pequannock Township Police Department, ⁶City of Huntsville



To select appropriate traffic calming applications, many cities have implemented Neighborhood Traffic Calming Policies. These policies provide a standard method for residents to seek appropriate solutions for high traffic volumes or speeds on residential streets. These policies provide guidance for how the communities respond to neighborhood concerns and recommend a process which includes assessment of existing conditions, selection of potential improvement(s), outreach, implementation and final evaluation. The benefit of having this policy in place ensures that all community concerns are handled consistently and equitably.

Goal 5: Parking

Access to a convenient and available parking supply is necessary for a healthy and competitive commercial district that encourages both residents and visitors to patronize local businesses. Sequim has two main commercial districts: Downtown and the West End Regional Commercial Center. Both areas are expected to see new development, including redevelopment of existing properties, over the next 20 years.

The way that parking is planned and designed has a major influence on the way that development interfaces with the transportation system, including its ability to encourage travel by non-auto modes. The following best practices highlight approaches that the City of Sequim should implement to meet the City's multi-modal vision, while balancing parking availability with demand.

Downtown

Parking lot utilization is often low and the visual impact of surface lots detracts from the downtown's aesthetic qualities. The 2010 Downtown Plan noted that "parking should be viewed as a shared resource that is managed, balanced with demand, and maintained to ensure use by customers of downtown businesses." The Plan recommended that the City "ensure that parking is not over-supplied and is provided in a way that adds to the ambiance of downtown." The following strategies would reduce the number of additional off-street parking spaces required for new development and provide existing businesses with additional parking supply.

- Allow, or require, shared parking among adjacent land uses
- Allow developers to pay in-lieu fees to reduce individual parking requirements where appropriate
- Reduce or waive codified parking minimums to encourage economic development
- Codify parking maximums to reduce excess parking spaces
- Apply stricter enforcement of short- and long-term parking regulations

West End Commercial Center

The West End Regional Commercial Center has significant potential for future development. As the stores in this area serve all residents in the Sequim-Dungeness Valley, it is important that adequate parking be provided to meet the demand. It is also important, however, that the City's vision for connectivity not be forgotten in this area.



New development should be required to coordinate with adjacent parcels to coordinate parking lot connectivity between developments. This will ensure that vehicles and pedestrians can easily travel between locations without requiring circuitous travel back to public roadways. The relevant development code and design guidelines should be updated to reflect this connectivity goal for new development.



5. NEAR TERM AND LONG TERM CAPITAL PLANS

This chapter presents the capital program that forms the basis of this TMP. Collectively, this program adds up to \$36 million in transportation projects to be constructed over the next few decades. For the purposes of planning, the capital projects are divided into two lists – near-term (years 0 to 6) and longer-term (years 7 to 20) needs.

To select the full list of projects and decide whether projects should be on the near-term or longer-term list, a set of prioritization criteria were used. These metrics were developed based on concerns and interests expressed by City staff, members of the community, and the TMP Technical Advisory Committee. **Table 7** provides a summary of the specific metrics considered.

Table 7. Project Prioritization Criteria

Criteria	Measurement
Addresses Capacity Constraints	<ul style="list-style-type: none"> • Is needed to maintain City’s LOS vehicular policy • Maintains consistency with basic GMA requirements
Network Completeness	<ul style="list-style-type: none"> • Consistency with layered network • Completes bike/pedestrian/mobility cart priority networks
Safety	<ul style="list-style-type: none"> • Addresses location with a history of injury/fatality collisions • Fixes a sight distance issue or identified modal conflict point
Active Living	<ul style="list-style-type: none"> • Encourages walking, biking, or use of mobility carts • Provides connection to city park or other public amenity
Order-of-Magnitude Costs	<ul style="list-style-type: none"> • Project’s costs are aligned with City budget constraints • Project could be funded within a 0-6 year time frame
Project Readiness	<ul style="list-style-type: none"> • Project on the books • Could be implemented within a 0-6 year timeframe • Dovetails with water and sewer plans
Economic Development	<ul style="list-style-type: none"> • Accommodates major economic generators in the city • Encourages development of small businesses



SIX-YEAR PROJECT LIST

Based on the principles of the layered network concept and project prioritization, a near-term project list was developed. As shown in **Table 8**, the majority of the near-term expenditures include pedestrian infill and new roadways to support expected near-term development. These projects are generally identified on Figures in Chapter 4. A full list of projects is available in **Appendix D**.

