

CHAPTER 1 INTRODUCTION



The City of Bainbridge Island is a unique community with a unique set of transportation needs. The City, which encompasses the entire island, is primarily residential but includes a variety of land uses and intensities of development from the urban Winslow area to farmlands and suburban communities. Each of these land uses has different transportation needs that ideally would be addressed separately; however, the entire roadway system operates as a system.

The backbone of the transportation system is the SR-305 corridor that runs from the Bainbridge Island ferry terminal north to the Agate Pass Bridge. This State facility not only provides regional travel to and from the Island, but also is an important connection for local traffic needs. The Island's transportation system is truly multimodal, with commute, school, recreation, and shopping trips being commonly taken by, foot, bicycle, bus, auto, and ferry. While Winslow and other more urban areas have sidewalks, bicycle lanes, and widened shoulders, which facilitate non-motorized movement, there are many areas of the City where pedestrians and bicyclists must share the vehicle travel lanes or walk on narrow, unimproved shoulders. Non-motorized issues have been discussed as part of the City of Bainbridge Island's Non-Motorized Transportation Plan, which serves as a sub-element to this Plan.

Traffic has increasingly become an issue for the community. Traffic from residential and economic growth has resulted in increased roadway volumes, oftentimes coupled with high vehicle speeds and congestion at intersections. This traffic increased conflicts with non-motorized users. In addition, the release of the ferry and other commuter traffic creates a surge of vehicles onto the highway and the entire roadway system. During peak commute hours and tourist season, the highway can be overwhelmed resulting in congestion and delays.

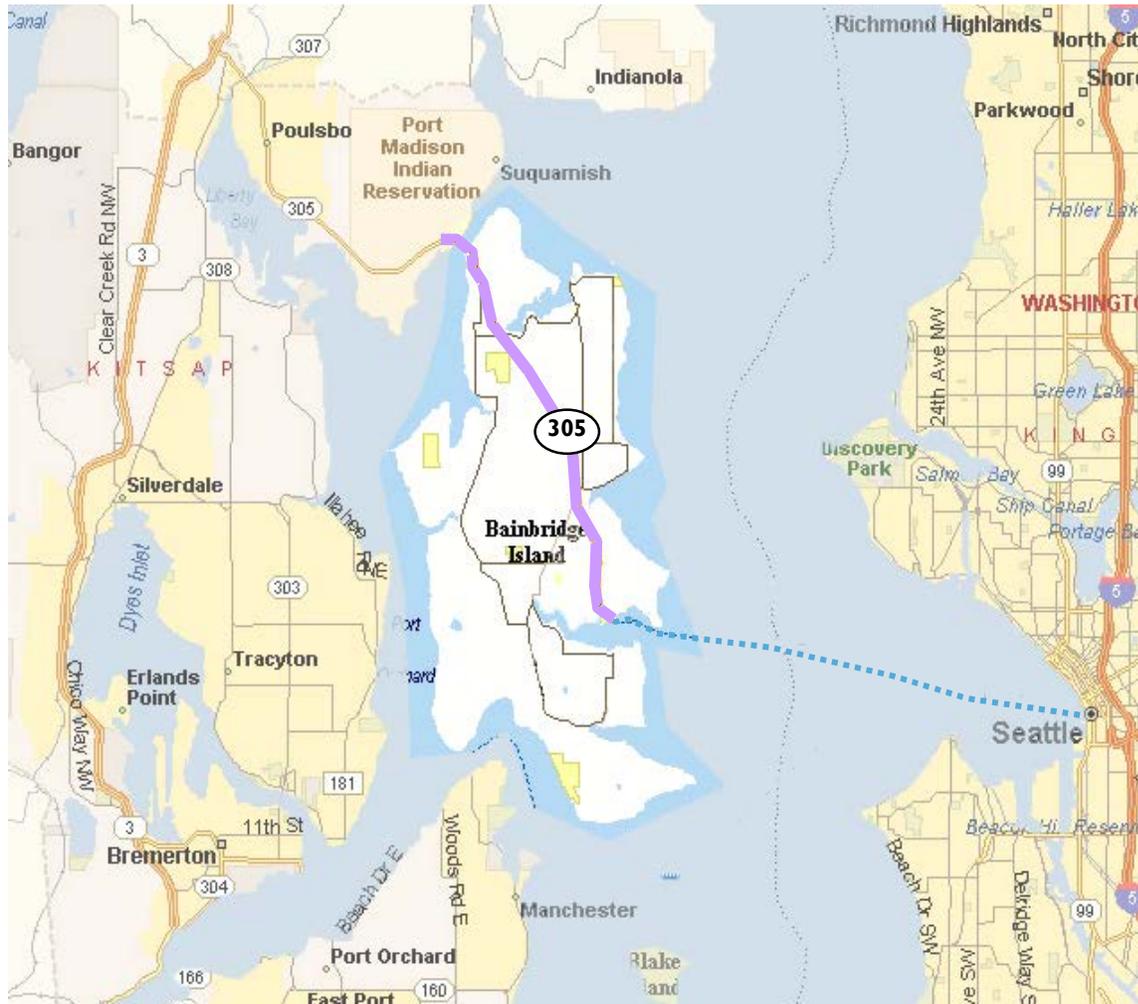
Plan Purpose

The Island Wide Transportation Plan (IWTP) represents an update and expansion of the 2004 Island-wide Transportation Study (IWTS) and the Transportation Element of the Comprehensive Plan. The IWTP focuses on the issues and desires of the Bainbridge Island community to develop a transportation system that will accommodate vehicle traffic patterns, within its multimodal environment. Figure 1-1 shows the study area and primary transportation features in relationship to the surrounding region.

The purpose of this effort is to provide an in-depth Plan of the existing and future traffic patterns to determine future transportation needs and solutions. The effort will include the development of a transportation model based on recent traffic counts, land use data, and roadway information that has allowed the analysis of existing and future travel needs. The emphasis in the model is to identify congested areas and the improvements needed to accommodate existing future vehicle traffic in light of the needs of all of the Island's transportation modes of travel.



**Figure I-1
Planning**



Credit: Microsoft Expedia





The IWTP incorporates information from other transportation planning efforts in order to provide a consistent approach to transportation problems. The IWTP uses information from the Winslow Master Plan, Non-Motorized Transportation Plan, and Comprehensive Plan to provide a single document that directs transportation planning efforts throughout the community.

Planning History

Bainbridge Island is planning under the Growth Management Act (GMA), and has prepared a Comprehensive Plan in accordance with the requirements of GMA. In 1994, the City's Transportation Plan provided discussion and analysis of the transportation needs of the Island, with the exception of the Winslow subarea that would be studied separately. The final study was adopted and incorporated in the Transportation Element of the City's 1994 Comprehensive Plan. Since that time, a number of Comprehensive Plan updates have occurred to clarify, modify, or revise various sections of the study, including those in the Transportation Element.



In 1995, the Winslow Master Plan, as a sub-element of the Comprehensive Plan, provided focus of the transportation needs in the Winslow and ferry terminal areas. In 2002, a Non-Motorized Transportation Plan was adopted which proposes a transportation system to meet the needs of pedestrians, bicyclists, and other non-motorized transportation users.

Each of these efforts had been developed with extensive effort and time by members of the community through steering committees, public participation, workshops, and surveys. Their influence is part of this plan and represents the values and thoughts of the community.

Relationship to Comprehensive Plan

The City of Bainbridge Island has developed its Comprehensive Plan under the requirements of the Growth Management Act (GMA). The GMA requires that jurisdictions identify existing transportation system characteristics, establish level of service ratings, identify existing and future deficiencies, develop improvement projects and strategies to mitigate deficiencies, and analyze projected revenues to ensure that necessary improvements will be constructed concurrent with demand.

In 1997, the State of Washington amended the GMA. One of the important provisions of the amendment was that all jurisdictions must update their Comprehensive Plans by 2002 and periodically thereafter to ensure that changes within the community are reflected in the plan.

The City is currently undergoing an update to its Comprehensive Plan, to be completed in 2016. The Island-wide Transportation Study (now IWTP) was last updated in 2004 and is being updated in 2015 to pre-inform the development of the 2016 Comprehensive Plan Update.

The IWTP addresses and provides a detailed analysis of a variety of transportation issues affecting the community. Elements of the IWTP will be used to develop the Transportation Element included as part of the updated Comprehensive Plan. It is intended that the IWTP will be adopted by Council following the public review during the Comprehensive Planning process and update of the Transportation Element of the comprehensive Plan.



Plan Update

The Study was last updated in 2003 and accepted in 2004 by the City Council. The development of the original Study involved an expensive consultant led effort with considerable public outreach.

The City's Non-Motorized Transportation Advisory Committee (NMTAC) and Staff have worked together to evolve the City's level of thinking for non-motorized planning. This work has been reflected in Comprehensive Plan updates. Future updates will provide an opportunity to formalize these on-going efforts and build upon the original 2003 effort.

The NMTAC and Staff recognize the huge effort that was involved with creating the original Island-wide Transportation Study. This study is comprehensive and is still largely relevant today. Those involved also recognize that to repeat an endeavor of that scale will take considerable volunteer and staff time as well as financial resources. At this time, the City has been very successful in procuring grant funding to provide for the delivery of a number of significant capital improvements including the Sound to Olympics (STO) Trail, the Wing Point Way Reconstruction, and the Wyatt Way Reconstruction projects. The priority for resources at this time is best spent in implementation as these improvements include grant funds with local match components.

Public involvement of the Plan will be limited to comments taken at regular NMTAC meetings during the development of the update and at the time the draft plan is presented to the Planning Commission for comment.

It is envisioned that this update will be accomplished by Staff working with the NMTAC to review and comment on a chapter by chapter basis. The City has engaged the services of Transportation Solutions Incorporated (TSI) to support the City Council in considering implementation of Transportation Impact Fees. This effort involves extensive traffic counts and the creation of a transportation model. TSI's scope of services includes updating information and exhibits in the update.

Plan Organization

The Island Wide Transportation Plan is organized in nine chapters. These correspond to the goals and policies developed by the Steering Committee to guide the Plan. Each chapter addresses one or more of the Plan goals and discusses how the policies were implemented by the City for each goal. The chapters are as follows:

Chapter 1: Introduction

Chapter 2: Goals and Policies

Chapter 3: Sustainability and Quality of Life

Chapter 4: Operations and Mobility

Chapter 5: SR305



Chapter 6: Safety and Maintenance

Chapter 7: Non-motorized Transportation

Chapter 8: Other Transportation Systems

Chapter 9: Financing

A matrix is provided below showing where in the IWTP the information is contained to address Growth Management Act requirements for transportation planning in accordance with RCW 36.70A.070(6).

Land use assumptions used in estimating travel. (i)	Refer to Chapter 4 and Appendix ?
Estimated traffic impacts to State owned transportation facilities. (ii)	Refer to Chapter 5.
Inventory of transportation facilities and services. (iii-A)	Refer to Figure 4-1, Roadway Classifications, Figure 8-1, Ferry Routes and Figure 8-5 Kitsap Transit Routes.
Level of service standards for locally owned arterials and transit routes. (iii-B)	Refer to Chapter 4 and Chapter 8.
Level of service standard for state highways. (iii-C)	Refer to Chapter 4.
Actions to correct current level of service deficiencies. (iii-D)	Refer to Chapters 4 and 5.
Traffic forecasts. (iii-E)	Refer to Chapters 4 and 5.
Identification of needs to meet future local and state system demands. (iii-F)	Refer to Chapters 4 and 5.
Probable funding capacity (iv-A)	Refer to Chapter 9.
Multi-year financing plan to meet road and transit level of service standards over the next 6 years. (iv-B)	Refer to Chapter 9.
Probable funding shortfalls and strategies to address funding needed to meet or reassess level of service standards.(iv-C)	Refer to Chapter 9.



Assessment of impacts of plan on neighboring jurisdictions. (v)	Refer to Chapters 4, 5, and 8.
Demand Management Strategies. (vi)	Refer to Chapter 8.
Non-Motorized element planned improvements. (vii)	Refer to Chapter 7 and 9.

CHAPTER 2 ISSUES, GOALS AND POLICIES



This Chapter identifies the key transportation issues facing the community, and provides for a review and update of the City's transportation goals and policies.

The first Island-wide Transportation Study was finalized in 2004. An extensive goals and policies chapter was developed for that Study. An Island wide Transportation Steering (IWTS) Committee was formed, at that time, and played a primary role in developing the original goals and policies. These goals and policies were incorporated into the Transportation Element of the City's 2006 Comprehensive Plan.

The 2015 update includes a review of the current goals and policies in the Comprehensive Plan by the City's Non-Motorized Transportation Advisory Committee (NMTAC). Recommendations for evolving transportation goals and policies are outlined in this section. The recommendations will be reviewed by the Planning Commission and further edited. The final document is intended to inform the 2016 Comprehensive Plan update.

Transportation Issues

As population grows on the Island and in Kitsap County more demand is placed on the Island's roadway network and the regional SR305 Corridor. As traffic volumes and vehicular-related congestion increases, so does conflicts with bikes/ peds and the need for transportation improvements to accommodate all modes of transportation and a wider range of users. We need to consider how future growth will affect the community, and how to preserve the character and livability of Bainbridge Island. The following list identifies and briefly describes the community's transportation issues.

- **Limited Transportation Choices** – Given the relative lack of non-motorized infrastructure in many parts of the Island, and limited transportation services, many islanders are dependent on individual automobile travel as their only practical and safe transportation option. In order to meet the needs of a growing population and maintain or improve quality of life on the Island, we need to provide better transportation options to improve mobility.
- **Roadway Congestion** – Traffic on Island roadways, particularly on SR 305 and within Winslow, can result in a variety of issues such as making it difficult to “get around” by automobile, traffic “spilling over” into adjacent neighborhoods, and making it more difficult for transit and non-motorized users to get to their destinations in a timely manner. Congestion related to ferry loading and unloading creates surges on Island roadways every 45 to 50 minutes. In the afternoon hours, impacts from ferry activities can snarl area traffic and cause traffic delays. In addition to ferry traffic, the SR 305 Corridor has experienced increasing congestion due to commuters traveling on and off island across the Agate Pass Bridge. Congestion and increased travel times are experienced during commute hours along the SR 305 Corridor. Congestion related to schools in the north end of the urban center of Winslow has become more problematic. With Woodward and Sakai Schools now on the same schedule, there is significant traffic congestion at intersections along New Brooklyn Road. Increasingly, youth are being driven to school and to activities after school and not taking the school





bus, walking, or bicycling to home or to after-school activities, causing additional demands on the transportation system in the Winslow Area.

- **SR 305 Traffic Congestion** – Concern surrounds the future of the SR 305 Corridor. While the existing configuration of two lanes is adequate during off-peak hours, peak hour traffic coupled with surges from exiting ferry activities have resulted in high levels of congestion at multiple locations. This affects Island residents using the corridor, off-Island commuters, and increases the difficulty of cross-Island travel, resulting in higher volumes of traffic on local streets when drivers try to avoid SR 305 congestion. Access to SR 305 is becoming increasingly difficult at the north end of the Island.
- **Greater Winslow Area Traffic Congestion** – The growth of vehicular traffic on Bainbridge Island, particularly in the Winslow subarea has resulted in more vehicles on the street system. Intersections are increasingly congested, in particular during commute and school drop off and pick up times, but also in general. Increasingly, these impacts are felt on streets adjacent to major corridors. Residents of these streets feel that the impacts of high traffic volumes and travel speeds need to be controlled to maintain the quality of the neighborhoods.
- **Motor Vehicle Speeds and Speed Limits** – Excessive vehicular speeds puts the traveling public at greater risk especially for walkers, wheel chair users, and bicyclists. Many Island roads lack shoulder facilities or separate bicycle and pedestrian infrastructure. Speeds are a barrier to many people who want to walk, use a wheelchair, or ride a bicycle for transportation or recreation in many areas on the Island.
- **Non-Motorized Travel** – Non-motorized modes of transportation are important to many Islanders and the need for improved non-motorized infrastructure has consistently ranked high in community surveys. The City has, and continues to, invest significant resources in planning and implementing non-motorized improvements. While significant improvements have been made, many parts of the Island infrastructure are not adequate to serve the needs of a wide range of users. As a result, many people remain dependent on cars as the only practical and safe means of travel. Many people do not feel safe walking and biking outside of the urban center of Winslow.
- **Transit Service** – Bainbridge Island is a bedroom community of Seattle and ferry service is essential for many Islanders. Ferry Service is vital to many residents who work in Seattle and to the local and regional economy. As automobile capacity and parking space at the ferry terminal is limited, non-motorized facilities with connectivity to the ferry and transit service are important to many Islanders for sustainably accommodating population growth. In recent years ferry auto use has declined and walk on passenger growth has moderated. WSF forecasts significant growth of non-motorized trips and automotive trips to remain flat in the coming decade. Kitsap Transit provides bus service connecting many areas of the Island to the ferry and the urban center of Winslow. Kitsap Transit is working to expand service during non-peak hours and to inter-Island locations, and many in the community would like to see this service maintained and expanded. This service has provided valuable mobility to the community, especially for older and younger populations.
- **Transportation Network Connectivity** – Bainbridge Island’s roadway system has few roadways that contribute to the development of a “network”. Many parts of the Island have only a single way to access the area, such as the Point White/Crystal Springs or Agatewood areas. Mobility, emergency access, emissions, and circulation can all be improved with better roadway connections. Alternative modes of travel are a high priority for many Islanders. Expanding the Island’s network of both on-street and off-street non-motorized facilities is needed to provide neighborhood, inter-island, and regional connectivity.
- **Roadway Intersection Congestion** – At locations other than SR 305, intersections may limit capacity as the Island population grows. Islanders are increasingly concerned about relieving intersection capacity at school locations and during commute times in the urban center of Winslow. Intersection congestion can also lead to delay for non-motorized users, in particular bicyclists where riders share the road with vehicles.
- **Roadway and Intersection Safety** – There are some Island locations where there has been a history of or a potential for accidents. The perception of these locations as unsafe may reduce the population



willing to walk, bicycle, or ride (on a horse or in a wheelchair) because they want to avoid a roadway or intersection that is uncomfortable for walking or bicycling.

- **Livability** – Providing convenient active transportation choices provides for better public health and improved lifestyles both in the urban center of Winslow and outlying areas of the Island. Bikeable and walkable communities are becoming increasingly desirable and important to many Island residents. These aspects of the community are attractive to visitors as well and are an increasingly important element to creating a vibrant downtown business community.
- **Community Character** - There is a desire to retain the feel of the Island's existing transportation system. Outside of Winslow and other more urban areas, the tree-lined narrow roadways, open drainage ditches, and winding roads provide a more rural flavor that many consider important elements of the Island's character. However, these elements need to be balanced with the community's desire for safe roads that provide mobility options for all ages and abilities of Island residents without requiring a vehicle.
- **Environmental impacts** – The City contains many environmental qualities that should be maintained. As the City's population grows, developing alternative modes of transportation is desirable to reduce congestion and carbon emissions from motor vehicles.
- **Storm water** – Storm water drainage of roadways is an important environmental aspect. As storm water regulations evolve, the cost of roadway construction has increased exponentially.
- **Regional coordination** – The IWTP update is an opportunity to coordinate with WSDOT (WSF, Olympic Region), Kitsap Transit, and neighboring jurisdictions to ensure a more integrated transportation system.
- **Financing** – Solutions to many of the Island's transportation issues will cost money, a lot of money. Considering how best to pay for these improvements and who should pay (City, State, Federal) are key issues to this Plan.

*According to the
U.S. Census 2009 -
2013:*

*The average
commute for Kitsap
County is 29.7
minutes*

*On Bainbridge
Island the average
commute is 43.2
minutes.*

US Census Bureau
March 31, 2015

Transportation Vision, Goals, and Policies

A vision is a statement that provides an overall direction to the Plan. It encompasses a variety of topics, but summarizes them into an overall thought or statement. Goals and policies are statements that reflect the vision of the community. The goals and policies address issues and concerns, define community priorities, develop framework for transportation solutions, and guide their implementation.

The vision, goals and policies are critical to the development of the plan. They provide a reference point, or a check, to identify if the proposed plan and actions meet the desires of the community. In this Plan, the goals and policies described below were used to:

- Review the existing roadway system
- Identify existing needs
- Develop roadway improvements
- Prioritize projects



The Transportation Vision and Goals are shown as currently written in the City’s current Comprehensive Plan. Recommended edits are shown as underlines for additions and strike throughs for deletions.

Transportation Vision

Provide a safe, dependable, properly maintained, and fiscally responsible, multimodal transportation system; promoting active transportation modes and transit, consistent with and supporting the other Elements of the Comprehensive Plan. The transportation system should improve mobility and safety for all users while respecting community character of neighborhoods and the environment. The system needs to be regionally coordinated, adequately financed, and community supported.



GOAL 1: Multimodal

Encourage the development of an integrated multimodal transportation system that provides a range of transportation alternatives and increases the through movement of people.

GOAL 2: Non-Motorized

Provide the citizens of Bainbridge Island with a non-motorized transportation system that is a planned and coordinated network of shoulders, sidewalks, trails, footpaths, bikeways, and multi-purpose trails that connect neighborhoods with parks, schools, the shoreline, the ferry terminal, and commercial areas in a way that maximizes mobility, provides a sense of safety and comfort for pedestrians, bicyclists, and equestrians, while respecting property owner’s rights, the natural environment and the character of existing neighborhoods.

2.1 Non-Motorized mobility and connectivity

Provide a non-motorized transportation system consistent with the policies of Goal 1 in Chapter 7 of this plan that effectively serves the needs of people who walk, bike, or ride horses or in wheelchairs; encourages non-motorized travel; and provides a continuous network of attractive shoulders, sidewalks, footpaths, multi-purpose trails, and bikeways throughout the Island that are also connected to regional systems.

2.2 Non-Motorized design and construction

Develop non-motorized design standards that provide safe and efficient access, encourage use and mobility, and are appropriate to the location and needs of the immediate area, consistent with the policies of Goal 2 in Chapter 7 of this plan.

2.3 Non-Motorized safety and maintenance

Promote the safety of non-motorized users through effective transportation improvements, maintenance operations and enforcement, following the policy direction of Goal 3 in Chapter 7 of this plan.

2.4 Non-Motorized community education

Improve the safe use of non-motorized and roadway facilities by non-motorized and motorized users through continuous community education of NMTP goal 4 in chapter 7 of this plan.



2.5 Non-Motorized implementation

Provide mechanisms for funding, prioritizing and implementing the non-motorized transportation system plan as described in Goal 5 in Chapter 7 of this plan.

GOAL 3: Ferry Service

Coordinate with Washington State Ferries (WSF) and other possible providers to operate ferry service to Bainbridge Island that meets local service and commuter needs, coordinates with all travel modes, and provides equitable regional service.

3.1 Parity of ferry services

Support efforts to equalize ferry services from Bremerton, Bainbridge, Kingston, and Southworth in order to optimize the use of each ferry service. Support actions that balance peak hour travel times and provide ferry capacity closer to users' origin and destination.

3.2 Ferry priority

Support the ferry system efforts to maximize the convenience of pedestrian, bicycle, transit, and HOV use on ferry runs through providing priority status and improvements to encourage non-single occupancy vehicle (SOV) use.

3.3 Passenger ferry options

Encourage innovative service options for foot ferry passengers such as water taxi and passenger ferry service to and from various areas of the Puget Sound region.

GOAL 4: Bus Service

Encourage the use of public transit and encourage transit agencies to operate and maintain local and regional transit service and facilities that reduce the need for single-occupant vehicles and support the needs of transit-dependent users.

4.1 Transit Level of Service (LOS)

Encourage a transit LOS standard that identifies deficiencies and program improvement needs as defined in the Kitsap Transit Plan.

4.2 Public transit ferry access

Support actions from Metro, Sound Transit, Kitsap Transit, or other appropriate agencies that:

- Improves public transit from the Seattle ferry terminal directly to popular destinations in Seattle metropolitan area, as well as Sea-Tac Airport.
- Promotes the availability of public transit service to ferry commuters and for special events.
- Adjusts bus schedules to meet ferry arrival and departure times and improve service throughout the day and during evening hours.
- Provides information on the ferryboats and at the ferry terminals regarding transit options.

4.3 Multiple-use P&R lots

Encourage park-and-ride use of multiple-use lots such as those located at churches or other locations, and promote the use of those lots to Island residents. Encourage park-and-ride lots to include areas, preferably covered, for bicycle parking users.



4.4 Expansion of Island transit

Support the expansion of Island transit services that target:

- Ferry commuters
- Non-ferry commuters, including Island employees
- Connection of High School Road and Winslow Way
- Non-commuter travel to other Kitsap County service and employment areas
- Intra-Island connection to Neighborhood Service Centers and residential areas
- Transit dependent access, including addressing the access needs of youth, the elderly and disabled transit users

GOAL 5: Transportation Demand Management

Encourage greater efficiency of the integrated multimodal transportation system that provides a range of transportation alternatives and increases the through movement of people.