TWENTY-YEAR PROJECT LIST

In addition to projects prioritized in the six-year list, the TMP resulted in an additional list of projects to be completed over the later portion of the planning horizon (years 7 through 20 of this plan). These projects total to \$19.3 million in 2012 dollars and are summarized in **Table 9** and detailed in **Appendix E**.

Table 8. Summary of Six Year Projects

Type	Notes	Approximate Quantity	6 Year Cost (thousands)
Bicycle Projects	Shared-use paths, bike lanes, and sharrows	10.3 miles	\$1,765
Pedestrian/Mobility Scooter Projects	Sidewalk infill, paths, Active Alleyways	5.6 miles (new facilities only)	\$4,745
Intersection Improvements	Traffic signals, roundabouts, turning lanes, intersection modifications	9 locations	\$1,880 ¹
Roadway Enhancements	Widening, transit accommodations	6 projects	\$3,290
New Roadways	Completion of street grid and infill roadways	4 projects	\$5,210
TOTAL			\$16,890

¹ This cost does not include Whitefeather/US-101, which is assumed to be funded by non-city sources.

Table 9. Summary of Twenty Year Projects

Type	Notes	Approximate Quantity	20 Year Cost (thousands)
Bicycle Projects	Shared-use paths, bike lanes, and sharrows	8.5 miles	\$455
Pedestrian/Mobility Scooter Projects	Sidewalk infill, paths, Active Alleyways	4.4 miles (new facilities only)	\$3,120
Intersection Improvements	Traffic signals, roundabouts, turning lanes, intersection modifications	4 locations	\$3,645
Roadway Enhancements	Widening, transit accommodations	2 projects	\$1,315
New Roadways	Completion of street grid and infill roadways	4 projects	\$10,115
TOTAL			\$19,310



Special Planning Areas

In addition to projects listed in the six and twenty-year project lists, the City identifies four special planning areas (SPAs) that will require additional study before designing specific improvements. These SPAs include:

- Washington Street and Sequim Avenue: intersection enhancements should reduce person delay and improve mobility while working within the bounds of the existing intersection right of way.
- School Planning Area: Bounded by Fifth Avenue (west), Hendrickson Road (north), Sequim Avenue (east), Spruce Street (south), this planning area will evaluate intersection treatments that balance school safety needs with east-west mobility enhancements.
- Washington Street between Brown Road and Rhodefer Avenue: Identify ways to accommodate a new east-west connection south of Washington Street through evaluation of existing signal locations and intersection configurations.
- Rhodefer Avenue crossing of US 101: Identify feasible alignments for a US 101 overcrossing that generally connects Rhodefer Avenue with Miller Road. Considerations should include land ownership, engineering constraints, and land acquisition costs.

PROJECTS OUTSIDE OF THE CITY'S FUNDED CAPITAL PLAN

The near-term and longer-term capital plans described in the previous pages include capital projects that are within the City's jurisdiction and that would be funded primarily by City sources (one exception is improvements to the Whitefeather/US-101 intersection, which is assumed to be funded by non-city sources). There are other types of expenditures that would benefit the City's transportation network that are not included in these capital project lists. These excluded projects/programs include ongoing rehabilitation and maintenance of the City's street system (such as filling potholes, chip seals, and overlays). Large capital projects that would be substantially funded by outside sources (such as WSDOT) or which are constructed to support specific developments are not included as City capital projects. The following major projects are anticipated to be constructed within the planning horizon, but are not included as City-funded capital projects:

- Improvements to US 101 interchanges with Simdars (State led project)
- Reconstruction of West Sequim Bay Road as a multimodal facility connection the John Wayne Development with Washington Street (development led project)
- Extension of Washington Harbour Road between West Sequim Bay and Simdars Road (development led project)



- On-site circulation roadways within the Burrow's Property southeast of Downtown (development led project)
- Extension of Spy Glass Lane between Keeler Road and Lofgrin Road (development led project)
- Extension of Grant Road between River Road and 7th Avenue (development led project)

The above projects would make important contributions to citywide connectivity and overall travel conditions for all modes. In some cases (such as the US 101 improvements at Simdars) these projects are critical for the City in meeting its traffic operations LOS, as required under the Growth Management Act. As such, while not called out as City-led capital projects, they were considered in the development of this plan.