5.1 SOV Parking restrictions

Use fee structure and space allocation programs to discourage Single Occupancy Vehicle (SOV) parking at City-controlled parking.

5.2 HOV parking

Develop parking and other programs that encourage High Occupancy Vehicle (HOV) use, including expanding carpool and van pool parking.

5.3 SOV reduction programs

Encourage schools, the private sector and the public sector to adopt programs that reduce SOV use including telecommuting, and promote alternative modes of transportation, including HOV, non-motorized transportation, and transit use.

5.4 SOV avoidance evaluation

The development of transportation improvement program projects and the prioritization of those projects shall consider the inclusion of multimodal enhancements as a criterion.

GOAL 6: Operations and Mobility

Improve the operation and mobility of the Island's transportation system through the identification and implementation of system improvements that maintain Level of Service (LOS) standards and meets the transportation vision.

6.1 Road development guidelines

Construct, modify, and maintain roads to: 1) meet safety needs, 2) provide for transit and non-motorized users (including bicyclists, pedestrians, wheelchair users, and equestrians as appropriate), 3) correct LOS deficiencies, 4) improve connectivity and emergency response times, and 5) meet Comprehensive Plan goals.



6.2 Street design guidelines

Set street design guidelines that establish street widths, reflecting the desired vehicle speeds, accommodating bicycle, pedestrian, wheelchair, equestrian, and transit uses, and providing for emergency vehicle access and also considering community character.

6.3 Roadway classifications

Set appropriate roadway classifications that reflect existing and projected vehicle usage, traffic operations, including non-motorized and transit uses, and consider adjacent land uses and community character.

6.4 Roadway LOS

Establish Level of Service standards for Bainbridge Island, excluding SR 305, that measure the performance of the existing transportation system, quantify the traffic impacts of future development, and prioritize improvements to the transportation system.

6.5 Concurrency management

Follow the City's concurrency ordinance and monitor the expected transportation impact of proposed development on the available capacity of the roadway system. Before issuing development approval, ensure that there are adequate transportation facilities or that improvements are scheduled and funded for completion within six (6) years.

6.7 Access management

Develop access management programs to control the location and number of curb cuts. Control the location and spacing of commercial driveway entrances and the design of parking lots to avoid congestion near intersections, line of sight obstructions, confusing circulation patterns, and avoid traffic and pedestrian accidents.

6.8 Truck corridors

Designate truck corridors to allow the efficient movement of goods and freight within the transportation system.

6.9 Island mobility

Identify and support improvements that will improve vehicular and non-motorized connectivity across SR 305.

6.10 Acquisition of transportation facilities

Secure easements or other land dedication for transportation facilities through development mitigation, donation, tax incentives/exemption programs, or direct acquisition.

6.11 LOS reassessment

If the adopted LOS standard cannot be maintained, due to funding shortfalls or other events, the City shall evaluate and revise the adopted LOS standard, restrict land use development as required, or institute other actions consistent with LOS reassessment strategy described in the Transportation Element.



GOAL 7: SR 305/Through Traffic

Coordinate with WSDOT to ensure that state facility improvements meet the goals of the Bainbridge Island transportation vision and Comprehensive Plan, and minimize impacts to the local transportation system.

7.1 SR 305 LOS standard

Adopt the Level of Service standard for SR 305, as established by WSDOT in the *State Highway Plan*. Under the current plan, the LOS standard is “D-mitigate”, where actions are taken to mitigate congestion when operations drop below LOS D.

7.2 Bridges to the Island

Oppose any proposal to construct any new bridges to Bainbridge Island. Support planning efforts for the eventual replacement/ refurbishment of the Agate Pass Bridge including potential capacity improvements for transit and non-motorized modes.

7.3 SR 305 improvements

Support the construction of spot improvements for SR 305 to reduce congestion and improve safety for through traffic, local traffic, and non-motorized and transit users.

7.4 Sound to Olympics (STO) Trail

Support the construction of the STO and its branch trails.

7.5 Park & Ride facilities

Encourage the development of park-and-ride lots near commuters' point of origin throughout Kitsap County in order to minimize traffic impacts along SR 305.

7.6 Impact to State facilities

Evaluate the Comprehensive Plan's land use designations to assess their impact on all roadways, including State-owned facilities, and include as part of the Transportation Element.

7.7 Improvements to off-island State facilities

Encourage off-Island projects that will mitigate on-Island congestion to SR 305.

GOAL 8: Neighborhoods

Consider the special needs of neighborhood safety, pedestrian and bicycle facilities, transit use and facilities, and traffic flow in the development of transportation improvements that affect neighborhoods.

8.1 Neighborhood cut-through traffic

Protect residential neighborhoods from the impacts of cut-through motor vehicle traffic by providing appropriate connecting routes and impact-minimizing design features for new developments and applying appropriate traffic-calming measures to control vehicle volumes while maintaining emergency vehicle response times.

8.2 Neighborhood street development

Establish roadway standards to enhance the character of neighborhoods by providing appropriate street width, lighting for safety, curb cuts, pedestrian and bicycle facilities as consistent with the Comprehensive Plan.



8.3 Neighborhood circulation

Develop a circulation and access management plan for neighborhoods and neighborhood service centers so that as properties develop, vehicular and non-motorized connectivity and circulation are maintained, cut-through vehicle traffic is discouraged, and appropriate speeds are encouraged, while maintaining access and response times for emergency vehicles.

GOAL 9: Safety and Maintenance

Support the safe use of the transportation system by maintaining the roadway system and including necessary safety enhancements in transportation improvement projects.

9.1 Maintenance is a priority

Include transportation projects and adequate operation and maintenance funding to ensure that the vehicular and non-motorized transportation system infrastructure is maintained in a safe and usable condition.

9.2 Roadway Network Traffic Control Evaluation

Conduct traffic studies in areas of the Island's roadway network that have experienced significant traffic changes due to development periodically at the discretion of the City Engineer to ensure that appropriate traffic control devices are employed to ensure the safety of the traveling public. Consider opportunities to improve the non-motorized infrastructure as a means to facilitate additional mobility options to the roadway network.

9.3 Roadside Safety Program

Periodically evaluate roadside conditions of the City's secondary arterial network and higher volume collectors, at the discretion of the City Engineer, to evaluate the condition of existing roadway elements, the need for new elements, and prioritize repairs and improvements to ensure the safety of the traveling public.

9.4 Street lighting guidelines

Provide street lighting to address safety issues. Light design and placement should minimize glare and light spillage, and maximize visibility of pedestrians and bicyclists.

GOAL 10: Parking



The availability of public parking is an asset to commercial districts and a benefit to Island residents and visitors. On-street parking is a vital element of the core commercial district that includes the City's "Main Street" community on Winslow Way. On-street parking may be a benefit environmentally in urban areas as it may require less developed impervious surface than off-street parking.

10.1 Encourage on-street parking in urban zoned areas.

Development of street frontages in urban commercial areas should maximize on-street parking to the extent practical. Development projects in urban residential areas should consider on-street parking in favor of off-street parking.



10.2 Preserve on-street parking in the Core commercial district of Winslow.

City projects in commercial districts should maximize parking to the extent practical within the existing rights of way. Note that “Complete Streets” projects must also balance other functions such as non-motorized uses.

10.3 Seek opportunities to expand public parking.

The City should look to maximize public parking on City-owned properties in addition to maintaining convenient parking for visitors and staff at City facilities.

10.4 Prioritize parking in the urban center of Winslow for short term use.

Continue to manage City public parking in the urban center of Winslow so that commuter parking for ferry commuters is not practical and short term parking is prioritized for the Waterfront Park, Senior Center, and patrons of downtown businesses.

10.5 Support parking programs for customers in retail/ service areas and employees of local businesses in the Main Street area of the urban center of Winslow.

Work with business owners toward the goal of limiting employee parking to off street facilities to optimize available/ convenient parking for patrons. Continue to manage City public parking to maximize close in parking for patrons of local businesses and assist in providing some daily off-site parking for employees at walkable outlying locations.

10.6 Encourage bicycle parking in the urban town centers and at public facilities.

Seek opportunities to accommodate bicycle parking. Consider providing bicycle parking at locations convenient to businesses providing goods and services and for employees who commute to work by bicycle. Provide bicycle storage at transit facilities.

GOAL 11: Community Character

Develop transportation improvements that respect the Island’s natural and historic character and are consistent with both the short and long-term vision of the Comprehensive Plan.

11.1 Scenic resource protection

Protect the Island's unique scenic resources along non-urban transportation corridors; require broad greenbelts and trees to screen parking and unwanted views and buffer noises between the roadway and development as identified in the Land Use element.

11.2 Road development guidelines

Encourage the appearance of winding, narrow roadways in non-urban areas through the provision for and retention of appropriate roadside vegetation and trees, and following of the natural topography whenever possible.

11.3 Street design guidelines

Reflect the more urban nature of roadways within Winslow Planning Area and within neighborhood centers by encouraging, where appropriate:

- crosswalks and sidewalks
- street trees and landscaping
- traffic calming strategies and devices



- on-street public parking
- accommodations for transit stops and facilities
- bike facilities
- street lighting, with an emphasis on maximizing pedestrian and bicycle visibility
- ADA requirements

11.4 Street lighting guidelines

Minimize the use of street lighting outside of Winslow, except to address safety issues design lighting to minimize glare and light spillage.

11.5 SR 305 scenic character

Retain the scenic character of SR 305 by minimizing the placement of signs, discouraging new access points, and maintaining vegetative buffers.

GOAL 12: Environment

Develop, operate, and maintain a transportation system that respects the natural environment including the quality of the Island's air, water, and natural habitats.

12.1 Environment sensitivity

Minimize impacts of road construction on environmentally sensitive areas; minimize damaging runoff and pollution from road use and maintenance; implement programs that encourage the planting of low-maintenance, vegetated groundcover and trees along roadways.

12.2 Utilities

Where possible, the City shall require the undergrounding of overhead utilities to reduce the need for removal and maintenance of roadside vegetation.

12.3 Air quality

Develop transportation plans and programs that reduce travel demand, improve traffic flow, and consider the impact to air quality and Support County, regional, and state air quality goals and requirements.

12.4 Wildlife corridors

Minimize transportation impacts to identified wildlife corridor crossings so that adequate linkages for animal movement between habitat areas are maintained.

GOAL 13: Community Involvement

Ensure involvement and input from the citizens at all stages of significant transportation projects and decision-making which affect Bainbridge Island. Using the theory and practices of Context Sensitive Solutions seek to refine the goals of the Comprehensive Plan for the context of the site in the development of the design of transportation projects.

13.1 Citizen involvement

Provide citizen opportunities for reviewing transportation plans and documents to give an opportunity for public comment and ensure consistency with the community vision.



13.2 Participation in regional decision-making

Insist on early and full City participation in regional transportation decisions affecting the Island. Such participation should include City and community representation in the decision making process and public meetings on the Island.

13.3 Public education

Educate and inform the public on the proposed methods and potential alternatives that address identified transportation issues.

GOAL 14: Regional Coordination

Coordinate with the local, regional, and state, public and private organizations that promote regional transportation improvements and services that are compatible with the community's vision as expressed in the Comprehensive Plan.

14.1 Agency cooperation

Participate in regional coordinating functions with the Kitsap County, Kitsap Transit, Washington State Ferries (WSF), Kitsap Regional Coordinating Council, Puget Sound Regional Council, and the Washington State Department of Transportation and other appropriate public transportation agencies and user groups.

14.2 Regional planning

Support regional studies that describe and identify the impacts of regional traffic on the Island's transportation system.

14.3 Jurisdictional coordination

Work to ensure that the transportation system is planned and operated in coordination with adjoining jurisdictions, Kitsap County, and the Washington State Department of Transportation.

GOAL 15: Transportation Financing

Prepare a fiscally, responsible cost-effective transportation financing plan that optimizes the use of City funds and leverages other funding sources.

15.1 Developer LOS requirements

Require all new and expanded development to maintain the adopted Transportation LOS standard. The pro-rated cost of any improvements needed to maintain the adopted LOS shall be the responsibility of developers.

15.2 Developer participation

Require new and expanded developments to construct, or participate in the funding, to upgrade unimproved roadways to City standards.

15.3 Funding from others

Aggressively seek available County, State, and Federal money to fund projects that meet the overall Island's transportation objectives.



15.4 Advance system planning

Ensure that the Island's transportation improvement plan accounts for forecasted population and employment growth and has revenue sources sufficient to build and maintain it.

15.5 Preservation of existing system

Mandate the maintenance and repair of the existing transportation system is a high priority when making funding allocation decisions.

15.6 Traffic Impact Fee

Adopt and update a traffic impact fee for mitigating the impacts of future development.

CHAPTER 3

SUSTAINABILITY AND QUALITY OF LIFE



One of the most important issues to the Bainbridge Island community is the relationship between the transportation system elements and the character of the community, livability, public health, and the environment. This chapter discusses each of these elements to the transportation system, identifies how this Plan responds to these issues, and provides examples of transportation system features that illustrate these concepts.

Transportation plays a large role in the quality of life of Bainbridge Island residents. The ferry terminal to Seattle and the Agate Pass Bridge are the only two options for traveling off the island. Bainbridge is largely a bedroom community of Seattle and Kitsap County and many Islanders commute off-island by ferry or by bridge. Lengthy commute times by ferry or being stuck in traffic on SR305 mean spending hours away from family, friends, and activities. Speeding and cut-through traffic makes neighborhood streets feel unsafe. Reliable and efficient transportation on and off island is important to balance jobs and housing and maintaining the quality of life for Island residents.

Poor quality or non-existent bicycle and pedestrian facilities can be a deterrent to residents walking or bicycling for transportation, connecting to transit, traveling to schools and parks, as well as for recreational purposes. Non-motorized facility networks provide options for active modes of transportation allowing residents to make healthy lifestyle choices. Walkability and bikeability are desirable characteristics of neighborhoods. An increasing number of Island residents are choosing to walk and bike to goods and services in the urban developed area of the Island and to work.

How people choose to travel is a key element of both environmental sustainability and quality of life. Transportation is a significant contributor to climate change, as it accounts for a high percentage of greenhouse gas emissions. The City's Comprehensive Plan focuses growth in urban areas such as Winslow and the Neighborhood Service Centers. With good planning and implementation of mixed use and higher densities within these urban areas, development can lead to a more sustainable growth pattern and preserve community character. Investments in infrastructure for active transportation modes and access to transit allow for reduced dependence on the automobile and present an opportunity for the Island to develop more sustainably and improve the quality of life for Island residents.

Transportation infrastructure and associated drainage have direct impacts on the environment. Storm water run-off can contribute to water pollution, flooding, and water temperature elevation. The road network right-of-way presents many opportunities to incorporate sustainable practices to provide positive contributions to environmental sustainability.



Community Character

Community character is a term used to identify the elements that define Bainbridge Island. The City of Bainbridge Island's Comprehensive Plan discusses the Island's character as "...forested areas, meadows, farms, marine views, and winding roads bordered by dense vegetation..." [Comprehensive Plan Framework Principles]

Relationship to Transportation

For transportation, community character elements include the highway, major streets, neighborhood roadways, and pedestrian and bicycle facilities, as well as the natural and manmade features within the roadway right-of-way, such as trees and landscaping, drainage ditches, and street lighting. Each of these elements define the existing character of the City of Bainbridge Island. Some of these elements may be highly desired such as trees and plantings, while others such as the visual presence of street lighting may be less of a community priority.

Much of the character of the transportation system relates back to stages of the roadway's development. Roadways throughout the Island were originally constructed as logging, mill, or farm-to-market roads connecting the rural areas of the Island with areas of urban development such as Winslow and to transportation connections such as ferry docks. As the Island became more developed, major transportation features were added, including the Agate Pass Bridge, SR 305, and the Bainbridge Island ferry terminal. Island roadways were also improved over time -- pavement was added, roadways were widened, drainage was improved, and traffic controls were added to improve vehicle mobility and safety. Urban areas, mainly Winslow, saw a higher level of improvements including sidewalks and pedestrian paths, on-street parking spaces, street trees and landscaping, and street lighting. Recent improvements to the Winslow area include bicycle lanes and sidewalks, pedestrian crosswalks and refuge areas, bicycle and pedestrian paths, vehicle turn lanes, roundabouts, and other transportation features. New property developments are required to include transportation improvements along the property's frontage in accordance with the City's roadway design standards.

The City has followed the community's desires by making efforts to define and implement an appropriate look and feel for its roadway system. Emphasis throughout the City's planning activities has responded to the community's concerns about preserving the elements that define the character of the community.

- The adopted Winslow Master Plan emphasized the use of traffic calming to slow traffic speeds and promoted the development of pedestrian and sidewalk facilities within the Winslow Core.
- The City roadway standards use 10-foot wide travel lanes instead of the standard 12 feet, creating a narrower feel and less paved width. This helps to slow traffic and reduce storm water impacts of roads.
- The City developed a Non-Motorized Transportation Plan to provide better facilities for pedestrians and bicyclists throughout the Island.
- The City continues to explore and implement innovative traffic control options such as the roundabout at Madison Avenue and High School Road as an alternative to the installation of traffic signals.



Community character transportation features

The IWTP is focused on identifying the improvements needed for improving the mobility and safety of vehicles using the transportation system. The Plan’s alternatives and recommendations meet the Plan’s goals for maintaining community character including:

- ***Scenic resource protection*** – Focusing the development of the transportation system within existing and carefully chosen new travel corridors.
- ***Road development guidelines*** – Providing consistency with the adopted roadway standards that promote the retention of appropriate roadside vegetation and trees and follow the natural topography.
- ***Street design guidelines*** – Providing for and protecting the development of more urban features, such as parking, sidewalks, and bicycle facilities within prescribed urban areas, and less urban features, such as widened shoulders and separated paths, in less urban areas.
- ***Street lighting guidelines*** – Concentrating street lighting within Winslow and Island Town Centers and areas identified by safety or community planning needs.
- ***SR 305 scenic character*** – Retaining the scenic character of SR 305 by discouraging new access points, and maintaining vegetative buffers.

Desired features of Community Character

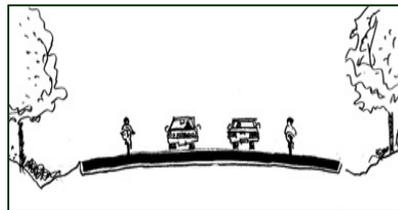
The photographs and sketches identify some of the key features that define the transportation character of Bainbridge Island.



Following natural topography, roadside trees and vegetation, with minimized paved surfaces are desired in suburban areas



Crosswalks, parking, street lighting, and non-motorized facilities are desired features in urban areas



Integration of bicycles, pedestrians, and non-motorized facilities are important features for the community

Livability and Health

The public is becoming more conscious of the environment in which they live and an increasing percentage of the population desires to live in places that are walkable and bikeable. Today



prospective home buyers are presented with statistics such as walkability scores. More and more commuters choose active modes of transportation to commute to work. On Bainbridge Island, many residents commute by walking and bicycling to the Seattle ferry. Other commuters use Kitsap Transit or carpool and often walk to stops within their neighborhood.

Relationship to Transportation

In order to achieve livability and promote public health, developing progressive standards and incremental investments in transportation infrastructure including non-motorized elements are essential.

- ***Roadway Standards*** – Pedestrian and bicycle facilities need to be specified that evolve the infrastructure in the community to be more livable and provide for active modes of transportation and recreation. Consider whether street lighting is appropriate for routes where residents are walking or cycling to school, work, or transit in the dark during fall and winter months. Recognizing that investments take time, consider interim measures to provide additional non-motorized safety through means such as reducing speed limits, providing wider shoulders, and installation of signage.
- ***Complete Streets*** – Investments in pedestrian and bicycle facilities within both urban and suburban areas over time will provide for greater connectivity. Many urban streets lack sufficient sidewalks and bike lanes. Many secondary arterial roadways in suburban locations lack shoulders and separated facilities.
- ***Multi use pathways*** – Investments in separated pathways with regional, inter-island, and local connectivity.

Neighborhoods

Bainbridge Island is a residential community, and the protection of neighborhood areas and promotion of neighborhood transportation facilities, is an important concern for Island residents. Urban neighborhoods, such as Winslow, need a high level of development with pedestrian and bicycle facilities, transit access, and a development of residential street character. In suburban areas, neighborhoods are concerned about the impacts of traffic flow, the development of non-motorized facilities and improving future connections and circulation.

Relationship to Transportation

Residential areas need to provide a safe roadway system for adults and children walking, bicycling, playing, and driving. The City of Bainbridge Island has a limited transportation network and vehicle movements often depend on a single street. Because of this, as traffic levels increase on the arterial street system, adjacent and parallel streets will begin to experience factors such as “cut through” traffic, inappropriate vehicle speeds, and intersection congestion.

- ***Neighborhood traffic calming***– The City’s Public Works Department, in conjunction with the Police Department, review complaints about inappropriate speeding or cut-through traffic on neighborhood streets.
- ***Traffic enforcement*** – The City of Bainbridge Island Police Department responds to neighborhood requests about high traffic speeds through residential areas.
- ***Roadway standards*** – The City of Bainbridge Island has developed its roadway design standards to act as a traffic calming feature through the use of narrow travel lanes and non-motorized facilities.



Neighborhood Transportation Features

The IWTP is focused on identifying the improvements needed for the mobility and safety of vehicles using the transportation system. The alternatives and recommendations meet the Plan’s goals for maintaining the neighborhoods including:

- **Neighborhood cut-through traffic** – Focusing the development of transportation system within primary travel corridors.
-
- **Neighborhood circulation** – Develop the transportation network to provide secondary roadway access, improve emergency access, increase neighborhood circulation, and improve pedestrian and bicycle mobility. Pedestrian and bicycle path short-cut connections through neighborhoods offer important connectivity to link neighborhoods and discourage unnecessary vehicle trips. City review of new development projects should look for opportunities to provide non-motorized connectivity between neighborhoods.
- **Winslow street visualization plan** – Promoting the design and character of each street within the Winslow area.

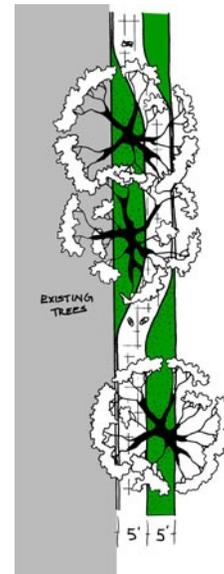
Desired features for Neighborhoods

The photographs and sketches identify some of the key features that define the neighborhood goals for transportation.



Neighborhoods should be enhanced by providing appropriate street width, sidewalks, and other facilities

The character and needs of Winslow streets will be part of a visual street plan



Streets need to reflect the special needs of pedestrians, bicyclists and traffic flow



Environment

Maintaining a natural quality environment is very important to the Bainbridge Island community. Protection of the environment is a key consideration for all development projects, with the city, state, and federal government agencies all playing roles.

Relationship to Transportation

Bainbridge Island has a variety of environmental characteristics that affect the development of the transportation system. As an island, traffic is concentrated near the ferry terminal in Winslow,



and at the two-lane Agate Pass Bridge at the north end of the Island. Its topography, soils and steep slopes have limited the development of roadways in many areas. The Island has many sensitive resources such as ravines, parklands, open spaces, and shoreline and wetland areas that require creative and environmentally sensitive approaches to roadway and non-motorized facility development.

Possible impacts to the environment are a key consideration in the development of transportation projects. These include full consideration of impacts in the planning and design of a project on the environment. Steps in the project development and environmental review process include:

- Transportation corridor studies that include public review
- Environmental Impact Statements that include public scoping and testimony
- Environmental considerations in the engineering and design process
- Departmental Plan review
- Interagency review (where applicable)

Environmental Transportation Features

The following environmental aspects should be considered in addition to improving mobility and safety for all modes of transportation:

- ***Environmental sensitivity*** – Minimizing road construction within environmentally sensitive areas and encouraging the planting of low-maintenance, vegetated groundcover and trees along roadways. The Plan focuses the development of the transportation system within existing travel corridors.
- ***Utilities*** – Promoting the undergrounding of overhead utilities to reduce the need for removal and maintenance of roadside vegetation.
- ***Storm water management***. – Providing for environmentally-sensitive design of storm water collection and detention facilities. Look for opportunities to combine traffic calming and storm water management goals through green infrastructure provisions within traffic calming features such as curb bulbs.
- ***Air Quality*** – Developing transportation plans and programs that improve traffic flow, encourage non-motorized and transit transportation alternatives to driving, and consider the impact to regional air quality.
- ***Wildlife corridors*** – Recognizing and promoting the maintenance of wildlife corridors.

Desired features of Environment

Bainbridge Island has a variety of environmental characteristics that affect the development of the transportation system.

The photographs and sketches below identify some of the key features that define the environmental goals.



Storm water Management and Green Infrastructure



*Special
stormwater
containment
features can
control water
runoff roadway*



- Storm water planters to control run off and improve water quality

- Rain gardens to control storm water run-off and improve water quality

Protection of environmental resources such as the Ravine





Developed landscapes including roadways are covered with impervious surfaces which can increase pollutant levels and increase stream flows degrading water quality. The Washington State Department of Ecology (DOE) establishes the storm water flow control and water quality requirements for roadway projects. As a municipality, the City of Bainbridge is required to meet the National Pollutant Discharge Elimination System (NPDES) permit obligations to discharge storm water to waters of the State of Washington and meet the NPDES permit requirements. With the implementation of the 2012 NPDES Permit, the City is implementing Low Impact Development (LID) requirements for both public and private development.

LID is an innovative storm water management approach that attempts to mimic the natural storm water hydrology of pre-development conditions. LID uses techniques that infiltrate, filter, detain, evaporate, and attenuate storm water run-off close to the source. Examples of “green” natural processes include, swales, bio retention, filter media, permeable pavement, and street trees. Streets that implement natural processes are commonly referred to as green streets. Green streets can serve multiple community goals by combining storm water infrastructure within traffic calming features such as curb, bulbs or by adding planting strip rain gardens that provide additional buffer from the sidewalk.

Balancing Community Needs

One of the more difficult aspects of improving a transportation system is finding the right balance between competing community needs and desires. For example it may be best to construct a sidewalk/ separated pathway on one side of the roadway rather than on both sides to reduce impacts to vegetation.

Evaluating the trade-offs and weighing the importance between community goals and design guidelines is an important function of the City of Bainbridge Island. Table 3-1 illustrates the issues that can arise for a variety of transportation improvements.



Table 3-1: Competing Community Needs

Project Type	Community Character concerns	Environmental concerns	Neighborhood concerns
Widen roadway for bicycle lanes	Increases paved width of roadways changing the road's look and feel	Promotes use of non-polluting vehicles, but also can increase water runoff	May slightly increase vehicle travel speeds on widened road corridor
Installation of roundabout at an intersection	Roundabouts highly desired over traffic signals	May result in removal of trees near intersection	May reduce cut-through traffic in residential areas
Rebuilding roadway impacted by shoreline erosion	May result in a more structured and modern roadway facility	May have impacts to shoreline areas, loss of trees and foliage	Needed improvement for access to property
Installing pedestrian path or sidewalk	May affect the feel of a traditional neighborhood	Promotes use of non-polluting vehicles	Provides safe access for pedestrians

As illustrated in the table above, each of these examples could have competing concerns and sometimes, even within a single category. In other words, a highly desired project for one member of the community may be highly opposed by another. In the end, these checks-and-balances can improve the planning and design of roadway projects by reflecting the needs and desires of the community.

Public Works uses the community values in the Comprehensive Plan when developing project objectives. The City of Bainbridge is committed to the principals of context sensitive solutions. Public Works staff strives to facilitate public engagement when developing capital projects to evolve and refine the community's values as they relate to each project.

CHAPTER 4 OPERATIONS AND MOBILITY



This chapter describes the traffic operations and current and future vehicle mobility for the City's roadway system. Mobility is the measure of how well vehicles can get around on the roadway system – the opposite of congestion. Island residents expect a high level of mobility to coincide with the character of their community. The high levels of congestion experienced during peak periods, especially on and around SR 305, is a common source of frustration for drivers.

Level of service standards are used to provide a basis for the mobility analysis. This Plan used planning and operational models developed by Transportation Solutions, Inc. in TransCAD and Synchro software, respectively, to analyze current conditions (based on traffic counts and existing roadway network information) and to forecast future levels of service (based on traffic generated by forecasted land use and roadway network changes). The structure of the roadway network was analyzed by reviewing the roadway classification system, connectivity, access, and road standards.

Existing Roadway System

The Plan of existing conditions provides an analysis of the current operating conditions and provides a baseline for future comparisons. The City of Bainbridge Island's transportation system is made up of a network of roadways, pedestrian facilities, bikeways, the ferry terminal, and formal and informal trails. Each of these elements is important to the mobility or movement of people and goods within and to destinations beyond the Island. This chapter focuses on the roadway system only; the non-motorized, bus transit, and ferry systems are described in Chapters 7 & 8.

The roadway system is designed for the movement of people and goods throughout the community. Major regional transportation features of the Island include the Washington State Ferry Terminal, which connects Bainbridge Island to downtown Seattle; and State Route 305, which connects the Island to the Kitsap and Olympic Peninsula. State Route 305 is the Island's principal transportation corridor, providing an important north-south connection.



The State system is supported by a City roadway system that connects residential areas to the highway and retail and employment areas. The City's arterial, collector, and residential street system provides roadway connections and access to properties within the City.



Travel Corridors

The following important commuter, shopping business, school, and freight/commercial corridors are identified for the Island:

- *Commuter Corridors* – SR 305, Winslow Way, Wyatt Way, Ferncliff Avenue, High School Road, Day Road, Blakely Avenue, Eagle Harbor Drive, Baker Hill Road, Miller Road, and North Madison Avenue.
- *Shopping Corridors* – SR 305, Winslow Way, High School Road, Madison Avenue, Ericksen Avenue, Wyatt Way, Lynwood Center Road, and Valley Road.
- *School Corridors* – High School Road, New Brooklyn Road, Sportsman Club Road, Madison Avenue, Day Road, North Madison Avenue, and Blakely Avenue
- *Freight Corridors* – SR 305, Day Road, Miller Road, Fletcher Bay Road, Sportsman’s Club Road, High School Road, Madison Avenue, and Winslow Way.

Roadway Inventory

The City’s roadway system consists of approximately 140 miles of paved roads, and another 20 miles of unpaved roads. The City maintains a Geographic Information System (GIS) that includes the roadway system. The GIS database includes characteristics for each roadway segment, including length, pavement width, functional classification, posted speed, sidewalks, and transit and bicycle facilities. A spreadsheet is maintained that includes sign inventory information. The City periodically conducts an island-wide traffic counting and develops volume and traffic speed information for its major roadways. This Plan was updated in 2014 with TSI traffic counts.

Roadway Classifications

Roadway functional classification is defined as “the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide”. The City divides Island roadways into four functional classifications: principal arterial, secondary arterial, collector, and local access roads. These classifications are described in Table 4-1.

Table 4-1. Functional Classifications

Classification	Definition
Principal Arterial	Carry the highest levels of traffic in the system at the greatest speed for the longest uninterrupted distance, often with some degree of access control. Used for through trips, and provide connections within the system.
Secondary Arterial	Carry high level of traffic at a moderate speed, sometimes for through trips. Often serve as access to high-intensity land uses such as major employers or larger commercial centers; provide connections within the system.
Collector	Connect traffic from residential roads to arterials at a lower speed, carrying lower levels of traffic than arterials. Serve neighborhood centers.
Local Access	Carry low levels of traffic at low speeds. Serve as access to residential and commercial areas and are not used for through trips.

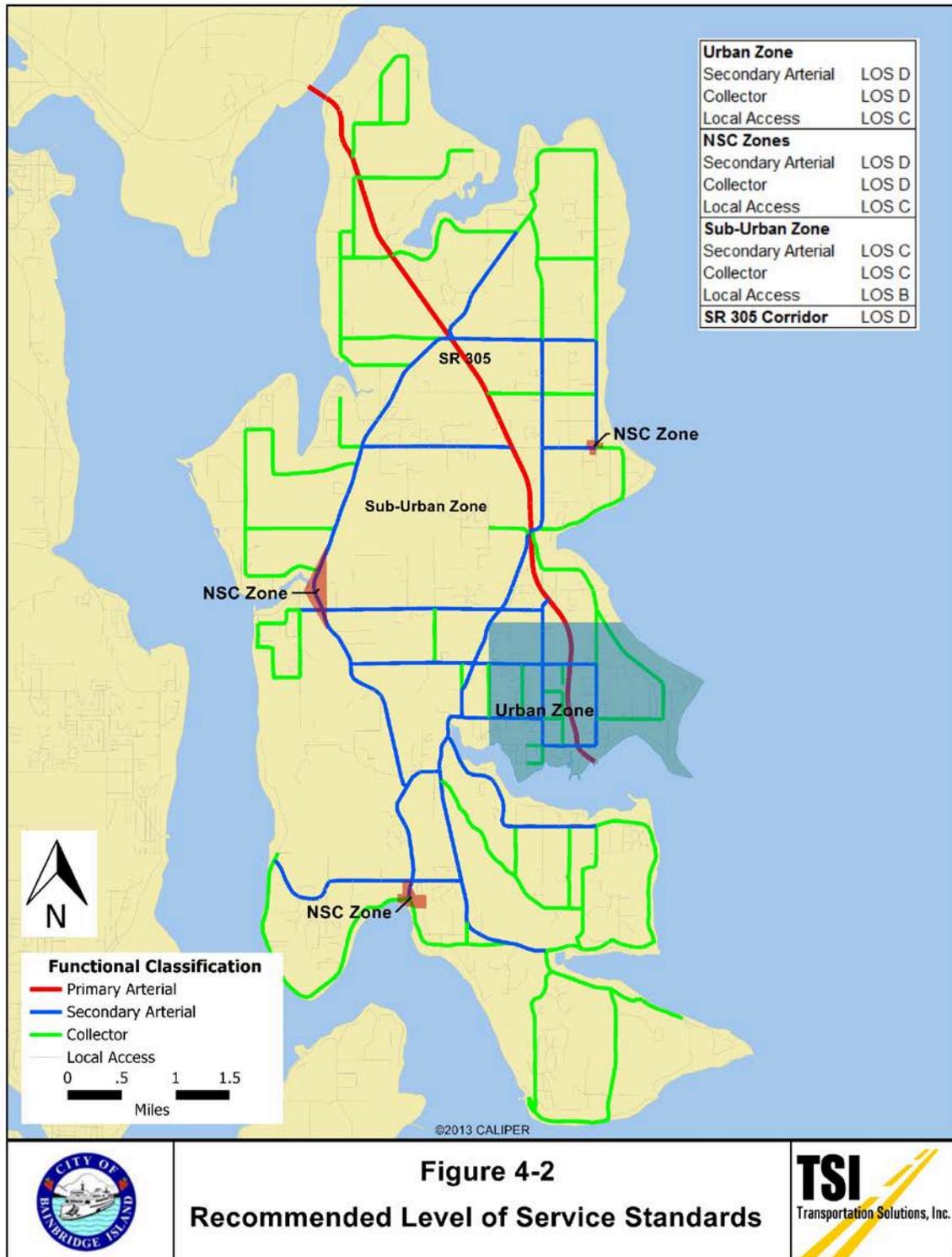
Streets and highways are assigned one of these classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they allow. Typically, a trip will use a combination of different road classes, with each classification having a specific function with



regard to access and travel speed. Arterials provide a high degree of mobility and less access, while local access roads provide a high level of access and less mobility. Collectors provide a balance between access and mobility and connect the system.

Each roadway in the City's system has been assigned a functional classification, which reflects its operational characteristics including traffic volumes, surrounding land uses, and travel speeds. Figure 4-1 shows the functional classes of the arterials and collectors. Other roadways are local access.

The following changes to roadway classifications since 2004 are included in this update to the IWTP: Halls Hill Road from Blakely Hill to Rockaway Bluff from Local Access to Collector, Wallace Way from Madison Avenue to Ericksen Avenue from Local Access to Collector, and Upper Farms Road from Collector to Local Access.





Road Standards

The City of Bainbridge Island has established its roadway street and design standards as part of its *Engineering Design and Construction Standards and Specifications*. These standards set the minimum requirements for constructing roadways and are applicable to all new roadway construction and modifications to existing roadways within the City of Bainbridge Island. The road and street design standards follow the functional classification system described above and establish separate standards for urban and suburban areas of the Island.

The City has both urban and suburban standards. Urban standards are intended to apply within the urban center of Winslow, the urban town centers including Lynwood, Island Center, and Rolling Bay, and the Day Road industrial Center. Urban standards apply in all locations with R2.9 and greater zoning and/or effective density. The City may require urban standards to be applied in other areas in close proximity for system continuity.

The roadway standards were created in 1997 and an update is needed to better address non-motorized elements and low impact development.

Level of Service

This section describes the Level of Service (LOS) standards used in this document. LOS provides a method for measuring the performance of the transportation system. The City uses a minimum standard for LOS that is used to determine if adequate mobility is being provided on the roadway system. LOS standards and method of measurement have been coordinated with Washington State Department of Transportation, Washington State Ferries, Kitsap County, and Kitsap Transit to ensure that standards used in this document are consistent.

LOS Defined

LOS is a measurement used in transportation planning to assess the operating performance of the transportation system. For roadways, LOS measures the degree of traffic congestion along a roadway varying from LOS A (free-flow traffic with minimal delays) to LOS F (highly-constrained traffic with long delays).

The Highway Capacity Manual (HCM) (Transportation Research Board, Special Report 209) establishes quantitative methodologies for determining level of service for differing types of facilities. The methodologies vary for intersections, roadways, freeway, and highway, but all follow the LOS A - F classification and provide a consistent method of measuring the performance of the transportation system. Table 4-3 describes the operation of the transportation system at each LOS ranking.



Table 4-3: Level of Service Descriptions

Level of Service	Description
LOS A	Free flow traffic conditions with very low delay at intersections.
LOS B	Reasonably unimpeded traffic operations with only short traffic delays at intersections.
LOS C	Stable operating conditions with average traffic delays at intersections
LOS D	Operating conditions result in lower travel speeds and higher delays at intersections.
LOS E	Travel speeds are substantially restricted with problems likely to occur at intersections.
LOS F	Roadway operations are over capacity with extreme delays likely at intersections.

LOS is measured differently for roadways and intersections. For roadways, LOS is measured as a function of traffic volume and roadway capacity. For intersections, LOS is measured as a function of vehicle delay in clearing the intersection.

Roadway LOS Measurement

Roadway LOS is measured by the relationship between traffic volume (V) and capacity (C) of the roadway. As the volume of traffic using the roadway approaches, the capacity of the roadway (V/C approaching 1.0), the level of service deteriorates. Table 4-4 relates volume/capacity to LOS measurements for roadways.

Table 4-4. Roadway Level of Service and Volume/Capacity Ratio

LOS	Volume/Capacity (V/C) Ratio
A	Less than 0.6
B	0.60 to less than 0.70
C	0.70 to less than 0.80
D	0.80 to less than 0.90
E	0.90 to less than 1.00
F	More than 1.00

Traffic volumes can be counted or they can be calculated using the traffic model by analyzing land uses that are served by the roadway. Bainbridge Island roadway capacity policy is defined in the City Design and Construction Standards; see Table 4-5. No policy is currently defined for arterial roadway capacity. There is some inconsistency between the City’s current capacity policy and an engineering-based approach to roadway capacity calculation which would typically consider the physical structure of the roadway, including the number of lanes, type of intersection controls, widths of lanes and shoulders, and design speed. The City’s capacity standards should be reviewed and updated during the roadway design standard update process.



The roadway levels of service described in this Plan are based upon current capacity policy. In lieu of an arterial capacity policy, this Plan calculated arterial segment LOS based on an approach which is currently used by the City of Sammamish and which is consistent with the state of engineering practice.

Table 4-4. Existing Roadway Capacity Policy

<i>Functional Classification</i>	<i>Area Type</i>	<i>Capacity (ADT)</i>
<i>Secondary Arterial</i>	<i>Urban</i>	<i>> 3,000</i>
<i>Secondary Arterial</i>	<i>Suburban</i>	<i>>2,000</i>
<i>Collector</i>	<i>Urban</i>	<i>2,000 to 3,000</i>
<i>Collector</i>	<i>Suburban</i>	<i>1,000 to 2,000</i>
<i>Residential</i>	<i>Urban</i>	<i>< 2,000</i>
<i>Residential</i>	<i>Suburban</i>	<i>< 1,000</i>

To improve the LOS for a roadway, either the capacity must be increased or the volume of traffic using the road must be decreased. To increase the capacity, the City can look at several options such as roadway improvements ranging from adding signals or separated turn lanes to an intersection to roadway widening. To reduce traffic volumes, the City can explore options such as changing allowable land uses or modifying individual travel behavior. This section focuses on capacity improvements. Chapter 7 discusses other travel modes and methods of transportation demand management.

Intersection LOS measurement

Intersection LOS is measured by the amount of delay experienced by a vehicle waiting to clear an intersection. Delay at a signalized intersection can be caused by waiting for the signal or waiting for the queue ahead to clear the signal. Delay at un-signalized intersections is caused by waiting for a break in traffic or waiting for a queue to clear the intersection. Table 4-6 shows the amount of delay used to determine LOS for signalized and un-signalized intersections. Roundabout-controlled intersections use the same LOS thresholds as signalized intersections.

Table 4-6. Intersection LOS and Delay

LOS	Signalized Delay per Vehicle (sec/veh)	Unsignalized Delay per Vehicle (sec/veh)
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50



Generally, speaking...

Roadways that are LOS E or F fail the standard.

LOS D is okay for certain arterials and collectors in urban areas

LOS A, B or C are within the standard for all arterials and collectors

Different delay standards are used for signalized (stop light controlled) and unsignalized (stop sign controlled) intersections. For signalized and all-way stop controlled intersections, the LOS is the amount of delay per vehicle caused by control and is reported for the intersection as a whole. For un-signalized intersections, where there are controls only on the minor approaches, the LOS is estimated by the average delay per vehicle and is reported for only minor approaches to the intersection.

City LOS Standard

The City of Bainbridge Island’s LOS standard designates the minimum operational performance of the roadway system that must be maintained. If traffic volumes cause a roadway to fall below the minimum LOS standard, improvements or other mitigation must be made to bring the facility back to the designated LOS standard. Level

of service standards are normally prescribed for the p.m. peak hour (most congested hour) of the traffic system, which typically occurs between 4:45 and 5:45 in the evening on Bainbridge Island.

The recommended minimum LOS standard uses the City’s roadway classification system, and four zones that reflect the differences in the Island’s character: Urban, Sub-Urban, Neighborhood Services Centers, and the SR 305 Corridor. Within each of these categories, individual minimum LOS standards were established for secondary arterials, collectors, and residential roadways. These are shown in Figure 4-2 and described below.

Urban Zone – (applies to roadways and intersections in the most developed areas of the City, mainly the greater Winslow area)

- Secondary Arterial – LOS D
- Collector – LOS D
- Local Access – LOS C

Neighborhood Service Centers (NSC) Zone – (applies to roadways and intersections within the City-defined Centers of Rolling Bay, Island Center, and Lynwood Center)

- Secondary Arterial – LOS D
- Collector – LOS C
- Local Access – LOS C

Sub-Urban Zone – (applies to roadways and intersections in areas outside of the Winslow core and the NSC – the remainder of the Island)

- Secondary Arterial – LOS C
- Collector – LOS C
- Local Access – LOS B

SR 305 Corridor – (applies to state highways and is established by the State)

- All Roadways– LOS D

SR-305 LOS Standard

The LOS standard for state facilities is set by the Washington State Department of Transportation as a Highway of Statewide Significance (HSS) under RCW 47.06.140. The HSS designation requires that SR-305 be evaluated using a LOS Standard designated by WSDOT. While WSDOT internally evaluates roadways using its own methodology, WSDOT has assigned a level of service



standard for SR-305 as LOS D-mitigate for City planning purposes. This standard requires that congestion be mitigated when the peak period operation of the state facility falls below LOS D.

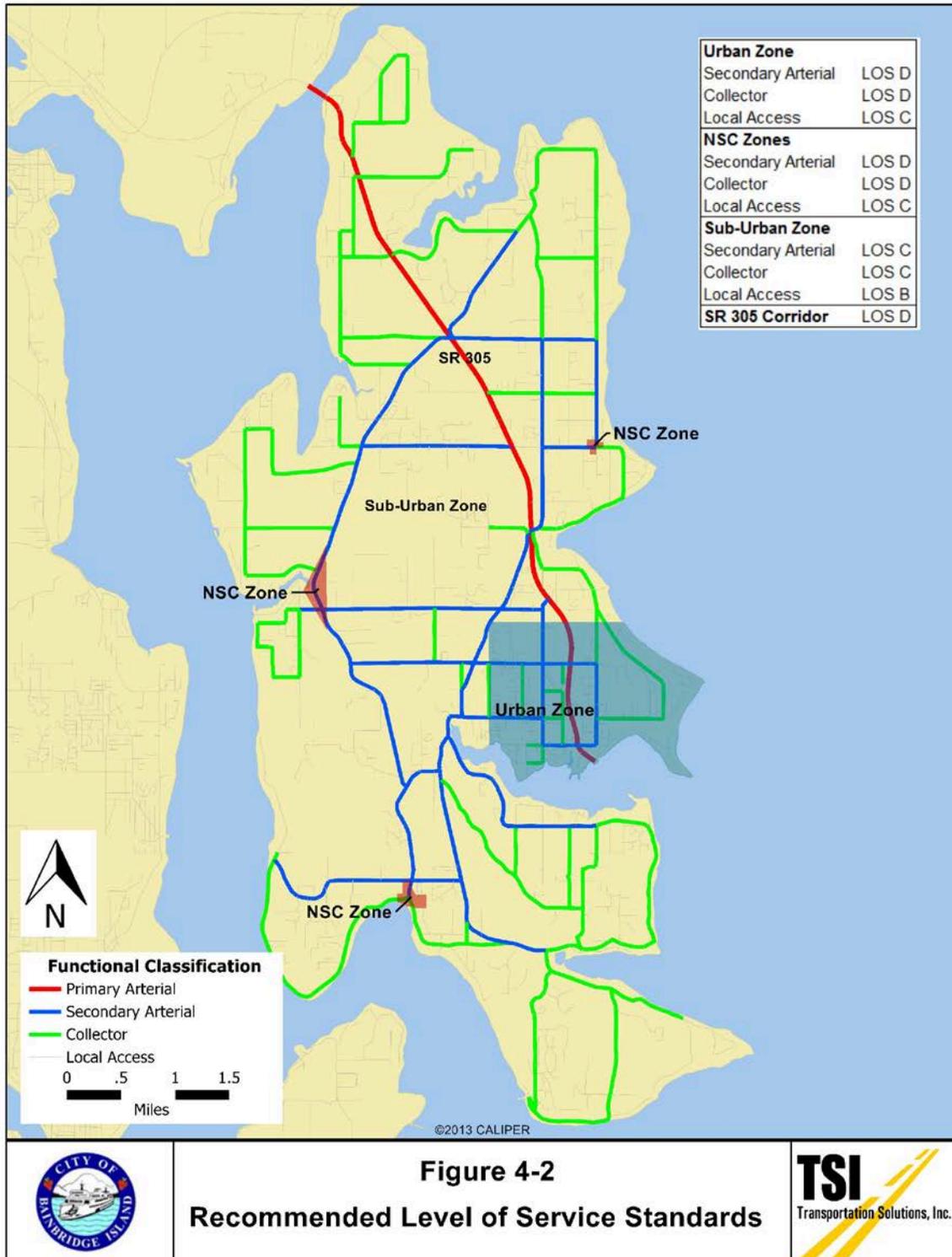


Figure 4-2
Recommended Level of Service Standards





Existing Traffic Conditions

This section describes the traffic conditions for the 2014 Plan year. The Plan is based on traffic data collected for roadway segments in 2012 and intersection counts in 2014.

Transportation Model

A consultant, Transportation Solutions, Inc. (TSI) developed a citywide transportation model to estimate existing travel demand and to provide a tool for forecasting future travel demand on City roadways. Current and future travel demand were used as inputs to a citywide operational model, developed using Synchro software, to evaluate current and forecasted PM peak hour levels of service throughout the city's roadway network. The demand model is based upon the concept of vehicle trips; pedestrians and cyclist demand is not forecasted. Similarly, carpool, vanpool, or transit users are represented by single vehicles in the model.

For analysis of existing conditions, the TransCAD-based model used existing land use data from Kitsap County and Puget Sound Regional Council (PSRC), roadway information from the City, and TSI traffic counts to reproduce existing trips and their paths, from origin to destination, through the citywide roadway network.

Land use was collected from Kitsap County at the individual parcel level and aggregated to create 241 transportation analysis zones (TAZs) which covered the entirety of the City. Two external zones were created to represent travel demand at the ferry terminal and at the north end of the Island.

Trip generation was based upon existing land use and trip generation rates established by the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition* and calibrated based on knowledge of local conditions and travel patterns. It was observed during calibration, for example, that single-family trip generation rates on Bainbridge Island were lower than the nationally-calibrated averages published by ITE. This reduced single family trip rate may be associated with a growing percentage of retirees living on the Island. Peak hour ferry trip generation rates were estimated from the WSDOT Ferries Division *2013 Origin-Destination Travel Survey Report*.