6. IMPLEMENTING THE TMP

As described throughout this document, this TMP seeks to rethink transportation in Sequim and achieve a future vision that embraces all travel modes, maintains a “small town” way of life, and provides safe options for all. The previous chapter presented near-term (6 year) and longer-term (20 year) project lists, which collectively add up to \$36 million in transportation infrastructure expenditures over the next few decades.

This chapter explains how these projects could be funded, which is at the heart of implementing the TMP. It also describes collaboration, since implementing the TMP will require close coordination among City departments, the citizens and businesses of Sequim, and other agencies within the region.

It should be noted that the TMP is a living document and will serve as the blueprint for transportation in Sequim over the next several years. Realistically, the actions in the plan are most useful over the next three to five years, at which point a plan update will be required. Several implementation steps should be initiated over the next couple of years to determine if changes are needed, or to reaffirm a particular strategy.

OVERVIEW OF COSTS AND REVENUES

A key GMA planning requirement is the concept of fiscal restraint in transportation planning. A fiscally constrained TMP must first allow for operation and maintenance of existing facilities and then capital improvements. To develop the fiscally

constrained plan, an inventory of revenues and costs was undertaken to identify funds that are likely to be available for capital construction and operations.

It is worthwhile to note that over the past five years, Sequim’s budget for transportation has been highly variable. In looking at 2012, the City spent around \$1.8 million for transportation capital and operations. Revenues include general city funds, grants, impact fees, and the Transportation Benefit District (TBD). The City’s TBD, which generates its revenue through sales tax and can be spent on all modes of transportation, is a very important source of funding for capital projects. Impact fee revenues, which are generated by new development, have been almost nonexistent. Expenditures in 2012 included roughly two-thirds (\$1.2 million) to operations and maintenance and one-third (\$600 thousand) for capital projects.

Recognizing a recent uptick in private development and signs that the economy is beginning to grow, this plan anticipates modest growth in development over the planning horizon (at a rate of 2% per year). This level of growth is considerably below levels seen in the early 2000s, but recognizes growth potential in the City’s western commercial districts, as well as on vacant parcels flanking downtown.

As a result of this anticipated growth, this plan anticipates an increased level of funding available for transportation over the next few decades. Notably, this increased level of funding would come mainly from impact fees, which are tied to development. **Table 10** summarizes the overall funding assumptions that form the basis for this TMP. The table



also describes how funds would be spent by travel mode.

Table 10 ties to the City's near-term and longer-term capital plans that are described in the previous chapter. Together, these plans will cost the City roughly \$36 million over the next 20 years. Again, these expenditures do not include projects /programs excluded from the City's capital plans, such as roadway operations/maintenance, projects outside of the City's jurisdiction, and development driven projects.

ADDRESSING POTENTIAL REVENUE SHORTFALLS

The comparison of revenues to costs indicates that the City will need to carefully prioritize its projects, since the funding plan does not include any leeway for cost increases or revenue shortfalls. To the extent

that project costs increase or revenues do not meet expectations, the City has several options:

- Increase the amount of revenue from existing sources. These could include updated impact fees, a higher Transportation Benefit District fee, or creation of additional Local Improvement Districts.
- Adopt new sources of revenue (see text box).
- Lower the level of service standard, and therefore reduce the need for some transportation improvements.

Note that the city could also weigh modifying the land use element. This could include changing the land use element to reduce the amount of overall development or the amount of development permitted further from the City core. Both of these measures would reduce the need for additional public facilities. However, it should be noted that

Table 10. Overall Project Funding (in \$1,000s)

Funding Source	Total Available	Planned Expenditures (By Mode)		
		Bicycle	Pedestrian	Roadway
Transportation Benefit District	\$11,145	\$2,220	\$6,292	\$2,633
Utilities	\$3,600			\$3,600
General Fund/REET ¹	\$1,517		\$1,517	
Grants	\$4,586		\$56	\$6,030
Impact Fees	\$13,847			\$13,847
Total	\$34,695	\$2,220	\$7,865	\$26,111

¹ Real Estate Excise Tax



this plan assumes a fairly conservative growth rate, and it is the desire to accommodate all modes and create a complete and connected transportation network, rather than capacity needs, that drive this plan.

constantly changing due to circumstances beyond the scope and influence of this plan. Hence, regular updates are necessary to ensure the plan remains current and relevant. The TMP includes the following actions to monitor and evaluate the progress of implementing the plan.

What Are Potential New Revenue Sources?