Trips were distributed through the TAZ network using a doubly-constrained gravity model, which assumes that trips produced at a given origin and attracted to a given destination are proportional to the total trip productions at the origin and the total trip attractions at the destination. Trip impedance was calculated free flow travel time as input to a gamma function with calibration parameters adjusted based on local knowledge and relationships established in other regional models, including the Kitsap County travel demand model.

The last step of the demand modeling process was to assign trips from origin to destination zones via the roadway network. Roadway information including width, number of lanes by direction, and presence of non-motorized facilities were used to estimate roadway capacity. TransCAD's stochastic user equilibrium assignment process iteratively loads the roadway network until a travel time equilibrium solution is found.

For operational analysis, a citywide traffic model was developed in Synchro software, using roadway information obtained from the City, satellite and street-level imagery collected from Google Earth, and traffic counts collected in 2014 by TSI. Relevant roadway information for operational analysis included number of lanes, intersection channelization, traffic control devices,



speed limits, and lane width. Observed PM peak hour traffic volumes were applied to the roadway network to calculate intersection levels of service.

Peak Hour Traffic Volumes

The City of Bainbridge Island collects traffic count data on a periodic basis to assess changes in traffic patterns, to collect information for its concurrency program, and to track the operational characteristics of the Island. In 2012, the City contracted an update of Island-wide traffic counts and travel speeds. In 2014, the City contracted intersection counts. This information was utilized in the traffic model developed by TSI. The data is included in Appendix E of this report.

WSDOT Ferry Travel Survey

Washington State Department of Transportation (WSDOT) conducts origin-destination (OD) surveys every six to seven years as a way to accurately capture and measure the travel patterns of ferry passengers. Passengers were asked about their typical routes, how they get to and from ferry terminals, and the purpose of their trips. The most recent survey was conducted in October 2013 and results were published in August 2014.

Surveys were administered to ferry riders during weekdays and Saturdays in October 2013. Over 17,000 survey questionnaires were collected system-wide, with 92 percent of collected surveys sufficiently complete for analysis. Survey responses were used to develop a database of ferry user characteristics, including trip origin and destination patterns. TSI reviewed and processed survey results for the Seattle-Bainbridge route and used them as inputs to the citywide travel demand and traffic operations models.

Figure 4-3 summarizes survey findings for the Seattle-Bainbridge Island ferry.

Highlights of the survey results are summarized below:

- Ferry ridership has declined slightly since 2006, with approximately 17,000 riders per day in 2013 compared to 18,000 riders per day in 2006. Vehicle boardings decreased by 7 percent during that period.
- The Seattle-Bainbridge route has shown an aging ridership, with the number of passengers over age 64 increasing from 8 percent in 2006 to 17 percent in 2013. System-wide, average passenger age increased from 42 in 1993 to 48 in 2006 and 49 in 2013. Currently 18 percent of riders are retired and another 14 percent are planning to retire in the next five years.
- Approximately 25 percent of weekday riders telecommute at least one day per week, up from 20 percent in 2006.
- The proportion of work- and school-related trips decreased and the proportion of recreation and shopping trips increased between 2006 and 2013.
- Of the 6,070 total (eastbound and westbound) ferry trips during the 3:00 to 7:00 PM weekday peak period, 67 percent had an origin or destination on Bainbridge Island, while the remaining 33 percent had off-Island trip ends. This indicates the WSF terminal's regional nature, with one in three travelers originating or destined for off-Island locations.
- The City of Poulsbo and other North Kitsap County locations accounted for 57% of the off-Island destinations. Other primary destinations included the cities of Kingston, Silverdale, Port Townsend, and Sequim. The results indicate that while much of off-Island traffic is



coming from areas adjacent to Bainbridge Island, as many as 40% of off-Island drivers could take advantage of new or improved service to downtown Seattle from Kingston or Bremerton.

- Nearly 70 percent of total weekday PM peak period ferry trips are destined westbound, with the other 30 percent of trips destined primarily for locations within Seattle.

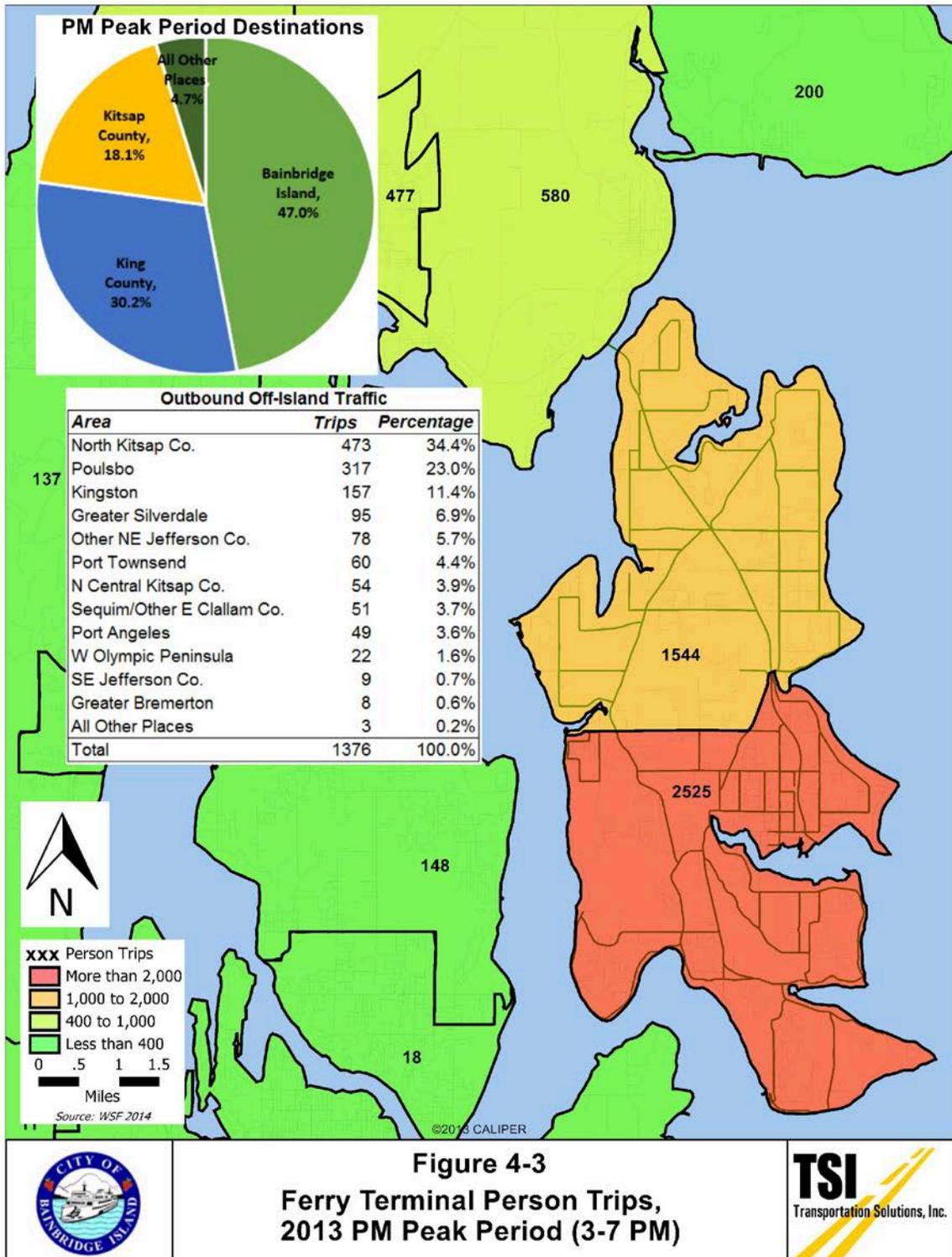


Figure 4-3
Ferry Terminal Person Trips,
2013 PM Peak Period (3-7 PM)





Existing LOS

The travel demand model was calibrated using a process that compares the counted roadway volumes to modeled flows which are based on land use and roadway network data. The calibrated TransCAD model and Synchro intersection analysis software were used to determine the 2014 LOS for the intersections in the study area.

Figures 4-4 and 4-5 show the 2014 LOS for the Island as a whole and for the Winslow area. The LOS for each intersection is shown by approach in Table 4-7. All intersections modeled on SR305 north of High School Road currently do not meet minimum LOS standards with the exception of the signal at Day Road. Day Road however is close to exceeding the standard. In urban areas, the Madison/Wyatt intersection currently fails the minimum LOS standard but will be improved to LOS A upon completion of a planned roundabout.

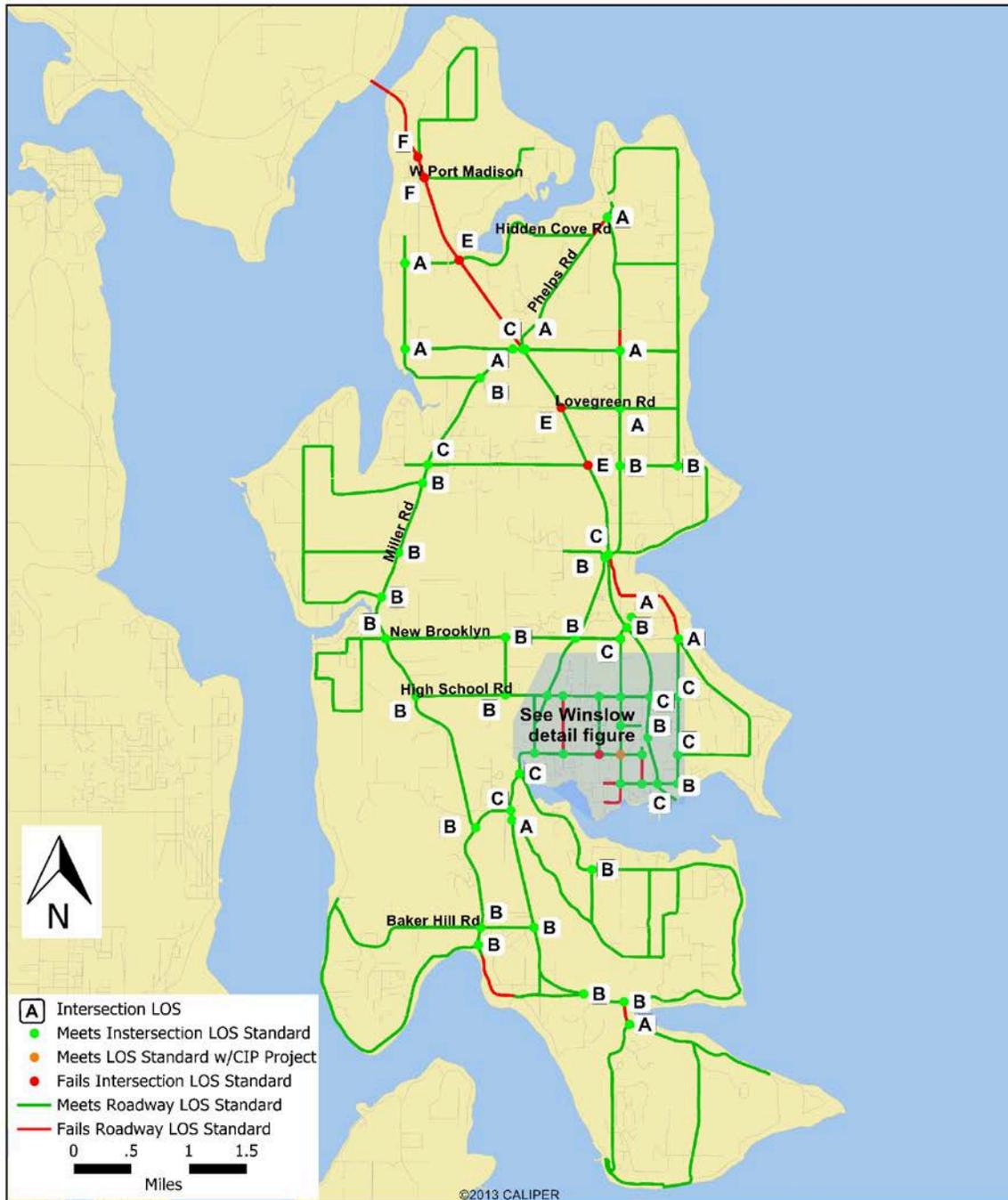
The intersection of Wyatt Way and Grow Avenue has been converted from all-way stop to two-way stop control. This resulted in a decline in intersection level of service from LOS C to LOS F and results in intersection LOS failure based on existing standards. Under two-way stop control, vehicles on Grow Avenue experience high delay while vehicles on the Wyatt Way approaches experience LOS A with no delay. The control change was implemented to reduce traffic volume on Grow Avenue and maintain the street's ability to serve non-motorized users. However, the City should continue to evaluate options to maintain both vehicular and non-motorized level of service at this intersection.

Roadway LOS failures occur on SR 305 north of Day Road and on several collector roadway segments throughout the Island. As previously discussed, segment LOS is based upon volume-to-capacity ratio, which in turn depends on City capacity policy. There are no engineering-based (e.g. Highway Capacity Manual-based) segment capacity failures other than on SR 305. However, the current City capacity policy yields LOS failures on the following roadways:

- Madison Avenue from Day Road to Mary Sam Lane
- Phelps Road from Hidden Cove Road to Madison Avenue
- Pleasant Beach Drive from Point White Drive to Lytle Road
- Weaver Road from High School Road to Wyatt Way
- Ferncliff Avenue from Yaquina Ave to Lofgren Road
- Lofgren Road from Ferncliff Avenue to Moran Road
- Moran Road from Lofgren Road to Madison Avenue
- Winslow Way from Madison Avenue to Wood Avenue
- Parfitt Way from Madison Avenue to Wood Avenue
- Ericksen Avenue from Winslow Way to Wyatt Way



- Country Club Road from Blakely Avenue to Fort Ward Hill Road



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Figure 4-4
2014 Citywide Level of Service







Table 4-7. Intersections PM Peak Hour LOS Analysis – 2014 Baseline

Intersection	Control Type	Roadway Class	EB	WB	NB	SB	Inter-section LOS	Meets Minimum LOS
Urban Zone								
High School Rd/Grow Ave	TWSC	A/C	--	--	C	--	C	Yes
High School Rd/Madison Ave	Roundabout	A/A	A	B	B	B	B	Yes
High School Rd/Ferndale Ave	AWSC	A/C	B	A	C	A	C	Yes
Madison Ave/Wallace Way	TWSC	A/C	C	C	--	--	C	Yes
Winslow Way/Ericksen Ave	TWSC	A/C	--	--	--	C	C	Yes
Winslow Way/Madison Ave	AWSC	A/A	B	B	C	B	B	Yes
Wyatt Way/Grow Avenue	AWSC	A/C	C	C	B	B	C	Yes
Wyatt Way/Madison Ave	AWSC	A/A	C	C	F	D	E	No**
NSC Zone								
New Brooklyn Rd/Miller Rd	AWSC	A/A	B	B	C	C	B	Yes
Sub-Urban Zone								
Blakely Ave/Bucklin Hill Rd	TWSC	A/A	C	--	--	--	C	Yes
Eagle Harbor Dr/Bucklin Hill Rd	TWSC	A/A	--	C	--	--	C	Yes
High School Rd/Sportsman Club Rd	AWSC	A/A	B	B	B	B	B	Yes
Miller Road/Koura Road	TWSC	A/A	B	C	--	--	C	Yes
Wyatt Way/Finch Road	TWSC	A/A	--	C	--	--	C	Yes
SR 305								
SR 305/Agatewood Road	TWSC	H/C	--	F	--	--	F	No
SR 305/Seabold Road	TWSC	H/C	F	F	--	--	F	No
SR 305/Hidden Cove Road	TWSC	H/C	E	E	--	--	E	No
SR 305/Day Road	Signal	H/A	D	D	C	C	C	Yes
SR 305/Lovegreen Road	TWSC	H/C	C	E	--	--	E	No
SR 305/Koura Road	TWSC	H/A	E	--	--	--	E	No
SR 305/Sportsman Club Rd	Signal	H/A	C	E*	E*	C	D	Yes*
SR 305/Madison Avenue	Signal	H/A	D	C	C	B	C	Yes
SR 305/High School Road	Signal	H/A	E*	B	B	C	C	Yes*
SR 305/Winslow Way	Signal	H/A	C	D	C	A	C	Yes

H = Highway A = Arterial C= Collector R=Residential
AWSC = All-Way Stop Control TWSC = Two-Way Stop Control / Minor Street Stop



**Approach does not meet LOS standard; however, overall intersection LOS is met.*

***With planned roundabout intersection will operate at LOS A.*

Future Traffic Conditions

This section identifies the land use forecast methodology and results used to identify the future needs and deficiencies of the transportation system. Two time periods were studied: 2021, representing the six-year short-term planning period, and 2035, representing the 20 year long-term planning period. 2035 matches the long term planning horizon of Puget Sound Regional Council (PSRC), the region's major planning entity.

Land Use Forecast

The transportation model used PSRC and Kitsap County land use forecasts to determine future PM peak hour trip growth by transportation analysis zone (TAZ). Trip growth forecasts were distributed and assigned to the future roadway network to generate expected future traffic growth citywide.

Determination of Base Year Land Use

Base year land use was provided by Kitsap County in the form of GIS-based tax parcel data. This data was cleaned and refined based on recent satellite and street-level photography, then categorized according to the following modeled land use types:

- Single-Family Housing
- Multi-Family Housing
- Senior/Assisted/Retirement Housing
- Retail
- General Office
- Industrial and Manufacturing
- Warehouse/Utility/Storage
- Hotel
- Hospital/Nursing Home
- Park and Ride
- School
- Recreation/Entertainment
- Church

Land use data was subsequently aggregated to create 241 transportation analysis zones (TAZs), with each TAZ representing a distinct geographical trip generating unit in the travel demand model. Table 4-8 describes the modeled 2014 land use quantities. The base year travel demand model was calibrated using 2014 traffic counts to establish a tool that reflects vehicle traffic and travel patterns for each of the TAZs.



Table 4-8. 2014 Land Use

Land Use Category	Quantity	Units
Single-Family Housing	8,517	Dwelling Units
Multi-Family Housing	1,311	Dwelling Units
Senior/Assisted/Retirement Housing	212	Dwelling Units
Retail	589	KSF
General Office	316	KSF
Industrial and Manufacturing	163	KSF
Warehouse/Utility/Storage	226	KSF
Hotel	96	Rooms
Hospital/Nursing Home	69	KSF
Park and Ride	841	Stalls
School	3,355	Students
Recreation/Entertainment	207	KSF
Church	121	KSF

Land Use Forecasts (2021 and 2035)

The next step in the transportation modeling process was to incorporate land use forecasts to the calibrated base year travel demand model in order to establish 2021 and 2035 traffic forecasts.

The year 2035 transportation model horizon matches the land use forecasting horizon used by PSRC and Kitsap County. In order to convert regional 2035 land use forecasts to the level of detail required by the citywide transportation model, housing and employment growth forecasts were geographically distributed to the TAZ level according to zoning and estimated land capacity. Employment growth forecasts were converted to gross floor area or equivalent modeled units using relationships established by the Institute of Transportation Engineers, U.S. Department of Energy, and San Diego Association of Governments.

Table 4-9 shows the citywide residential and employment forecasts used in this Plan.

Table 4-9. 2021 and 2035 Forecasts

	Households	% Change from Base	Employees	% Change from Base
2014 Base Year	10,040	--	7,779	--
2021 Forecast	10,948	9%	8,715	12%
2035 Forecast	12,763	27%	10,587	36%

Growth in households is assumed to occur at an annual rate of approximately 1.3 percent per year during the planning period. Employment growth is expected at 1.7 percent per year. The 2035 forecasts assigned a moderate rate of growth throughout the Island with the greatest



commercial growth in the designated Neighborhood Service Centers, industrial growth focused in areas currently zoned business/industrial, and residential housing growth occurring in areas where the greatest potential for new housing under the existing zoning could occur. The 2021 forecasts were based on a straight-line interpolation of growth for each TAZ, with the assumption that the distribution of employment and housing would be proportionate to the 2035 scenario.

Future Traffic Operations

This section describes the future traffic conditions on the City's roadway system for 2021 and 2035. Future traffic conditions were estimated for 2021 and 2035 using the results of the land use and employment forecasts, roadway network information, and the calibrated travel demand model (including calibrated trip generation, distribution, and traffic assignment submodels).

2021 Traffic Forecast

The 2021 traffic forecast was developed by applying a linear interpolation of forecasted 2035 land use growth to the calibrated base year planning model. Forecasted traffic growth was then applied to the Synchro traffic operations model to analyze 2021 levels of service. Where LOS was shown to fall below the minimum LOS threshold by 2021, mitigating improvements were added to the road network. This section describes the results of the 2021 analysis.

2016-2021 Programmed Improvements

A number of improvements are scheduled in the 2015 Capital Improvement Program to occur prior to 2021. These programmed improvements have been added into the 2021 transportation model forecast and assumed in the LOS calculations.

The following improvements which impact level of service are assumed to be in place by 2021:

- *Madison / Wyatt* – The intersection control will be changed to a signal or roundabout.
- *Wyatt/ Grow* – The intersection control will be changed to two way stop control. This work will be performed in conjunction with pedestrian crossing improvements and is intended to limit cut through traffic on Grow. The level of service for the north and south legs of the intersection would be allowed to decline in order to mitigate cut through traffic.

2021 LOS

The traffic model provides a representation of the expected traffic under 2021 conditions. Results of the 2021 forecast show continued heavy congestion and poor level of service along SR305 and some minor intersection problems in the Urban Zone around Winslow.

Roadway LOS

Roadway LOS failures occur on some relatively low volume collector roadways due to the capacity policy described above. These failures may not exist if capacity policy is revised to represent a Highway Capacity Manual or similar approach. Traffic congestion along SR305 is expected to continue.

Intersection LOS

The traffic model was used to identify locations where intersections may be the cause of poor operations. Table 4-10 shows the results of the 2021 Plan year intersection LOS analysis. Without mitigation, one intersection in the Urban Zone – Madison Avenue N / Wyatt Way NE – fails to meet the minimum LOS standards. In the Suburban Zone, the intersection of Bucklin Hill



Rd. and Blakely Ave. is forecasted to fail at LOS D. Several intersections on secondary arterials in the Urban Winslow Area operate at LOS C.

On SR 305, the intersections at Agatewood Road, Seabold Road, Hidden Cove Road, Lovegreen Road, and Koura Road all fail to meet the minimum standard. By the 2021 forecast year, SR 305 corridor congestion continues to deteriorate with the intersections at Hidden Cove Rd. and Koura Rd. falling from LOS E to LOS F.









2016-2021 Mitigation

Each intersection and roadway segment identified as below the minimum LOS standard in 2021 was studied to see if mitigation actions could improve the intersection LOS to the minimum standard. Targeted roadway improvements can correct an intersection or roadway that fails to meet the minimum LOS standard.

City Mitigation

For intersections in the City's roadway system where the expected LOS is below the minimum standard, the following mitigation is proposed:

- *Blakely Ave/ Bucklin Hill Rd* – An intersection control improvement such as a signal or a roundabout would improve the intersection to LOS A. The intersection will be studied to determine what specific improvement should be constructed; however, the roundabout would be the preferred method by the community according to the survey conducted for this Plan.
- *Winslow Way/ Erickson Ave & Bjune* – Limited access, no left turns from Ericksen Ave is proposed for this location for peak hours. The improvement would result in LOS C at this location. This improvement would reduce conflicts in the offset intersection reducing congestion and improving safety for all users.
- *Madison Ave/ Wallace Way* – Limited access, no left turns from Wallace Way is proposed for this location for peak hours. The improvement would result in LOS C at this location.

WSDOT Mitigation

Five SR 305 intersections and two roadway segments currently fail to meet LOS and will continue to deteriorate. Table 4-10 describes improvements that could mitigate LOS failures, such as adding turning lanes or signalization. Refer to chapter 5 of this Plan for recommendations.



Table 4-10. Intersections PM Peak Hour LOS Analysis – 2021 Forecast

Intersection	EB	WB	NB	SB	Inter- section LOS	Mitigation
Urban Zone						
High School Rd/Grow Ave	--	--	C	--	C	
High School Rd/Madison Ave	B	B	B	B	B	
High School Rd/Fernclyff Ave	B	B	C	A	C	
Madison Ave/Wallace Way	C	C	--	--	C	Prohibit WB left turns from Wallace Way. LOS D without mitigation.
Winslow Way/Ericksen Ave	--	--	--	C	C	Prohibit SB left turns from Ericksen Avenue. LOS D without mitigation.
Winslow Way/Madison Avenue	B	B	C	B	C	
Wyatt Way/Grow Avenue	--	--	F	C	F	After planned conversion from AWSC to TWSC
Wyatt Way/Madison Ave	A	A	A	A	A	Planned roundabout.
NSC Zone						
New Brooklyn Rd/Miller Rd	B	B	C	C	C	
Sub-Urban Zone						
Blakely Ave/Bucklin Hill Rd	A	--	A	A	A	Roundabout. LOS D without mitigation.
Eagle Harbor Dr/Bucklin Hill Rd	--	C	--	--	C	
High School Rd/Sportsman Club Rd	B	C	B	B	B	
Miller Road/Koura Road	B	C	--	--	C	
Wyatt Way/Finch Road	--	--	--	C	C	
SR 305						
SR 305/Agatewood Road	--	D	A	A	A	Signal. LOS F without mitigation.
SR 305/Seabold Road	D	D	A	A	A	Signal. LOS F without mitigation.
SR 305/Hidden Cove Road	C	B	A	A	A	Signal. LOS F without mitigation.
SR 305/Day Road	D	D	C	C	C	
SR 305/Lovegreen Road	C	C	A	A	A	Signal. LOS E without mitigation.
SR 305/Koura Rd	C	--	A	A	A	Signal. LOS F without mitigation.
SR 305/Sportsman Club Road	A	A	C	C	C	
SR 305/Madison Avenue	D	C	C	B	C	
SR 305/High School Road	C	C	B	B	C	
SR 305/Winslow Way	C	D	A	A	C	

*Approach does not meet LOS standard; however, overall intersection LOS is met.



2035 Traffic Forecast

The analysis of 2035 traffic conditions provides a long-range view of how the roadway system will operate on the Island. The 2035 traffic forecast considers housing and employment growth forecasted by PSRC and by Kitsap County, as well as any roadway network changes that would impact traffic operations. This section describes the results of the 2035 analysis.

2021-2035 Model Forecast Improvements

Few projects have been programmed into the traffic model to be constructed between 2021 and 2035. The City's traffic plan has not been updated since 2004 and was not formally adopted. The State has recently begun longer term planning for the SR305 and other corridors. Because only a few improvements have been included in planning documents beyond the six-year period for either City or State facilities in the study area.

The following improvements are assumed to be in place by 2035:

- *SR305 / Suquamish* – A roundabout is planned for this intersection. This intersection is outside the study area for this Plan and is not evaluated in the traffic model.

2035 LOS

The traffic model produces a forecast of 2035 traffic conditions, which are shown in Figure 4-8 and 4-9. Results of the 2035 forecast show continued heavy congestion and poor level of service along SR305 and some minor intersection problems in the Urban Zone around Winslow.

Roadway LOS

Analysis of the expected traffic in 2035 shows that most of the City's roadway system would continue to meet the minimum LOS standards with the roadway system in Winslow, including SR 305 intersections, generally operating acceptably. Based on the City's existing capacity policy, some roadway LOS failures would still exist on several collector roadways throughout the Island. For the 2035 forecast year, SR 305 is expected to fall below the minimum LOS standard from Madison Avenue to the north end of the Island.

Intersection LOS

The intersection analysis results from the 2035 Plan year are shown in Table 4-11. Assuming the identified short term planning horizon improvements are provided in the urban zone, no further intersection improvements are needed or anticipated. By 2035, the increase in traffic on SR 305 is expected to result in continued deterioration of intersection operations. Excessive delay would occur at nearly all of the intersections north of Madison Avenue. The intersections at SR 305 and Agatewood Road, Seabold Road, Hidden Cove Road, Lovegreen Road, and Koura Road would all be at LOS F. The poor operation of the highway would cause it to act as a barrier to cross-Island traffic, impacting operations of the City's roadway system as a whole.





Figure 4-9
2035 Winslow Level of Service





Table 4-11. Intersections PM Peak Hour LOS Analysis – 2035 Forecast

Intersection	EB	WB	NB	SB	Inter- section LOS	Mitigation
Urban Zone						
High School Rd/Grow Ave	--	--	C	--	C	
High School Rd/Madison Avenue	B	B	C	B	B	
High School Rd/Ferndale Ave	C	B	D	B	C	
Madison Ave/Wallace Way	-	C	-	-	C	Prohibit SB left turns from Ericksen Avenue. LOS E without mitigation.
Winslow Way/Ericksen Ave	-	-	--	C	C	Prohibit SB left turns from Ericksen Avenue. LOS E without mitigation.
Winslow Way/Madison Avenue	C	C	D	C	C	
Wyatt Way/Grow Avenue	--	--	F	D	F	No mitigation identified.
Wyatt Way/Madison Avenue	A	B	A	A	A	
NSC Zone						
New Brooklyn Rd/Miller Rd	B	C	D	D	C	
Sub-Urban Zone						
Blakely Ave/Bucklin Hill Rd	A	--	A	B	A	Roundabout. LOS E without mitigation.
Eagle Harbor Dr/Bucklin Hill Rd	--	C	--	--	C	
High School Rd/Sportsman Club Rd	A	B	A	A	B	
Miller Road/Koura Road	C	C	--	--	C	
Wyatt Way/Finch Road	--	--	--	C	C	
SR 305						
SR 305/Agatewood Road	--	E*	A	A	A*	Signal. LOS F without mitigation.
SR 305/Seabold Road	D	D	B	A	A	Signal. LOS F without mitigation.
SR 305/Hidden Cove Road	D	D	B	A	B	Signal. LOS F without mitigation.
SR 305/Day Road	D	C	B	C	C	Add NB/SB queue lane
SR 305/Lovegreen Road	C	C	A	A	A	Signal. LOS F without mitigation.
SR 305/Koura Road	D	--	A	A	A	Signal. LOS F without mitigation.
SR 305/Sportsman Club Road	A	A	D	C	C	
SR 305/Madison Avenue	D	C	C	B	C	
SR 305/High School Road	C	C	B	C	C	
SR 305/Winslow Way	D	D	B	B	C	

*Approach does not meet LOS standard; however, overall intersection LOS is met.



2021-2035 Mitigation

Mitigating the LOS for the City intersections would require minor improvements which can be programmed into the City's future transportation improvements program. The increased traffic volume expected to use SR 305 in 2035 would overwhelm the existing facility, resulting in a situation that cannot easily be mitigated.

City Mitigation

Improvement to intersection channelization and/or intersection control can mitigate the substandard LOS at all of the City intersections. The following projects are proposed to improve LOS at the four identified substandard intersections:

- *Bucklin Hill/ Eagle Harbor Drive* – An intersection control improvement such as a signal or a roundabout would improve the intersection LOS to B. The intersection will be studied to determine what specific improvement should be constructed; however, the roundabout would be the preferred method due to the three way configuration, traffic calming benefit for downhill traffic, and avoiding operational resource impacts of signals.
- *Bucklin Hill Road/ Blakely Avenue* – An intersection control improvement such as a signal or a roundabout would improve the intersection LOS to B. The intersection will be studied to determine what specific improvements should be constructed; however, the roundabout would be the preferred method due to traffic calming and operations resource considerations.
- *Madison Avenue/ Wallace Way* – An intersection control improvement such as prohibiting left turns during peak traffic hours is recommended.

WSDOT Mitigation

In 2035, most of the intersections and roadway segments along the seven-mile SR 305 corridor within the study area will operate at LOS F. This problem is based on lack of roadway capacity that affects the intersection operation as well, making it extremely difficult to mitigate individual locations. Any mitigation that is proposed would need to be examined on a corridor basis, and would need to be consistent with WSDOT operational objectives, as well as City's goals and objectives with regard to traffic operations, environmental and community character concerns. An individual solution for each problem location would not provide an adequate assessment of the corridor-wide issues that are present on the highway.

There are a number of possible solutions that could be proposed to mitigate the corridor. In order to adequately explore possible solutions, a special study was performed for this corridor. The results of the study are explained in Chapter 5.

Other Mobility Issues

There other issues that affect the mobility of traffic on the roadway network. These issues include factors that influence how traffic operates and connects to the City's roadway system. The three areas discussed in this section includes the connectivity of the roadway system, access management, and special study areas identified by the Steering Committee.

Connectivity

Connectivity is defined as the level of connections between roadways in a transportation system. In concept, connectivity describes the efficiency of travel between any two points on the roadway



system. A high level of connectivity is characterized by a well-developed street network, available alternative routes, quick response times for emergency vehicles, good mobility for pedestrians and bicyclists, and an efficient use of the roadway system. A low level of connectivity is characterized by numerous dead-end streets, cul-de-sacs, and roadways that do not connect, resulting in poor response times for emergency vehicles, circuitous routing of pedestrian and bicycle travel, and inefficiencies in traffic flow. Low connectivity can also result in interrupted access to areas in the event of a road closure such as a traffic accident or landslide, which can result in the loss of development opportunities for some properties if they aren't served by the public roadway system, and can cause a high level of congestion and bypass traffic on the available streets.

On Bainbridge Island, an example of an area with relatively high connectivity is the Winslow subarea, where the street network is more developed and few streets end in dead-ends or cul-de-sacs. However; there are areas in Winslow where there are “super blocks” which inhibit connectivity. Many of the sub-urban areas have low connectivity with few alternate connections and wide street spacing, requiring difficult routing between areas.

Connectivity improvements are usually undertaken to solve potential safety problems or to improve traffic flow. New connections can be constructed to provide access to undeveloped properties, or alternative access in areas where there is only one roadway serving many homes or businesses, where the existing road is unstable due to steep slopes or erosion, or where an alternative route is needed to provide relief to an overly congested route.

Seventeen connectivity projects have been identified across the Island to be developed as traffic and other needs dictate. These are shown in Figure 4-10 (general area of connection shown with star) and described in Figure 4-11. The potential connections shown are recommended for development by the Steering Committee. The recommendations were developed by looking at the needs of schools, fire and emergency medical response, and other public facilities, as well as access to landlocked properties. Each potential connection will be considered separately as traffic patterns and emergency response times warrant, will be studied to identify potential impacts, and will include discussions with affected property owners. Connections will be included with other nearby projects if possible. Connectivity improvements are not included in this Plan's 2035 traffic model.

Access Management

Access management is the control of the number and location of access points along a roadway, in order to provide access to property, maximize safety for all roadway users, and optimize roadway operations. Access management is especially important on arterial roadways and highways where there is or may be high travel speeds and traffic volumes are desired.

Access management is generally implemented on roadways for three reasons: to improve roadway operations, to improve safety, and to improve access to properties. Roadways operate best when all vehicles travel in a straight line. Conflict points occur when the path of one vehicle crosses the path of another. These can be at intersections, driveways, or at other locations where vehicles turn. Vehicles that slow to make turning movements, accommodate merging traffic, or allow crossing traffic flows all contribute to the reduction in the number of cars that can travel through a corridor. Reducing conflict point's increases capacity and traffic speeds.



Multiple conflict points not only slow traffic and reduce roadway capacity, but also increase the potential for accidents. Rear-end and turning vehicle collisions can be minimized through the use of access management strategies that reduce conflict points. Too many conflict points can also interfere with access to properties by making it difficult for vehicles to turn across traffic, or by restricting turning movements. Access management can also improve access to individual properties by organizing driveways at locations where turning movements are safer and easier.

On Bainbridge Island, access is a major issue along SR-305 corridor, particularly north of Hidden Cove Road. Along this stretch of the highway there are multiple driveways and streets where the only access to properties is via the State Highway.

Techniques that can be applied to increase the mobility and safety of a travel corridor vary from development of shared access points to the installation of medians or other turning restrictions. The objective of an access management program is to provide access to a property while limiting negative impacts to the property.

Control techniques fall into two categories: driveway access and roadway operation. Driveway access controls prescribe the number and location of driveways for properties along a roadway segment. Roadway operation controls provide for access to properties and cross streets. The following list identifies the techniques included in each category:

Driveway Access Controls:

- internal circulation between parcels
- shared driveways
- limits on number, spacing, and size of driveways
- consolidation of access for adjacent parcels
- use of one-way driveways
- right-in/right-out (RIRO) access
- development of access driveways on minor streets

Roadway Operation Controls:

- refuge lanes or two-way continuous left turn lanes
- turning movement limitations through signage and channelization
- construction of deceleration lanes
- raised medians that limit left turns
- traffic signals at high volume locations
- provisions for U-turns



The State of Washington supports the use of access management strategies to protect its key roadways and travel corridors. RCW 47.50.010 requires that access be managed along all state facilities:

“Regulation of access to the state highway system is necessary in order to protect the public health, safety, and welfare, to preserve the functional integrity of the state highway system, and to promote the safe and efficient movement of people and goods within the state.”

While the institution of access management may not solve the corridor's congestion problems, adoption of access management strategies and practices will increase the efficiency and safety of the corridor while minimizing the impacts on existing property owners.

The City of Bainbridge Island does not currently have a formal access management program. Some aspects of access management, such as number and location of driveways and internal parcel circulation, are monitored by the Public Works Department during the site plan review process.

WSDOT manages access on state highways, including SR 305 as it crosses the Island. This highway is classified as *Partial Access Control*, which has the following definition: “Access approaches are permitted for selected public streets, roads, some crossings, and existing private driveways. No commercial approaches are permitted and no direct access if Public Street or road access is available.”



Figure 4-10 Connectivity Improvements

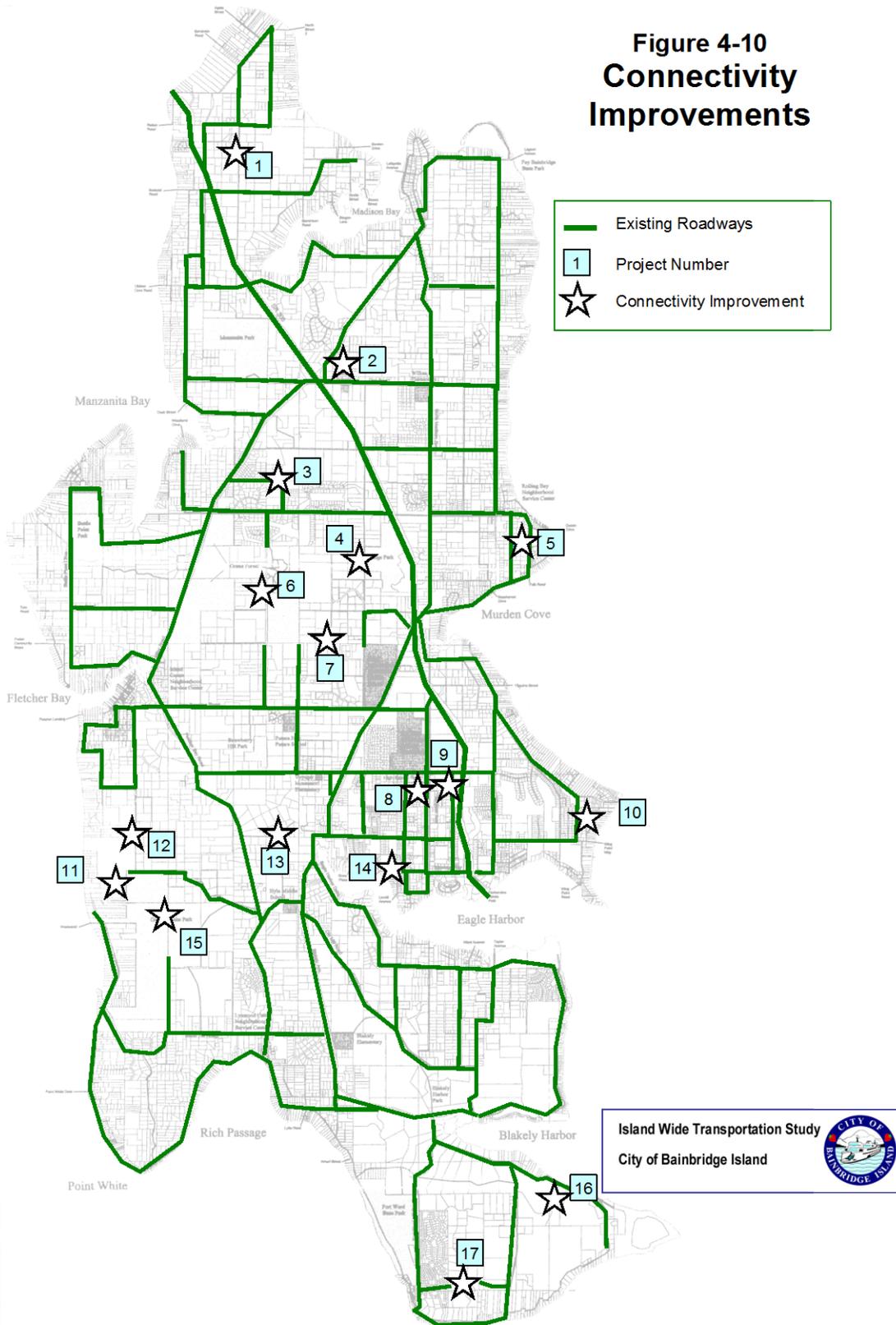




Figure 4-11 Guide To Potential Connectivity Improvements

1. **Agate Pass Road** – The extension of Agate Pass Road between Dolphin Road and W. Port Madison Road would provide a secondary access to the area and lessen traffic impacts and delay at the intersection of Agatewood Road/SR 305.
2. **Phelps Road** – The realignment of Phelps Road, east of current intersection with Day Road would improve the intersection’s geometrics and intersection spacing from Day Road/SR 305.
3. **Fieldstone/Bayhill Road** – The extension of Bay Hill Road to Fieldstone Lane would improve neighborhood circulation.
4. **Wardwell Road** – The connection between Wardwell Road and Koura Road would improve the circulation opportunities in the central Island area, provide a secondary access to the Wardwell Road area, and provide access to undeveloped parcels. One alternative may be to provide non-motorized through access and limit motorized use.
5. **Manitou Beach Road** – This proposed segment would provide a connection between upper Manitou Beach Road and Falk Road providing a secondary access to the area where shoreline erosion problems threaten sections of Manitou Beach Road.
6. **Mandus Olson Road** – The connection of north and south portions of Mandus Olson Road would provide better circulation throughout the area, a through connection between the two existing street segments, and access to undeveloped parcels. There is currently an unimproved gravel path at this location limited to non-motorized use. One alternative may be to limit this route to non-motorized use.
7. **Paulanna Road** – The extension of Paulanna Road to Bucsit Lane would provide secondary access to the area and could connect north to Wardwell Road.
8. **Ihland Way** – The connection of Ihland Way through to Madison Avenue would break up the superblock between Wyatt Way and High School Road.
9. **Ericksen Avenue** – The connection between Ericksen Avenue and Hildebrand Lane would eliminate the existing connection through the bank parking lot and improve the mobility of the transportation system.
10. **Dingley/Alder/Fairview** – This project would connect segments between these dead-end roadways to improve neighborhood connectivity.
11. **Marshall Road** – The extension of Marshall Road west to Crystal Springs Road would be an important link in developing a system of streets in the largely undeveloped southwest area of the Island. The current roadway is a long dead-end with a single access point.



12. **Springridge Road** – The extension of Springridge Road south to Marshall Road extension (see #11) would be part of the circulation improvements to the southwest portion of the Island. This roadway would also provide access to undeveloped parcels.
13. **Wyatt Way/Fletcher Bay** – Develop a western extension of Wyatt Way between Bucklin Hill Road and Fletcher Bay Road to provide secondary access to south Island locations and provide access to undeveloped parcels.
14. **Shepard Way** – This connection between Grow Avenue and Nicholson Place would create a secondary access and better circulation in the area for motorized and non-motorized users. There is currently an unimproved gravel path at this location limited to non-motorized use.
15. **Deerpath Lane** – The extension of Deerpath Lane north to NE Marshall Road would increase the connectivity in this south Island area. The current roadway is a long dead-end with a single access point.
16. **Country Club Road** – The connection between Country Club Road and Toe Jam Hill Road would provide an access around a potential shoreline erosion area.
17. **Darden Lane** – The project would connect Fort Ward Hill Road and Toe Jam Hill Road by developing a roadway segment connecting Evergreen Avenue and Darden Lane.
18. **Reitan Road** - Providing an access on both sides of the highway is recommended to maintain reliable access to the neighborhood as the only access is from SR305. This improvement would allow limited access for a section of SR305.
19. **Agate Beach Land** - Providing a frontage road to link this and other properties fronting SR305 is recommended to maintain reliable access. This improvement would allow limited access for a section of SR305.

CHAPTER 5 SR 305



The SR 305 highway is the State Highway's primary connection (via the WSF) between Seattle and the Kitsap Peninsula. Traffic during the morning and evening peak travel hours has continued to worsen resulting in long delays. This chapter reviews the issues associated with SR 305 and its impact to the City's roadway system. The chapter also describes a special study that was performed, and recommendations for future actions.

Summary of SR 305 Issues

SR 305 is significant to the City's roadway system as the major north-south travel corridor on the Island, not only for through traffic traveling to and from the ferry dock, but also for Island residents and employees. The goals and policies address the LOS standard, access to the Island via the Agate Pass Bridge, improvements to the highway, impacts to the highway from the City's Comprehensive Plan elements, and off-Island improvements that affect on-Island traffic.

As a state highway, WSDOT is the agency that is responsible for the operation and maintenance of SR 305. This means that WSDOT sets the minimum LOS standard and is responsible for the funding and implementation of any improvements to the highway. According to WSDOT policy, control of the highway within a City's corporate limits can be transferred to the City if its population is greater than 22,500. According to US Census data, Bainbridge Island exceeded this population threshold in 2010 with a population of 23,025, according to US Census data. As a result, some of the responsibility for highway improvements could shift to the City, however, because SR 305 is a regional facility and is listed as a Highway of Statewide Significance, some responsibility could also remain with the WSDOT.

SR 305 LOS Impacts

The traffic analysis (described in Chapter 4) shows that current conditions on SR 305 do not meet the WSDOT minimum LOS standards, and future traffic will be even worse. Currently, along the SR305 Corridor all collector street intersections fail and one secondary arterial intersection (Koura Rd.) do not meet level of service standards. The PM peak hour average speed along the seven-mile corridor is currently 16 miles per hour, with several roadway segments operating below the average speed. The problem is most severe at the north end of the study area, where there are large back-ups beginning at the Suquamish Way intersection and Agate Pass Bridge. By 2021, all of these locations will have failed LOS. Additionally, by 2035 the Day Road intersection will be LOS D and approaching falling below standard. The corridor is forecasted to operate with an average speed of 14 mph by 2035, which is less than one-third the posted 45 mph speed limit at the north end of the Island. The expected level of service for the highway without improvement – described as the No Action alternative – are shown for the 2015, 2021, and 2035 years in Figures 5-1, 5-2, and 5-3.







A Intersection LOS

- Meets Intersection LOS Standard
- Fails Intersection LOS Standard

— Fails Roadway LOS Standard

— Meets Roadway LOS Standard

0 .33 .67 1 Miles



Figure 5-2
SR 305 Level of Service
2021 No Action







What Makes SR 305 Different?

The traffic issues on SR 305 are different than the issues associated with the rest of the Island’s roadway system for several reasons. First, the highway facility is owned and operated by the WSDOT. This is significant because WSDOT would be the lead agency and would have primary decision-making and financial responsibility for improvements to the highway. Second, even though the highway functions as a main north-south corridor for Island travel, it is also heavily used by regional traffic and is a Highway of Statewide Significance, especially by vehicles traveling to and from the ferry terminal in Winslow. Because the WSF controls the ferry schedule, they have a great deal of influence on when and how much ferry traffic is using the highway. Third, the highway experiences substandard levels of service over most of the seven-mile length of the highway on the Island and the Agate Pass Bridge. Improvements to the highway would require several large projects that could be expected to require significant time to complete the planning, design, and construction of each, and a significant financial outlay.

This Plan updates the 2004 Island-Wide Transportation Study. The 2004 Study forecasted significant traffic growth on SR 305 which has not occurred as anticipated. This study updates the SR 305 travel demand and level of service forecasts using the planning and operational models described in Chapter 4 of this Plan, which yielded a more modest growth forecast than described in the 2004 Study. The updated Plan studied the roadway network on the Island, which does not include the intersection of SR 305 and Suquamish Way to the north of the Agate Pass Bridge. It is understood that short- and long-term improvements along SR 305 must consider the SR 305 corridor as a whole and that congestion at Suquamish Way could impact operations on the Bainbridge Island roadway network.

SR 305 Special Study

Because of the major issues associated with SR 305 improvements, a preliminary study was undertaken to determine what kind of possible improvements could resolve the traffic issues without looking into the environmental, financial, or other issues associated with the improvements. The goal of the study was to identify possible improvements along the SR305 to compare their effectiveness to improve mobility along the corridor, improve permeability across the corridor, and provide reliable access to neighborhoods whose only access is from SR305. Based on this information, the NMTAC and Staff, could include recommendations in the IWTP to better position the City to advocate for improvements.