- Proceeds from General Obligation Bonds
- Reciprocal impact fees with adjacent jurisdictions
- Creation of a Local Improvement District (LID) to fund specific projects benefiting the district
- Mitigation contributions required under the State Environmental Protection Action (SEPA)
- Working with the State Legislature to approve a local street utility.

The city can explore the feasibility and likely revenue amounts from these or other sources as the plan is implemented over the next several years.

Bi-Annual Mobility Report Card

A bi-annual mobility report card will be developed to document progress towards plan implementation and to monitor the transportation system performance. The City will use this information to inform the public regarding the City's actions, and results, related to the TMP. The report card will also provide a basis for future updates of the TMP.

The report card is expected to report on the following topics:

- Land Use and Transportation Trends - These data will describe general land use and transportation trends within Sequim. Information will include:
 - Current population and employment levels and growth rates,
 - Summary of yearly development activity, and
 - Summary of growth in traffic volumes, transit service and other trends. Given the high seasonality of Sequim's traffic (reflecting factors like tourism and the "snow bird" phenomenon), it would make sense to collect this data during both the summer and winter seasons.
- Transportation Performance - These data will focus on documenting the current performance of the

MONITORING AND EVALUATION

The TMP is a long-range plan that enables the City to plan for its current and future transportation needs. Nonetheless, the transportation network is dynamic,



transportation system, by mode.
Information will include:

- Transit route ridership (from Clallam Transit and Jefferson Transit)
- Traffic volumes
- Collisions
- Traffic level of service (auto/truck priority corridors)
- Pedestrian and bicycle volumes
- Pavement Maintenance Ratings
- Project Implementation Status - These data will summarize the city's progress towards implementing the priority network improvements recommended in the TMP. Information is expected to include:
 - Auto/truck facilities constructed
 - Pedestrian facilities constructed
 - Bicycle facilities constructed
 - Miles of Pavement overlays

The report card will provide the necessary information to help the city adjust transportation priorities and to facilitate updates to the TMP every few years.



7. GLOSSARY OF TERMS

100% Corner: A frequently used moniker for the intersection of Sequim Avenue and Washington Street. This term refers to the complete nature of the intersection, in terms of signalization and movements served.

Americans With Disabilities Act (ADA): Federal law enacted in 1990 to provide accommodations for individuals with physical and mental impairments. With respect to transportation, this law often applies to design of sidewalk and transit facilities.

Bicycle Lane: An on-street striped lane, which provides specific accommodation for bicycles. Bike lanes are typically between 4 and 7 feet wide.

Level of Service (LOS): Is a standard measure of transportation operations, which can be applied to any mode. For this plan, LOS is measured differently for each mode. For bicycles, pedestrians, and mobility scooters, LOS is measured qualitatively, based on the presence or absence of adequate facilities. For vehicles, LOS is measured quantitatively, based on vehicular demand whereby a letter grade, from A to F, is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving as well as speed, travel time, traffic interruptions and freedom to maneuver.

Mobility Scooter: An electrified scooter that provides mobility assistance for people with otherwise limited mobility. Given the age profile of Sequim, this plan prioritizes accommodating mobility scooters.

Olympic Discovery Trail (ODT): 100-mile system of trails, bike lanes, and other designated facilities, which provides a scenic route for recreational cycling across the Olympic Peninsula. **Sequim 120:** The proposed title for Sequim's upcoming Comprehensive Plan update. The Comprehensive Plan looks out 20 years, which will extend to the 120th year since Sequim's founding.

Sharrow: A shared-lane marking placed in the center of the travel lane, which indicates that cyclists may use the entire lane. Sharrows tend to be placed on slower facilities and are meant to encourage cycling.

Special Planning Area (SPA): In addition to projects listed in the six and twenty-year project lists, the City identifies four SPAs that will require additional study before designing specific improvements. These SPAs include the intersection of Washington and Sequim, the vicinity of the High School and Middle School, Washington Street between Brown Road and Rhodefer Avenue, and the alignment for a potential US 101 overcrossing connecting Rhodefer Avenue and Miller Road.

Trail: A separate facility provided for bikes and pedestrians. Unlike bike lanes, trails are completely separated from the roadway and are often designed as shared facilities for bikes and pedestrians.



Transportation Benefit District (TBD): Sequim's TBD is a voter-approved sales tax measure of 0.2%, which funds transportation projects.

Transportation Master Plan (TMP): A long-range vision for transportation, which identifies transportation priorities, policies, and projects to support the Comprehensive Plan.