Because SR 305 is a state facility, all improvements would require a commitment by WSDOT to be constructed. The City could participate in the improvements in order to improve mobility and level of service for the City roadway system.

Special Study Alternatives

Two preliminary alternatives were developed to examine different future scenarios to see if there is a way to overcome the SR 305 operational deficiencies.



The first alternative, Alternative A, represents the scenario with all crossings at grade and improved and additional signalized intersections. Limited access is included at north Island locations. Refer to Figure 5-4.

This concept includes:

- Access from both sides of the highway from Reitan Rd.
- Frontage road serving Agate Beach Ln. and Agatewood Dr.
- Signals at Agatewood Dr. and West Port Madison Rd. w/ combined operation.
- Widening of the signalized intersection at Day Rd. to add two lanes at the north and south legs of the intersection.
- Widening of the signalized intersection at Sportsman's Club Rd to add two lanes at the north and south legs of the intersection.

Signals are spaced from the SR305 Sportsman's Club Road intersection north at a regular spacing such that signals can be timed to minimize travel times along SR305. In this scenario, funding is prioritized to ensure that most Island locations have reliable access to SR305. The State envisions a roundabout at Suquamish Way to be one viable long term alternative. If constructed, limited access between the roundabout and the first traffic signal on the Island would be needed as there would be no control of traffic flow at peak hours. The SR305 intersections at Hidden Cove Rd, Lovegreen Road, and Koura Road would fail during the PM peak hour. The traveling public at these times could choose to access SR305 at other signalized intersections at peak hours in most cases.

The second alternative, Alternative B, represents a scenario that incorporates a reversible transit and car pool lane and separated grade crossings. Limited access is included for the entire corridor. Refer to figure 5-5.

This concept includes:

- Access from both sides of the highway from Reitan Rd.
- Frontage road serving Agate Beach Ln. and Agatewood Dr.
- Overpass of SR305 at Agatewood Dr. w/ no access to SR305
- Interchange underpass of SR305 at West Port Madison Rd.
- Underpass of SR305 at Hidden Cove Rd w/ no access to SR305
- Interchange overpass of SR305 at Day Road and reconfiguration of Phelps road approach.
- Interchange w/ underpass of SR305 at Sportsman's Club Road and abandonment of Moran Road access to N. Madison Ave.

The State envisions a roundabout at Suquamish Way to be one viable long term alternative. If constructed, limited access between would be needed on the north end of the Island south of the roundabout as there would be no control of traffic flow at peak hours. The SR305 intersections at Lovegreen Road and Koura road would fail during the PM peak hour. The traveling public at these times could choose to access SR305 at other intersections at peak hours in most cases. While not included in this Plan, an underpass of SR305 could be added at Koura Rd. Alternative connectivity for other local access roadways serving smaller neighborhoods with their only access at SR305 could also be studied.

Using a modified Highway Capacity Manual-based arterial roadway capacity calculation methodology and the roadway level of service standards described in Chapter 4, roadway level



of service failures would persist along most of the SR305 corridor under both alternatives described in this Plan.

Special Study Results and recommendations for further study

The two improvement alternatives were analyzed and compared to see how well they were able to meet LOS minimum standards. The special study compares at-grade and separated grade alternatives. In each alternative, the number of intersections was minimized while providing for reliable access to most Island locations. LOS C or better is maintained at most intersections for both alternatives. With alternative B, an LOS B or better is achieved for most intersections north of the urban center of Winslow. However, in some locations alternative longer routes would need to be taken to access intersections meeting LOS standards. Additional intersection improvements could be evaluated in a more comprehensive plan. Roadway level of service failures are not mitigated in either of the two alternatives but would require additional roadway capacity along the SR305 corridor (e.g. in the form of added travel lanes) or decreased volume. Note that it is assumed in the analysis that the SR305 intersection at Suquamish Way will be improved so as not to have a ripple effect on Island intersection locations.

Further study is needed to design alignments and develop reliable cost estimates to adequately plan for maintaining adequate level of service both currently and in the next 20 years along SR 305. Grade separated alternatives would be significantly more costly to implement than at grade alternatives. Both alternatives achieve acceptable LOS. Therefore, it may be difficult to justify the additional cost of grade-separated alternatives, especially larger interchanges. Some combination of intersection improvements and limited access is needed to reduce congestion and provide for reliable access. It may be practical to incorporate less extensive grade separation options for both motorized and/or non- motorized modes to maintain permeability along the corridor.

The SR305 corridor as it exists today and with any future improvements will have a significant impact on many aspects of transportation on Bainbridge Island. Further study should be inclusive of and comprehensive to address all aspects. The following issues have been identified for inclusion in further study of the corridor:

- Operations of adjoining roadway networks and connectivity – The study should consider the effectiveness of the adjacent roadway networks along the corridor. There may be opportunities to mitigate cut through traffic and improve connectivity. There may be impacts to circulation and neighborhoods.
- Corridor Permeability – The 2004 IWTS included a special study that looked at two improvement scenarios. The first scenario, Alternative A, assumed increasing congestion would not be mitigated and interchanges and crossings to restore east-west travel along the corridor. Permeability for all modes remains a key consideration for any scenario.
- Maintaining reliable access for neighborhood – For many neighborhoods, such as in the Agate Pass and West Port Madison areas, the only access is from roadways that connect to SR305. Maintaining reliable access is an important aspect of any scenario.
- Sound to Olympics Trail and Inter-Island Trails – The City envisions a network of regional and sub-regional separated pathways along and crossing the SR305 corridor. The existing and potentially wider highway presents a barrier to many users. Permeability for active modes of transportation is a key consideration for intersection and other improvements.
- Bus Transit – Improving efficiency of and access to transit along the corridor is an important aspect that should be studied and integrated into all scenarios. Collaboration with Kitsap Transit is needed to explore possibilities.



Other SR 305 Issues

The deficient level of service is the most significant issue currently affecting the City's transportation system. The bridge, park and ride, and off-Island improvement issues will be addressed in future studies in conjunction with an overall plan for SR 305 improvements. The City should take a leadership role in initiating studies to develop improvement projects and not defer to WSDOT's timeline and priorities. The City should partner with Kitsap Transit and others to reduce vehicular demand on the Highway.

SR 305 Recommendations

Since the 2004 IWTS, WSDOT has implemented a number of intersection projects including the following:

- Signal improvements at N. Madison.
- Signal timing optimization for peak hour ferry offloading at the Winslow Way intersection
- Signal timing optimization for the Day road intersection to improve access from Day and Miller.
- Bike through lane on right improvements to the north and south legs of the intersections at Madison, Sportsman's Club/ N. Madison, and Day Roads.



Figure 5-4
SR 305 Level of Service
2035 Alternative A








A number of interim and long term recommendations are as follows based on the special Study.

Interim Improvements:

The following interim improvements are recommended at the time of this Report for the next 6 years:

- Support WSDOT’s proposed right hand turn lane at the south leg of the Suquamish Intersection, including bicycle lane, and pedestrian sidewalk and crossing improvements.
- Advocate for WSDOT to include “do not block” intersection signage at intersections north of Day Road, Hidden Cove, West Port Madison, and Agate Point in the above WSDOT project.
- Intersection improvements at West Port Madison eliminating access to Seabold and providing a receiving lane (similar to Agate Pass) for south bound traffic.
- Advocate for consistent 8 foot or wider paved shoulders along the full length of the corridor to accommodate cyclists and pedestrians.
- Advocate for the Sound to Olympics Trail and its branch trails.
- Advocate for improved access to ferry and bus transit including park and ride and bike parking opportunities both on and off island.
- The proposed West Port Madison Intersection project should be scoped and evaluated for inclusion in the City’s Capital Improvement Plan.

Long Term Recommendations:

The following Long Term specific improvement projects are recommended:

- Advocate for improvements at the intersection to Suquamish to address north south mobility/capacity. Advocate for the bi-direction transit lane recommended in the 2006 Multi-modal plan.
- Advocate for Agate Pass Bridge replacement/ renovation.
- Advocate for a separated pathway for non-motorized users in conjunction with the bridge replacement.
- Advocate for limited access improvements at Reitan in conjunction with the bridge replacement. This would include access for Reitan and possibly connection frontage roads from both sides of the highway in conjunction with the bridge replacement.
- Advocate for a joint signal at Agate Point & West Port Madison to restore access to these “highway locked” areas.
- Advocate for channelization and signal improvements to accommodate additional north-south queuing capacity (4 lanes) at the Day Road Intersection.
- Advocate for a right hand turn lane at the west leg of the Madison intersection. Note that intersection improvement at New Brooklyn should also be considered at that time.
- Advocate for capacity improvements to roadway segments north of the Madison Avenue intersection. Alternatives may include HOV lanes, a reversible HOV lane, or shoulder use by HOV’s. Improvements should be design to accommodate bus rapid transit.

The above improvements should be evaluated in studies undertaken by the City or other agencies.

If and when the State legislature resolves its transportation funding challenges, the City could then re-evaluate opportunities to partner with WSDOT Olympic Region, Washington State Ferries, Kitsap Transit, and other local agencies to invest in planning/permitting (EIS) for the implementation of a large scale multi-modal regional transportation improvements to the SR305 Corridor. Until that time, the long term project improvements identified in the Plan



recommendations will serve as policy guidance for the City and City recommendations for WSDOT and other jurisdictions.

Chapter 6 Safety and Maintenance

Safety and the related issue of maintenance are primary community concerns to ensure the roadway system's safety and longevity. This chapter provides an overview of the safety and maintenance issues for the City of Bainbridge Island. The core of the safety section is a discussion about accident history and high accident locations. The maintenance section describes maintenance issues, activities, and programs that occur on the Island.



Safety

Many of the Island's two-lane roads were constructed before current safety guidelines were developed. As traffic levels increase, the potential for safety concerns rises. There is a combination of factors that can lead to accidents on substandard roadways, including demographic changes to the Island's population, preferences for larger or more powerful vehicles, increased motor vehicle volumes, and demands for greater use of roadways by pedestrians and bicyclists. Crashes on these roads can have more serious consequences because of narrower lanes and shoulders, hazardous roadsides, steeper grades, and sharper curves, which also impedes the ability for emergency vehicles to respond.

Speed is a factor in the risks and severity of traffic accidents. Both the likelihood of accidents and the severity of injuries are greater with higher speeds. Communities are embracing initiatives for lowering speed limits such as the Vision Zero initiative that has been adopted by the City of Seattle and WSDOT's target zero initiative. Vision Zero initiatives make the goal of zero deaths and serious injuries the highest priority and emphasize government taking the lead to implement improvements to further that goal. An emphasis is placed on lowering speed limits, including engineering solutions such as narrowing traffic lanes, and employing traffic calming.

The City of Bainbridge embraces the principle of putting people first when it comes to safety over efficiency for vehicular traffic and even bicycle traffic. The City's standard roadway lane width is 10 feet providing narrow lanes for traffic calming. The following areas are emphasized for safe street design:

- Speed Limits – Consider neighborhood context and existing and future non-motorized use when establishing speed limits. For local access and minor collector streets, lowering speed limits can be an effective tool for obtaining lower speeds. For secondary arterials and major collectors, speed zones with lower speed limits can be an effective tool for lowering speeds. When traffic engineering professionals consider lowering the speed limit has potential for achieving lower speeds then the non-motorized safety aspects of the study should be heavily weighted in the analysis.
- In developing capital projects, consider elements that manage speed, improve safety and traffic calming:
- Bicycle climbing lanes at locations where differential speeds are higher between cyclists and motorists;
- Pathways separated from the roadway for pedestrians, wheel chair users, and cyclists;



- Roundabouts, traffic islands, and curb bulb outs;
- Maintaining or providing vegetation close to the roadway.

In developing transportation improvement programs consider types of projects that provide improved safety for the traveling public, such as:

- Complete Streets,
- Shoulder Improvements,
- Separated Pathways, and
- Greenways.

Accident data is often used to identify the location of safety issues. While the number of accidents does provide an indication of the safety of an intersection or roadway, it does not mean a location is safe. Often drivers will adjust their driving behavior to match the design of a roadway. For example, a driver may be more cautious and slow their travel speed when approaching a corner where there is limited sight distance. Types of safety concerns that can be identified by accident data include:

- *Road Surface Conditions* – Poor roadway surface conditions such as pavement edge drop-offs, potholes, worn lane striping, and reductions in surface friction due to age and wear affect vehicle stopping and maneuvering capabilities.
- *Intersection Configuration* – Accidents related to high turning volumes, lack of channelization, and improper phasing.
- *Non-Motorized Conditions* – High accident data between vehicles with pedestrians or bicycles may emphasize the need for the construction of non-motorized facilities.
- *Geometric Conditions* – Accidents related to undesirable physical characteristics of the roadway's design, such as sight distance, curve radii, paved width and shoulder, and roadway slope.
- *Enforcement Issues* – Accidents related to vehicle speeding, intersection traffic violations, driving under the influence of alcohol or illegal drugs.



Accident History

Accidents can indicate where safety issues exist within a transportation system. The number of accidents at a specific location is a function of a number of factors including the quality of reporting data, traffic volumes, roadway design and geometrics, vehicle speed, and speed limit. For the analysis the total number of annual accidents at intersections over a ten year period is used. Unsignalized intersections with an average annual number of accidents of 5 or more is considered to be a high accident location. For signalized intersections 7 or more accidents is considered to be a high accident location.

City Intersections

Table 6-1 indicates intersection locations with 10 or more accidents over the ten year period ending in 2014 per the City’s accident data base at locations other than along the SR305 corridor. Current data is compared with data from the previous study which was reported over a 9.5 year period ending in 2000.



Table 6-1. Bainbridge Island Accident Locations

Intersection		Type	Accidents 2005- 2014	Average Annual Accidents	Accidents 1991 - 2000	Average Annual Accidents
High School Rd	@ Madison Ave.	RA	22	2.2	45	4.7
High School Rd	@ Hildebrand Lane	SC1	20	2.0	19	1.9
Winslow Way	@ Ericksen Ave.	SC2	14	1.4	18	1.8
Wyatt Way	@ Madison Ave.	SC4	13	1.3	23	2.4
Miller Rd.	@ Koura Rd.	SC2	12	1.2	---	---
High School Rd.	@ Grow Ave.	SC2	10	1.0	24	2.5
Eagle Harbor Dr.	@ Bucklin Hill Rd.	SC1	10	1.0	---	---

RA - Round About, SC – Stop Controlled

All of the top ten intersections fall below the high accident criteria threshold. The highest number of accidents is reported for the two intersections along High School Road west of and in closest proximity to SR305.



State Route 305 Intersections

Table 6-2 indicates the accident rates at primary intersections along the SR 305 corridor as from data available from the Washington State for the ten year period ending in 2014. The number of reported accidents, and the average annual rate over a 3.25-year period from the prior IWTS. Annual average accidents are shown for comparison purposes Department of Transportation. The table displays the intersection cross streets, the type of intersection (“S” signalized, “U” un-signalized),

Table 6-2. SR 305 Accident Locations

Intersection	Signalized/ Unsignalized	Accidents 2005 - 2014	Average Annual Accidents	Accidents 1997 - 2000	Average Annual Accidents
SR 305 @ Madison Ave.	S	82	8.2	22	6.8
SR 305 @ Sportsman’s Club Rd.	S	71	7.1	21	6.5
SR 305 @ Day Rd.	S	52	5.2	34	10.5
SR 305 @ High School Rd.	S	47	4.7	25	7.7
SR 305 @ Winslow Way	S	31	3.1	9	2.8

As indicated by the table, the intersections at SR 305/Madison and SR 305/Sportsman’s Club exceed 7 accidents per year which is considered higher than what is normally expected for signalized intersections. There are no scheduled improvements identified by WSDOT for these intersections.

Accidents involving pedestrian and cyclists

From review of the State accident report there were 19 injury accidents reported involving pedestrians (6) and cyclists (13) along the SR305 corridor for the ten year period. The highest concentration of accidents was near the Ferry Terminal. The vast majority of accidents outside of the urban Winslow area involved cyclists. A project for implementing non-motorized improvements on SR305/ Olympic Drive near the Ferry Terminal is in progress.

From review of City accident reports outside of SR305 there were 121 injury accidents reported involving pedestrians (27) and cyclists (94) for the ten year period. There was at least one fatality involving a pedestrian on struck crossing the street on New Brooklyn in December of 2010. The highest concentration of accidents occurred on Madison Avenue (17), Winslow Way (16), High School Road (14), and Wyatt Way (10). In 2012 Winslow Way was reconstructed including pedestrian and bike facility



improvements. Non- motorized improvements are planned for Wyatt Way and Madison Avenue.

Addressing Safety Problems

Addressing safety problems require a combination of approaches ranging from educating the driver, enforcement, to improving the roadway. Roadway improvements fall into two major categories — improvements designed to prevent crashes from occurring, and improvements that minimize the severity of crashes that occur. Types of improvements that can improve safety problems include:

- *Clear Zones*—Areas of open space with gentle slopes adjacent to the road giving motorists room to safely regain control of their vehicles if they run off the road. These areas should include features such as signs and utility poles which breakaway on impact, barrier walls or guardrails that redirect vehicles away from hazards, and crash cushions that absorb energy and lessen the severity of crashes where appropriate.
- *Guardrails* – The Island along its perimeter has many medium and high bluffs. In the interior the island’s topography is hilly in many areas. Guardrails are employed at many locations. Many of these guardrails are older not meeting current design standards and some are in disrepair. There are some locations where new guardrails may be warranted due to roadway configuration, topography, traveled speed, and traffic volumes.
- *Signing, Pavement Marking, and Delineation* — Traffic signs, pavement markings, rumble strips, and reflective devices improve driver perception of important roadway features and alert them to changes in roadway geometry or other conditions.
- *Pavement Improvements and Preventive Maintenance* — Greater smoothness and friction of the road surface are provided by pothole repair, resurfacing, rehabilitation, and reconstruction.
- *Intersection Controls* – Stop signs, roundabouts, and traffic signals can better control traffic flow and reduce intersection conflict points.
- *Adding or Widening Shoulders* – Shoulders provide drivers, pedestrians, and cyclists with additional room to maneuver on narrow roads or to pull out of travel lanes.
- *Channelization* – Separate lanes for left or right-turning traffic avoid impediments to traffic flow, which can lead to rear end crashes.
- *Pedestrian/Cyclist Facilities*—A variety of techniques can be used to separate pedestrians and cyclists from motor vehicle traffic to improve safety.





How study addresses safety

The IWTP proposes improvements that will improve the safety of the roadway system through targeted improvements at intersections and roadways. Safety-related elements of this study include:

- Reviewing roadway geometrics and promoting safety enhancements,
- Identifying and mitigating of high accident locations,
- Identifying and mitigation of intersections with poor LOS operations, and
- Including safety as a factor in the evaluation of the roadway system.

Safety Programs

- **Roadside Safety Program** – This program provides for the inventorying and inspection of roadside elements of the Island’s secondary arterial streets and higher volume collector streets. The program also provides for contracting work that is beyond the capacity of Operations and Maintenance. Roadside elements include items such as guardrails, shoulders, and clear zones. This program provides for the prioritization of guardrail repairs, replacements, and installations.
- **Focused Traffic Studies Program** – This program provides for the study of traffic control measures implemented on the Island’s roadways. As conditions change with factors such as population growth and development, it is necessary to evaluate the effectiveness of roadway signage and other traffic control devices. Many residents are concerned about vehicular speeds and this program provides for the evaluation of speed limits.

Maintenance

An increasingly important function of the City of Bainbridge Island is preservation and maintenance of the existing roadway system. Careful maintenance allows existing travel corridors to keep their function, prevents damage from water and vehicle loads, and maximizes the use of City resources.

Maintenance Issues

The City of Bainbridge Island’s Public Works Department is in charge of roadway maintenance activities for the Island.

Key maintenance issues for the City include:

- *Vegetation growth* – Overgrown vegetation requires the trimming of foliage to retain roadway safety and sight distance.
- *Pavement maintenance* – As roadways age, the pavement surface and underlayment can be damaged by traffic, heavy vehicles, weather, and water seepage if not properly maintained. Poor pavement condition can also affect the safety of the road for drivers and bicyclists.



- *Gravel road grading* – The surface of gravel roadways can deteriorate fairly quickly, producing potholes in the roads. These roads need regular re-grading to maintain the surface.
- *Dirt and gravel on shoulders and roadways* – Regular sweeping of roadways is necessary to provide a clean, smooth surface for drivers. Bicyclists are particularly concerned about gravel, dirt and debris accumulating on shoulder areas.
- *Stormwater* – Maintaining good roadway stormwater drainage is important to protect the roadway and to prevent flooding hazard.
- *Roadway erosion* – Roadway erosion on shoreline and steep slope areas is increasingly becoming an issue for the City. Repair of these roadways often is expensive and may require special permits and consistency with shoreline management goals and objectives.

Maintenance Programs

The roadway system has a number of on-going needs to keep the current roadway system functioning, and to prevent major roadway failures that would require extensive roadway reconstruction. The City Public Works Department's operation and maintenance program has the primary responsibility for these programs.

- *Street sweeping program* – Island-wide, street sweepers collect debris and litter before they enter the stormwater collection systems or roadside ditches. This function is important to protect stormwater run-off from the roadways and to provide a safe surface for automobiles and bicyclists.
- *Brush cutting program* – Island-wide mowing of vegetation to maintain roadway clearance and sight lines.
- *Roadway ditches and shoulders* – These components of the roadway system are periodically maintained, cleaned, and reshaped to ensure they function as designed.
- *Roads preservation program* – The City of Bainbridge Island has an annual road program focused on preserving, maintaining, and repairing the existing roadway infrastructure. The April 11, 2001 Pavement Management Program evaluated 462 street segments totaling 256 lane miles in length. The study recommended a strategy for each of the streets evaluated for either 1) reconstruction, 2) overlay, 3) seal coat and/or 4) patching. Where the roadway does not require complete reconstruction the City can repair damaged sections (patch with asphalt), apply chip seal layer (an oil emulsion and crush rock layer), or overlay new asphalt over the existing pavement.
- *Gravel grading program* – The City fills and regrades the surface of the gravel roads in the system annually.
- *Trail and Pathway Maintenance program* – The City cuts brush and restores trail surfaces to maintain its separated pathway and trail network.



- *Special Maintenance* – The City also performs maintenance activities not addressed in the above programs such as the removal of large trees that may present hazards to the traveling public.
- *Sign Inventory* – The City maintains a data base of signage and routinely maintains or replaces signs to meet reflectivity and other requirements.

How study addresses maintenance

The IWTS proposes improvements that will address roadway maintenance and promote the long-term preservation and operation of the street system. Maintenance related elements of this Study include:

- Establishing the use of existing City transportation facilities as key elements of the future travel network. The need to maintain and improve these facilities is required to meet City roadway standards
- Promoting maintenance as a priority need in the budgeting and financing of transportation functions.
- Identifying roadway improvements that meet the minimum requirements of the City's Design and Construction Standards and Specifications.

CHAPTER 7 NON-MOTORIZED SYSTEMS



Non-Motorized Modes – people walking, cycling, horseback riding, and using wheelchairs – play an important role in Bainbridge Island’s transportation system. Many peak hour commuting trips as well as other trips are made walking or riding. Having non-motorized choices available is important to many Island residents. Providing facilities that accommodate non-motorized users provides for safety, mobility, supports development density, encourages healthy lifestyles, reduces impact to the environment, and ultimately provides for improved quality of life for Island residents, workers, and visitors.

Background / History

Non-motorized modes of transportation, have been and continue to be, an integral part of Island life. From the late 1800’s to the early 1900’s, the main transportation to the Island was provided by a small fleet of steam ships referred to as the “mosquito fleet”. Roads originated at or near the “mosquito fleet” docks. Early residents walked, rode horses, and biked before the proliferation of automotive transportation. Auto ferry service was brought to the Island in the 1920’s at Agate pass. The Agate Pass Bridge was constructed in 1950. Auto ferry service to Seattle followed in 1951. With the onset of the golden age of the automobile, reliance on non-motorized transportation declined. As a rural oasis from the growing urban center of Seattle, walkability, biking, and horse-friendly neighborhoods remained an attractive part of the Bainbridge lifestyle. Walking and biking continued to be an important aspect of mobility within and nearby the Town of Winslow and other outlying Island town centers. With a reliable transportation to Seattle, a commuter culture developed and Bainbridge evolved to be more suburban. With increasing population, bus transit linking residential areas to the ferry terminal became an important element of the transportation system. In more recent times, with increased density closer to the ferry terminal increasing traffic congestion, and greater awareness of health and environment, walking and biking have become a more attractive mode of transportation.

The entire Island incorporated as the City of Bainbridge Island in 1991. Since incorporation, there has been a greater emphasis on non-motorized transportation planning. Following the development of the 2003 Island-Wide Transportation Plan, non-motorized transportation became a significant driver of the City’s Capital Improvement Program. The City has invested heavily in non-motorized improvements over the past decade. The following is a summary of major milestones in the City’s non-motorized planning and implementation:

- Inclusion of bicycle system planning and maps in the Transportation Element of the 1992 Comprehensive Plan.
- Development of a Trail System Master Plan in 1994.
- Recommendations for sidewalk and bicycle improvements in the 1995 Winslow Master Plan.



- Formation of a Non-Motorized Transportation Advisory Committee (NMTAC) to advise Council and support staff in December of 2002.
- Drafting of an island-wide Non-Motorized Transportation Plan in 2003. This plan included a comprehensive set of policies and goals that were later adopted in the City's Comprehensive Plan. Extensive Island-wide non-motorized existing and planned facilities maps were developed. These maps were subsequently adopted in the City's Comprehensive Plan and have evolved through several comprehensive plan updates.
- Inclusion of extensive non-motorized planning in the transportation element of the City's 2006 Comprehensive Plan following the 2003 Non-Motorized Plan.
- Formation of the Core 40 Program to provide a 40 mile integrated shoulder network for bicycles island-wide in 2007. The delivery of several Core 40 projects, including Bucklin Hill and North Madison.
- Delivery of capital improvement projects (mostly grant funded) in the Winslow area providing pedestrian and/or bicycle facilities including; Bjune, Ericksen, Ferncliff, High School, Madison, and Winslow Way.



In the 2004 Island-Wide Transportation Study, the 2003 Non-Motorized Plan was included as a separate volume. In this update to the Island-Wide Transportation Study, the Non-Motorized Plan is being incorporated into the Plan. Both the 2003 Non-Motorized Plan and the 2004 Transportation Study were extensive efforts that involved considerable staff time, comprehensive consultant support and extensive public outreach. Much of the information in the past Plans is still relevant today and remains a useful reference. The current update is more limited in scope and budget. The limited update is being prepared by City Staff with consultant support for updating information from the updated traffic model from the recent impact fee study. Public involvement includes participation by the NMTAC in the revisions to the Plan and review of the final draft by the Planning Commission. All of those meetings are open to the public. The final draft of the Plan is intended to be utilized to inform the update of the City's Comprehensive Plan Transportation Element. The Comprehensive Plan update includes more extensive public involvement.

Vision, Goals, and Policies

Broader transportation vision and goals, including those for non-motorized transportation, are included in Chapter 2 of this Plan. This section provides more specificity for non-motorized transportation goals.

Overall Goal



To provide the citizens of Bainbridge Island with a non-motorized transportation system that is a planned and coordinated network of shoulders, sidewalks, trails, footpaths, bikeways, and multi-purpose trails that connects neighborhoods with parks, schools, shoreline, ferry terminal, and commercial areas in a way that maximizes mobility for all ages and abilities. This non-motorized network provides a sense of safety and comfort for pedestrians, bicyclists and equestrians, and ADA accessible facilities wherever possible, while respecting the natural environment, and character of existing neighborhoods and private property rights.

Goal 1: Mobility and Connectivity

Develop a non-motorized transportation system that effectively serves the needs of all ages and abilities of Bainbridge Island residents including people walking, cycling, in wheelchairs, and horseback riding by providing a continuous network of context-sensitive infrastructure. The infrastructure should include attractive shoulders, sidewalks, footpaths, multi-purpose trails, and bikeways throughout the Island that are connected to main origins and destinations as well as regional systems.

GOAL 1 POLICIES

NM 1.1

In accordance with complete streets practices and guidelines, new or rebuilt streets shall, as much as is practical, address the use of the right-of-way by all users.

NM 1.2

Provide safe and appropriately scaled, continuous non-motorized access that connects neighborhoods with Neighborhood Service Centers, Winslow, ferry terminal, schools, parks, recreation areas, shoreline road-ends, transit connections, and regional destinations.

Discussion: Transportation facility needs vary depending on the expected use, the type and volume of users, and volume and speed of vehicle traffic. Standards must reflect the specific needs and character of the immediate area while providing adequate, safe, and effective non-motorized transportation facilities. Needs may include wider sidewalks in areas with high pedestrian use (e.g., Winslow, ferry terminal), bicycle lanes or separated bicycle facilities along high use corridors (e.g., Madison Avenue, Olympic Drive, Wyatt Way), and shared facilities or shoulders where appropriate (areas with low vehicle, bicycle, and pedestrian volumes).



NM 1.3

Provide pedestrian facilities of sufficient width to accommodate expected pedestrian use, including safe roadway crossings and, wherever feasible and appropriate, access provisions will accommodate people with the widest range of mobility.



Discussion: Attention should be paid to supporting people with a range of needs including those with visual impairments, and who require the use of wheelchairs, walkers and canes. An emphasis should be placed on the development of such travel routes in the Winslow area. The Non-motorized Advisory Committee should include an ADA advocate to

review Non-Motorized Transportation projects for mobility issues (see NM 5.1).NM 1.4

Locate and design bicycle facilities that effectively accommodate all types of bicycle riders including adults and children commuting to work or school and riders using their bikes for transportation and recreation. The system shall include separated bicycle facilities, on-road bicycle lanes, paved shoulders, and shared use pathways.

NM 1.5



Develop a system of trails for non-motorized use that connects Neighborhood Service Centers, the ferry terminal, schools, parks, road ends, shoreline trails and greenways of Bainbridge Island, including existing equestrian use trails.



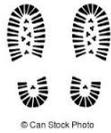
Discussion: Evaluate land uses, origins and destinations, existing and future non-motorized demand, and environmental critical areas to determine the appropriate type of trail and provide facilities that are appropriately sized for the anticipated demand. It may be appropriate to have paved shared use path facilities where demand is anticipated to include people walking, bicycling, and in wheelchairs.

NM 1.6

Provide well-designed and constructed pedestrian and bicycle facilities within one mile of public schools that are safe and comfortable for children. Within at least one-half mile of public schools, provide sidewalks or separated pathways along arterials,



collectors and some residential streets. Retain school bus service where necessary to discourage students from crossing SR-305.



Discussion: The school district receives school bus funding for students who live outside a one-mile radius of a school location. The City and school district should coordinate efforts to develop non-motorized facilities along primary non-motorized travel routes within the one-mile radius.

NM 1.7

Private schools will work with the City to provide safe, well-designed pedestrian and bicycle access from neighboring properties to the school.

NM 1.8

Require residential subdivision and commercial projects that meet the development thresholds set in the Municipal Code to provide public non-motorized connections through the development, where appropriate, and along public streets fronting the development. These non-motorized improvements are to be consistent with the location and design as identified in the Plan and to meet standards requirements as set by the City Engineer.

Discussion: The City needs to ensure that non-motorized connections to and through new commercial and housing developments are included as part of the development of a site plan. These include connections and short cuts that will increase the mobility of the non-motorized users, support a system, and provide connections to neighboring developments and the non-motorized network. Work with the City Planning Department to support Municipal Code changes that provide development incentives that encourage developments to incorporate non-motorized elements that cannot be required.



NM 1.9

Encourage non-motorized travel by recognizing existing informal and private pathways as part of the overall pedestrian and bicycle network. Efforts shall be made to formalize and make these connections public. Realignment of existing trails may be necessary to accommodate both trail access and private development.

Discussion: Informal and private pathways form a secondary system that is linked to the public system. This network of pathways provides direct connections between destinations, encouraging and allowing non-motorized



travel. Where these short cuts occur, it is more likely that trips will be made by foot rather than by automobile. NM 1.10

Subdivision regulations should be amended to include pedestrian and multi-use trails as an appropriate use in required perimeter buffers.



NM 1.11

Pursue development of non-motorized facilities on publicly owned (unopened) rights-of-way, street ends, utility corridors, easements and other lands available for public use.

Discussion: Unopened rights-of-way provide an opportunity for publicly owned connections to be retained as multi-purpose trail links.

NM 1.12

Support regional connections with the phased development of the Sound to Olympics Trail and other improvement to provide a safe, non-motorized, multi-purpose, travel corridor between the Agate Pass Bridge and the Bainbridge Island ferry terminal.

Goal 2: Design and Construction

Develop non-motorized design standards that provide safe and efficient access, encourage use and mobility, conform to State and Federal requirements, are responsive to the needs and character of the neighborhood and are sensitive to the natural environment.

GOAL 2 POLICIES

NM 2.1



Regularly update design standards, approved by the city engineer, as needed in order to evolve non-motorized elements and meet current recognized standards.

NM 2.2

Prioritize sidewalk connectivity by crafting street standards that encourage sidewalks to continue across driveways at the same level wherever feasible. This can be accomplished by providing a planting strip adjacent to the curb or by alternative driveway designs where right-of-way space is constrained.

NM 2.3

Prioritize non-motorized facilities; clearly designate the location of roadway shoulders, bicycle lanes, and multi-use lanes that are used by non-motorized users. Consider texture, color, lighting, and signage in the design of non-motorized facilities including but not limited to crossings.



Discussion: Wider fog line markings consistent with the MUTCD, shall be required on roadways to delineate the vehicle travel lanes where shoulder areas are designated for pedestrian and/or bicycle facilities. Consider using colored bike boxes, shared lane markings, and other markings in accordance with accepted standards including



PROWAG.

NM 2.4



Develop and require standardized directional, destination and safety information signage for all non-motorized facilities appropriate to the Island character.

NM 2.5

Require that the City's Design and Construction Standards for sidewalks, footpaths and shared use pathways follow specifications appropriate for the roadway vol-



umes, motor speed limits, location, topography and expected intensity of use. Incorporate accessibility requirements in accordance with the PROWAG to the extent feasible and incorporate universal principals in design to the extent practical. Trails standards will follow the specifications set out by the Bainbridge Island Metropolitan Park District as described in their Trails Plan and a certified arborist shall be consulted when retaining or incorporating existing vegetation.

Discussion: Width and surface materials will vary dependent upon whether sidewalks, footpaths or trails serve the Winslow and Service Center cores or residential areas or provide school access and should reflect the character of the neighborhood. In addition, road volumes and speeds shall be considered. NM 2.6



Road approach design standards shall require that asphalt or concrete paving be extended an appropriate depth into the approaching driveway or road to avoid gravel spill onto roadway shoulders.

Discussion: Rock and debris from gravel driveways and roads that is tracked onto roadway shoulders that are used by pedestrians and bicyclists pose a safety hazard either by causing bicycle accidents or by causing pedestrians and cyclists to veer into traffic lanes to avoid the debris.

NM 2.7



Construct non-motorized facilities with appropriate amenities, such as restrooms, drinking fountains, benches, and short-term and long-term bicycle parking, throughout the system that will encourage and support non-motorized use. Encourage private property owners and non-profit organizations to also provide these types of amenities.

NM 2.8

The design of new parking lots and garages shall include covered bike storage/parking facilities. Where existing bicycle parking is sufficient and conveniently located, the City Engineer may omit this requirement.

NM 2.9



When bike racks are required for commercial development and public facilities, the racks shall be located convenient to the building entrance, appropriately designed to be compatible with the design and development of the site, and sheltered from inclement weather.

Discussion: While covered bike racks are preferred, it is not necessary to provide a separate built structure. Racks can be incorporated into the building design, such as under roof eaves, to provide adequate cover. Bike rack type of facilities should be incorporated into future updates to the Municipal Code requirements.



NM2.10

Road construction design standards shall discourage the placement of utility facilities, such as manhole covers and utility poles, within non-motorized travelways.

NM2.11

Artwork should be incorporated into the functional design of the publicly funded facilities and encouraged in private developments.

Goal 3: Safety and Maintenance

Promote the safe use of non-motorized facilities through effective transportation improvements, maintenance operations and enforcement.

GOAL 3 POLICIES

NM3.1 Develop and fund an annual maintenance and repair plan for non-motorized facilities that includes, but is not limited to, the following:

- maintenance of bike lanes and shoulder areas including: frequent sweeping of debris, striping and vegetation maintenance;
- deficient disability access;
- the replacement and/or adjustment of the grade of storm drain grates;
- repair of uneven or damaged sidewalks, footpaths, bicycle lanes, roadway shoulders and below-grade storm drain grates or other utility facilities;



- reduction of sight line obstructions;
- pruning of branches, vines and vegetation that obstruct the travel way according to best management practices; and
- completion of other maintenance activities that promote safety for non-motorized users.

NM3.2

Remove man-made objects that may be dangerous for the traveling public in existing rights of ways

NM3.3

Improve the safety of non-motorized travel by using such techniques as raising crosswalks, wider striping, pedestrian islands, ADA accommodation, modifying lighting, installing hand or bicycle activated sensors or implementing traffic calming measures.

NM3.4

Provide marked crosswalks in high traffic areas consistent with the MUTCD, at safe and appropriate intervals, particularly in locations where pedestrian routes cross an arterial.

Discussion: Existing and proposed motorized / non-motorized crossings (such as at driveways where bicycle and automobile paths cross) should be evaluated to assure the safe passage of non-motorized travelers.

NM3.5

Strongly encourage The Washington State Department of Transportation to make improvements at intersections that promote safe non-motorized crossings of SR 305.

Discussion: SR-305 provides few locations for non-motorized users to safely cross the facility. Coordination with WSDOT to locate improvements, such as "smart lights", will be necessary.

NM 3.6



Where appropriate, separate motorized from non-motorized uses, especially-pedestrian use of SR 305 and elementary schools.

Where traffic speeds are high, pedestrian and bicycle facilities should be separated from motor vehicle traffic. If that is not feasible, it may be necessary to reduce traffic speeds in order to maintain road safety for all users. A particular emphasis on providing separated routes shall be on roads connecting to schools and along SR 305.

NM 3.7

Coordinate with the Police Department and the Washington State Patrol to provide officer training and consistent enforcement of traffic laws, including speed limits, for both motorized and non-motorized travelers.

Discussion: Enforcement of traffic laws increases safe practices and provides a safer environment for non-motorized travel.

NM 3.8

Coordination with public and private groups, including the Bainbridge Island Police and Bainbridge Island Metropolitan Parks District, to promote the education and awareness of personal safety while using trail and other non-motorized facilities. Support bicycle patrol units for enforcing traffic laws for cyclists and patrolling multi-use pathways that are separated from the roadway.

NM 3.9

Maintain safe conditions during construction and maintenance of non-motorized travel paths and adjoining properties. If sidewalks, shoulders, or trails must be temporarily blocked, the city shall require alternate travel routes to be provided, posted, and maintained. Temporary wheelchair accessibility shall be provided.

Goal 4: Education

Improve the safe use of non-motorized roadway facilities through continuous community education.





Goal 4 Policies

NM4.1

The City will coordinate with the City police department, the Kitsap County Health District, the school, parks, and fire districts, and other civic groups to develop and sponsor outreach programs. The programs are intended to inform specific segments of the community, including but not limited to, motor-vehicle drivers, school-age children, non-motorized commuters, cyclists, recreational users, private property owners with or adjoining non-motorized facilities, and the general public.

The following public education programs should be provided to Island citizens:

- pedestrians and non-motorized vehicle safety
- rights and responsibilities of non-motorized facility users
- rights and responsibilities of property owners

Discussion: Squeaky Wheels, Cascade Bicycle Club, the Bicycle Alliance of Washington, and The League of American Bicyclists or other bicycle organizations are good resources of information on skill development and safety education for bicyclists.

NM4.2



Develop programs, or adapt programs, used successfully elsewhere, to encourage the use of non-motorized travel modes, including bicycle to work programs, bike-to school, sharing the road promotions, and training workshops. Various programs have been used throughout the nation to promote non-motorized use and education.

NM4.3

The City should identify the location of public facilities, such as trails, and, as appropriate; especially travel routes through or adjacent to private property.

Discussion: The design of access points and way finding signs can provide better recognition of facilities to the traveling public.



Public non-motorized facilities, such as trails, should be identified with signage and maps in order to clearly designate routes and access points. This is especially important where non-motorized facilities run adjacent to or through private property.



NM4.4

Develop a Non-Motorized Transportation Guide Map that identifies the location of non-motorized routes and facilities including the location of public restrooms and other amenities. The map should be updated regularly to provide the most current information for Island residents and visitors.

Goal 5: Implementation

Provide mechanisms for funding, prioritizing and implementing the Non-Motorized Transportation System Plan.

Discussion: Implementation of the Plan requires the translation of the goals and policy statements into a system improvement plan and a financing strategy.

GOAL 5 POLICIES

NM 5.1

The City will maintain a Non-Motorized Advisory Committee to advocate for the Transportation System Plan, in particular, non-motorized projects. The committee should consist of a minimum of five community members representing a broad range of interests, including an emphasis on pedestrian, bicyclists and equestrian users. Coordination efforts by the committee will include, but not be limited to: review of proposed transportation projects, including receiving and incorporating input from the public as required in Goal 6; project review for system connectivity and use standards; and providing general guidance and recommendations to the City Council, Planning Commission and City staff regarding non-motorized facilities. The committee will also review grant applications and assist with non-motorized education for the community.



NM 5.2

Coordinate planning and implementation with Kitsap County, Kitsap Transit, Washington Department of Transportation, Kitsap Coordinating Council, the Puget Sound Regional Council, and other planning / advocacy groups to further non-motorized goals. This includes trails and access to transit in Kitsap County, the Olympic Peninsula, and the greater Puget Sound region.



NM 5.3

Incorporate non-motorized improvements during the planning and design phase of road construction and other improvement projects. All commercial and residential development projects that reach the design review thresholds set in the Municipal Code shall be reviewed for compliance with the goals, policies and standards of the Non-Motorized Transportation System Plan. The NMTAC should develop a review checklist to aid City staff in evaluating projects for compliance with the Plan.

NM 5.4

Review the Municipal Code for opportunities to add regulations and incentives to increase the ability to obtain non-motorized projects with new private development applications.

NM 5.5

Identify and prioritize specific non-motorized construction projects in the Capital Facilities Plans and Transportation Improvement Plan, as identified by the Non-Motorized Transportation System Plan. Identify high priority projects, such as the Waterfront Trail (as identified in the Winslow Master Plan), and assure their completion.

NM 5.6

Designate City funding levels and actively pursue various funding sources, such as available grants and bond initiatives to allow construction of priority projects identified in the Non-Motorized Transportation System Plan. Funds for non-motorized projects shall be identified in the City's Capital Facilities Plan and annual budget and be used to acquire right-of-way, construct new facilities, refurbish older facilities, and maintain existing facilities.

NM 5.7

Secure easements or other land dedication for non-motorized facilities through development mitigation, donation, tax incentives / exemption programs, or direct acquisition. Look for opportunities to renegotiate and create new multi-purpose easements where non-motorized access can be accommodated within other easements, such as utility easements.



Discussion: The success of the Non-Motorized Transportation System Plan is dependent on the ability to obtain the land necessary to build the non-motorized system. The Non-motorized Advisory Committee should advise the City Council on acquisitions necessary to complete the system. In addition to securing new easements, the City should look for opportunities to renegotiate existing easements (like utility access easements) to add non-motorized access as an allowed use.

NM 5.8

Pursue joint funding opportunities with the School District, Park District, Washington State Department of Transportation and other agencies to meet high priority needs.

Discussion: Joint projects with multiple agency participation is an efficient way to leverage limited funds of each participant and enhance grant applications.

NM 5.9

Evaluate all repair and maintenance projects for opportunities to incorporate non-motorized projects in order to accelerate the implementation of this Plan.

Discussion: Using tools such as a coordinated review of the City's annual workplan, pre-feasibility studies and designated funding in the transportation improvement projects budget, assure that non-motorized transportation facilities identified in this Plan are funded.

System Overview, Inventory, Attractions, and Travel Routes

The system is envisioned to provide local access, inter-island, and regional connectivity for all modes of non-motorized transportation through an integrated network of sidewalks, shoulders or bike lanes, multi-use separated pathways, and trails. Facilities are envisioned to provide connectivity for people walking, biking, in wheelchairs, or riding horses to the following destinations:

- Ferry Terminal
- Agate Pass Bridge
- Town center of Winslow
- Town centers of Day Road, Island, Lynwood, and Rolling Bay
- Residential neighborhoods



- Schools
- Churches
- Parks
- Road ends and shorelines
- Equestrian facilities

Providing facilities for accommodation of non-motorized modes of transportation has consistently ranked high on past City surveys. The City Council appointed the NMTAC role to work with staff to plan and assist with the implementation of non-motorized improvements and other work related to furthering non-motorized transportation.

This section provides a detailed understanding of the current needs as understood at this time by the NMTAC and what the best opportunities are given geographical, existing development, and other constraints in providing for those needs.

The over-arching goal embodied in the non-motorized vision and the first non-motorized goal (9.1) is to provide a network of transportation facilities that provide non-motorized modes of travel for the greatest number and widest range of the traveling public.

The NMTAC considers the following mobility challenges to be high priorities:

- o Accommodating a wide range of non-motorized users of all ages and abilities.
- o Providing connectivity to the Ferry Terminal and the Winslow Town Center.
- o Providing safe routes to schools.
- o Providing connectivity to town centers and neighborhoods across the island for all modes.
- o Improving safety for cyclists and walkers on the Island's secondary arterial roadways.
- o Improving usability and accessibility of sidewalks in the Winslow Town Center.



- o Removing barriers and addressing gaps in networks addressing the above priorities. This includes but is not limited to SR305 and other higher volume streets.

Bainbridge Island is largely rural and suburban with neighborhood centers like Rolling Bay and Lynwood Center and the Winslow Town Center that have more urban development patterns. Context sensitive solutions for non-motorized modes will depend upon site specific conditions such as existing and planned land uses, the location of origins and destinations such as schools and parks, motor vehicle speeds and volume, and the overall network connectivity.

The overarching goal of the non-motorized transportation system is to create a network of facilities that makes it safe and secure for all ages and abilities of people to get around their neighborhoods and the island without a car. This will require a toolkit of facilities that will be evaluated for the particular context but may include:

- Sidewalks and bicycle lanes along urban streets in the Island's town centers.
- Separated non-motorized facilities that provide a viable non-motorized transportation option for a wide range of people walking, riding bikes, riding horses, or using wheelchairs are a key component of the Island's transportation system. This pathway network is envisioned to connect to the City's sidewalk and bike lane infrastructure and connect to main destinations like the ferry terminal, Agate Pass Bridge, Winslow, urban town centers, schools, parks, shoreline street ends, equestrian facilities, and other amenities. These facilities will vary depending on purpose but are envisioned to include:
 - The Sound to Olympics (STO) trail, which serves as a centralized spine for non-motorized users and is envisioned as a 12-foot wide separated multi-use path connecting the Bainbridge Island Ferry Terminal to the Agate Pass Bridge and linking to other regional locations,
 - Inter-island trails, which are envisioned as 10-foot wide separated multi-use pathways to link urban town centers, schools, and parks, and
 - Connecting pathways, which are 6-foot wide trails built to City standards that provide local connectivity and connect to the regional and inter-island trails. Additionally the system will integrate with Bainbridge Island Metropolitan Parks District Trails, built to Park Standards that provide both inter-island and local connectivity.

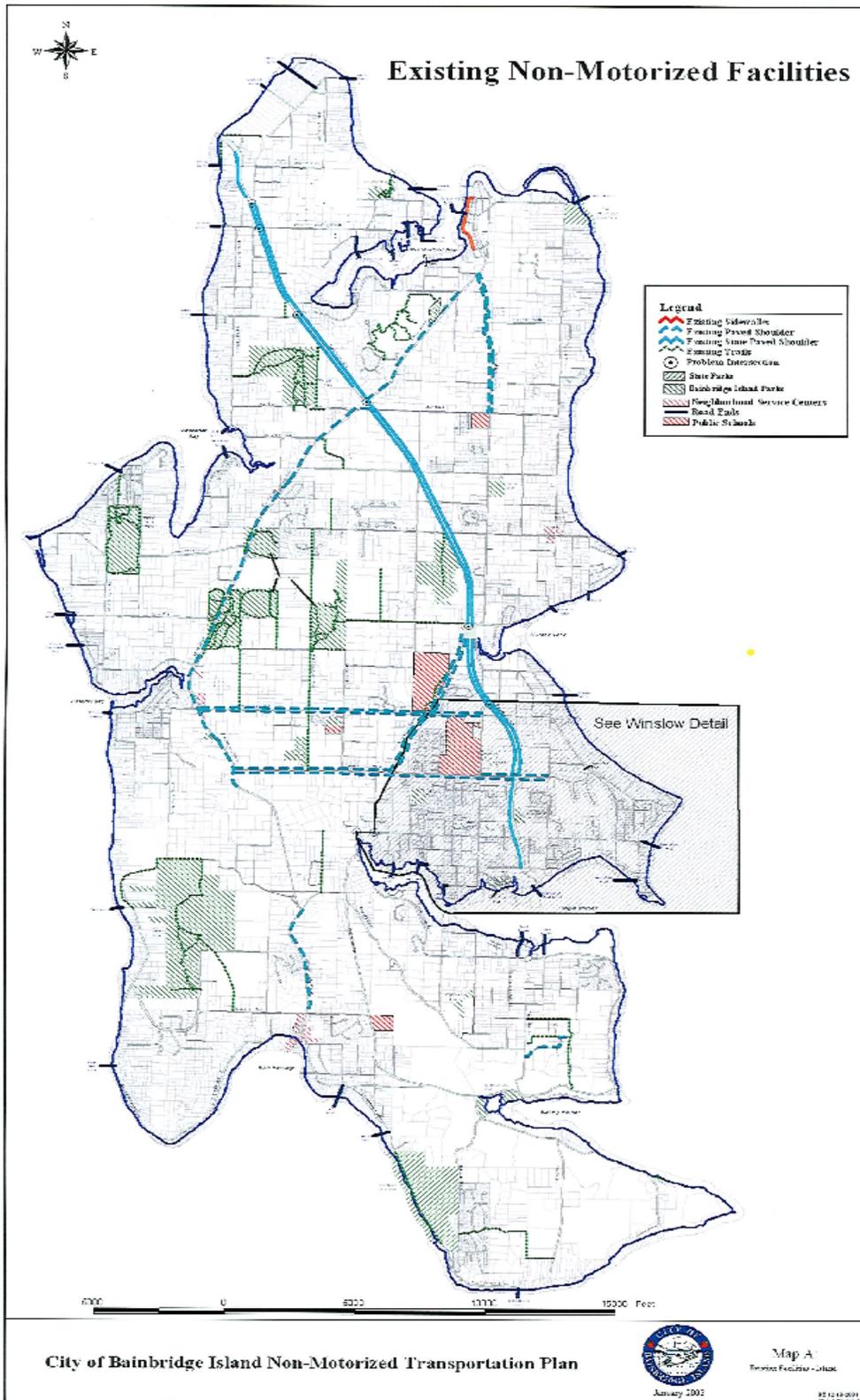
Road shoulders can provide connectivity for commuter and more experienced cyclists, as envisioned in the City's Core 40 Program. The Core 40 goal is to provide an integrated network of shoulders for cyclists that when combined with multi-use trails and lower volume roadways provides 40 miles of bicycle routes on the Island.

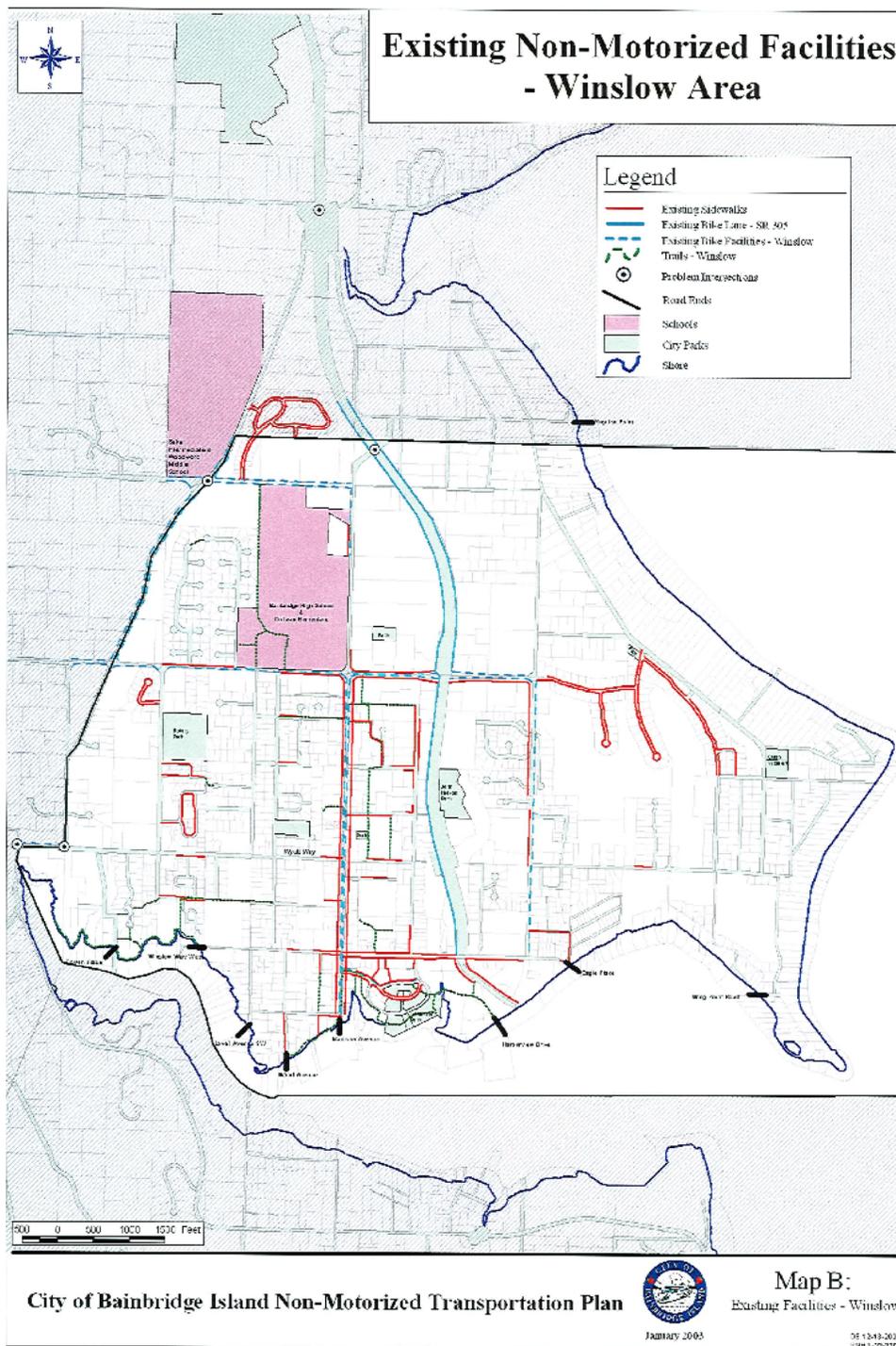
On low-volume neighborhood streets, specific non-motorized infrastructure may not be necessary if vehicular speeds are low (20-25 mph).



This combination of facilities is envisioned to make up a functional network that provides connectivity to the attractions previously identified and mobility for the greatest number and widest range of users.

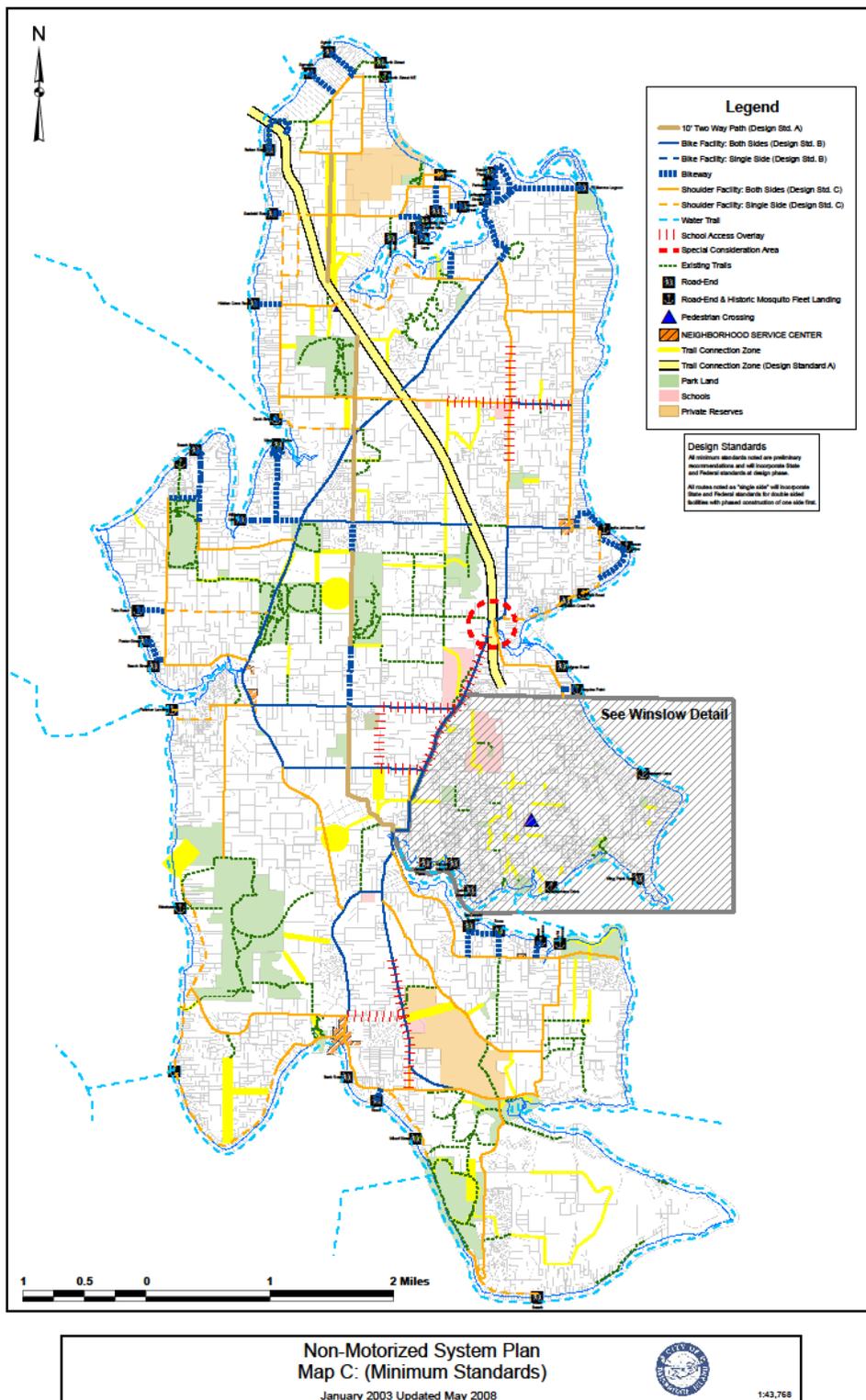
The existing non-motorized system is shown in Map A (Island-wide) and Map B (Winslow). The planned non-motorized system is shown in Map C (Island-wide) and Map D (Winslow). Map E shows planned regional and inter-island connectivity including a network of separated pathways, bicycle routes, and equestrian routes.







*City of Bainbridge Island – Island Wide Transportation Plan
Chapter 7 Non-Motorized System*





Barriers to use and Connectivity Improvements

Barriers are physical characteristics of a transportation system that limit or restrict the mobility for non-motorized users. Some common barriers on the Island are listed as follows:

- Inadequate maintenance from lack of shoulder sweeping for cyclists, objectionable joints at settled sidewalk panels, or poor trail surfaces in need of re-grading and compaction;
- Deficiencies in design such as lack of ADA compliant ramps, facilities that are not of adequate width to be comfortable for many users, and facilities with materials that are not ADA compliant;
- Discontinuities in system networks such as gaps in sidewalks or roadway shoulders;
- Inadequate facilities at roadway intersections;
- Lack of facilities when systems do not exist or do not extend far enough to meet needs;
- Physical barriers such as naturally occurring ravines or existing developed properties that do not provide for access.

To address barriers and other limitations on non-motorized connectivity across the Island, connectivity improvements are identified in a set of figures and tables which are intended to be living documents updated as new areas are identified and considered warranted by the Public Works Department / Director.

Table 7-1 lists identified barriers on SR305 and on City roadways.

Table 7-1, Roadway Network Barriers		
1	SR305 at Vineyard Lane	A separated grade crossing is needed to unite the two sides of the urban town center of Winslow that are divided by the SR305 superblock between Winslow Way and High School Road.



2	SR305 Signalized Crossings	Wide crossings can be a barrier to some users; As capacity improvements are made to SR305, medians, islands, and other pedestrian related improvements should also be provided.
3	SR305 Shoulders	Shoulder widening is needed to address gaps in between Hidden Cove Road and the Agate Pass Bridge.
4	City Secondary arterial and collector roadways	Where pedestrians and cyclists are uncomfortable, shoulders and/or separated pathways are needed in areas with or with potential for non-motorized use. Many of these areas are identified for improvements shown in Map E.

Table 7-2 identifies potential connectivity for trails. The focus of this table is for regional and inter-island multi-use pathways and roadway shoulder improvements. Trails included in this table are shown in Map E. Map E graphically depicts one set of possibilities for inter-island trails for the purposes of demonstrating connectivity that may be achieved by an integrated trail network. Some connectivity is identified for connecting pathways that are branches of regional and inter-island trails. Local connectivity is beyond the scope of what is listed. Refer to Maps C and D for additional trail connection zones. Trail connection zones are identified as opposed to specificity of routes to allow flexibility. The City's past practice has been to acquire easements for trails from private property owners on a voluntary basis or when there is significant development. While Maps C and D are applicable to development review, the specificity of location shown in Map E is not intended to be binding on development.

Table 7-2, Trail Connection Zones

Table 7-2, Trail Connection Zones		
1	Sound to Olympics Trail at Vineyard Lane	A non-motorized Bridge is envisioned to connect the center of Winslow which is divided by SR305, requiring easements for accommodating a non-motorized bridge and its approaches.



2	Sound to Olympics Trail at Hildebrand Shopping Area	A 10 foot wide paved pathway is envisioned to serve as a cross-connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor.
3	Sound to Olympics Trail_north of High School Rd	A 10 foot wide paved pathway is envisioned to serve as a cross connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor, requiring easements from the Parks District and private property owners fronting SR305 for construction of the trail from High-School Rd.
4	Sound to Olympics Trail north of Madison Ave	A 10 foot wide paved pathway is envisioned to serve as a cross connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor, requiring easements from private property owners fronting SR305 within the highway setback for flexibility in construction of the trail.
5	Sound to Olympics Trail north of Sportsman Club Rd.	A 10 foot wide paved pathway is envisioned to serve as a cross connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor, requiring easements from the Parks District on the Meigs Farm property.
6	Sound to Olympics Trail north of West Port Madison	A 10 foot wide paved pathway is envisioned to serve as a cross connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor requiring easements from private property owners for use of roadways fronting SR305.
7	Waterfront Trail connector at Harbor Drive	A 10 foot separated pathway is envisioned to connect the Waterfront Trail to the Ferry Terminal. Permission is needed from WSF to use the area West of the roadway for a separated pathway.



8	Cave Avenue Trail connector	A 6 foot wide connecting pathway is envisioned to connect local neighborhoods to the STO trail and the center of the urban area of Winslow. Easements may be needed in the vicinity of the ravine for access from the STO trail to Ferncliff Avenue near Wing Point Way.
9	Knechtel Trail connectors	A network of 6 foot wide connecting pathways and low volume local access roadways is envisioned to connect local neighborhoods to the center of the urban area of Winslow and the STO trail, Easements are needed from private property owners to link local access to the roadway for east – west connection from STO trail to Weaver.
10	Schools Inter-Island Trail	A 10 foot wide paved pathway is envisioned to serve as a cross connecting route at the north end of the urban Winslow area. This route would connect to Schools and Parks facilities and also serve as a transportation corridor. Formalized routes and easements are needed from the Parks District at the Central Park and the School District at the High School campus and the City’s Suzuki property.
11.	Wardwell Inter-Island Trail	A 10 foot wide paved pathway is envisioned to serve as a route connecting points north to the urban Winslow area School and Parks facilities. Formalized route and easement are needed from the School District at the Middle School campus.
12.	Shepard Inter-island Trail	A network of 10 foot wide paved pathways and low volume streets is envisioned along this corridor to better accommodate non-motorized use. Easements will be needed from private property owners to link local access roadway for east – west connection from Weaver to Finch.
13.	Head of the Bay shoulders and trail	6 foot wide paved shoulders are envisioned along this corridor. Additional right-of-way may be needed from fronting property owners to widen the roadway and mitigate for wetland impacts.



14	Bucklin Hill Road	6 foot wide paved shoulders are envisioned along this corridor. Additional right-of-way is needed to widen the roadway and drainage for shoulder improvements.
15	Lost Valley Inter-island Trail	A 10 foot wide paved pathway is envisioned through the lost valley. The trail would provide a more direct route to the west from the Winslow area at lesser grades than surrounding road networks. Easements are needed at the east end of the proposed trail to connect through to Fletcher Bay Road.
16	Lynwood Center Inter-Island Trail	A 10 foot wide paved pathway separated from the roadway is envisioned on the East side of Fletcher Bay Rd and Lynwood Center Rd. This pathway would provide non-motorized connectivity south to Lynwood Center. Easements are needed along the East side of Fletcher Bay Road.

Table 7-3 identifies gaps and deficiencies in sidewalks in the urban center of Winslow. This information is used to facilitate the planning of the City's sidewalk infill program and pedestrian elements for capital improvement projects.

Table 7-3, Winslow Area sidewalk gaps and deficiencies		
1	Madison Avenue from Wyatt Way to High School Rd	The existing 4 foot plus wide sidewalk is not adequate to accommodate a range of users.
2	Madison Avenue from Winslow Way to Wyatt Way	Sidewalk ramps not to current standards
3	Madison Avenue from Winslow Way to Parfitt Way	Sidewalk ramps not to current standards
4	Wyatt Way from Ericksen to Madison Ave	Sidewalk needed both sides



5	Wyatt Way from Madison Ave to Lovell	Sidewalks and bike lanes needed
6	Wyatt Way from Lovell to Weaver	Sidewalk is needed on north side to fill in the current gap.
7	Winslow Way from Madison Ave to Grow Ave	Existing sidewalks incomplete for roadway segment. Complete sidewalks are needed on both sides.
8	Grow Ave from Winslow Way to Wyatt Way	Sidewalk needed. Possible greenway.
9	Grow Ave from Wyatt Way to High School Rd	Sidewalk needed. Possible greenway.
10	Wood Ave from Grow Ave to Parfitt Way	Sidewalks are incomplete on both sides
11.	Cave Avenue	Gap is sidewalk on East side.
12.	Waterfront Park Trail at Harbor Drive	The sidewalk is narrow along a steep street grade. A separated pathway on the ferry property to the East with switchbacks would improve accessibility for persons with disabilities and cyclists.
13.	Waterfront Park Bridge and approaches	The bridge needs to be widened to accommodate cyclists and resurfaced for all users.
14.	Waterfront Park from Brien Drive to Shannon Drive	Access to the park from the upper areas to the lower areas does not meet ADA
15.	Trail from Parfitt Way to Finch Place	The existing gravel trail serves an area that is used by many senior citizens and is inconsistent in width and surfaced with gravel



Standards

The City's existing Design and Construction Standard's were developed in 1997 and have not been updated to include all of the non-motorized elements identified in the 2003 Non-Motorized Transportation Plan. It is recommended that this document be updated following the update of the Island wide Transportation Plan and the City's Comprehensive Plan both now and in progress. Refer to the table below showing a list of considerations for updating the Design and Construction Standards.

Standards 1	Maintain narrow 10 foot lanes on major roadways.
Standards 2	Modify standards to require pedestrian facilities to be maintained at grade at driveway entrances.
Standards 3	Require sidewalks to be built to the back of the right-of-way along arterial and collector streets.
Standards 4	Include a standard for planter strips for increased pedestrian accommodation. An alternate standard would still be available to omit planter strips in certain situations. Wider sidewalks should be provided where planter strips are omitted.
Standards 5	Minimum bike lane width on secondary arterial and major collectors to be 5 feet. An additional one foot clearance of the curb to be provided at curb and gutter locations. Buffered bike lanes to be considered at up-hill climbing locations.
Standards 6	Require paved driveway approaches at all driveways serving more than 3 households for all categories of projects. Note that paved driveways are currently required for new development.
Standards 7	Include a standards for shared use path, buffered separated multi-use path, inter-island trail, etc.
Standards 8	Utility structure covers are to be located out of the sidewalk unless impractical and any deviation requires approval by the City Engineer.



Standards 9	Tenant improvements and remodels trigger frontage improvements to meet current ADA standards.
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Non-Motorized Improvement Plan

Programs and projects to achieve the proposed Non-motorized Transportation System Plan are identified in Map E and the Capital Improvement Plan which are included in the Financial Chapter of this Plan.

Preservation and Maintenance

Existing and proposed non-motorized facilities need to be preserved and maintained to ensure continued usefulness. As the system grows, so does the demand for resources to maintain it. Facilities deteriorate over time and the City needs to plan for expenditures to repair and/or reconstruct these assets.

Areas of emphasis for maintenance as follows:

- o Annual raised sidewalk grinding or replacement
- o Annual sidewalk and cross walk power washing where needed to maintain slip resistance and/or contrasting color
- o Monthly sweeping of separated pathways
- o Annual cleaning/ power washing of separated pathways
- o Seasonal brush cutting of trails
- o Annual graveling of gravel surface trails where needed
- o Monthly shoulder/bike lane sweeping + higher frequency at problem areas
- o Annual pavement marking maintenance of cross walks, bike lane symbols, etc.
- o As needed washing and replacement of signage such as no-parking signs, way finding signs, etc.

Education, Encouragement and Enforcement



The NMTAC, supported by City Public Works, Planning, and Police Staff, and in coordination with Schools, Parks, and community groups will work to further the education goals of this Plan. This may include:

- Listening to the community to identify transportation system deficiencies and opportunities for improvement
- Coordinating and or supporting programs and projects that encourage active modes of transportation
- Supporting community outreach and involvement for the development of transportation projects
- Supporting safe routes to school programs
- Supporting “Adopt-a-Trail” and “Adopt a Route” programs
- Developing and distributing guide maps

The Committee and City routinely support the following efforts:

- ‘Bainbridge Shares the Road’ program and signage.
- League of American Bicyclists ‘bicycle friendly community’ designation.
- Posting walking and biking warning signs in high non-motorized use areas without adequate facilities.
- Walking, Cycling, and Paddling Map supported on the City’s web site.
- Walking Map of Winslow, produced by Sustainable Bainbridge and supported on the City’s website.
- Participating in ‘Bike to School Day’.
- Community engagement for connectivity opportunities and easements.
- Participating in public outreach involvement opportunities of City transportation projects.

Funding

In order to fund the Non-Motorized Improvement Plan and other recommendations in this Plan, the NMTAC recommends the following:



- o Continue to fund transportation improvements at current levels with the general fund.
- o Continue to seek grant funding opportunities to leverage City resources for “Complete Streets”, trails, shoulders and other non-motorized improvements. Provide flexibility in the program as needed to be competitive.
- o Currently a study is in progress to evaluate impact fees on new development. Include non-motorized elements and implement impact fees to partially fund projects that relieve future congestion including complete streets projects.
- o Put forward a bond measure to fund regional and inter-island trails and Core 40 shoulder improvements.
- o Study maintenance needs and put forward a budget proposal in Operations and Maintenance to provide for new facilities and improved level of service of all facilities.

CHAPTER 8 OTHER TRANSPORTATION SYSTEMS

For the City of Bainbridge Island, other transportation systems provide an extremely important role in the movement of people, vehicles, and goods. The ferry, transit, and non-motorized systems are a primary means of moving people to and from their destinations from commuter trips to Seattle to tourists visiting Bainbridge Island. This chapter describes each of these systems and their relationship to the Bainbridge Island transportation system.

Ferry System



The WSF service has, for many years, been the primary provider of ferry transit services in western Washington. The Seattle-Bainbridge ferry run provides an integral connection to the Interstate 90 and Interstate 5 corridors for the Kitsap Peninsula and the Olympic Peninsula regions. System-wide, the WSF system carries more than 23 million passengers per year (*2014 Washington State Ferries Rider Statistics Report*).

Washington State Ferry Operations

The Seattle/Bainbridge Island ferry provides daily crossings between Bainbridge Island and downtown Seattle's Coleman Dock. The 35-minute crossing covers 8.6 miles and connects Bainbridge Island and the SR 305 corridor with downtown Seattle and the Interstate 5 and 90 corridors. Two Jumbo Mark II Class auto/passenger ferries, the M/V Tacoma and M/V Wenatchee, serve the route connecting the I-90 corridor to SR 305. Each vessel has a travel speed of 18 knots, and maximum capacity for 2,500 passengers, 218 vehicles and 60 commercial vehicles.

Table 7-1 lists the ridership, schedules, crossing times, and service frequencies for the Seattle-Bainbridge Island route and alternative ferry routes that serve the central Kitsap County region. As shown in Figure 8-1, these alternative routes include the Seattle-Bremerton (passenger-vehicle and passenger only), and Kingston-Edmonds runs. The Seattle-Bainbridge run carries the largest share of ridership with more than 6.32 million passengers per year. The Kingston-Edmonds runs carries approximately 4 million annual passengers and the two Seattle-Bremerton ferries carry about 2.5 million riders.



Credit: WSF

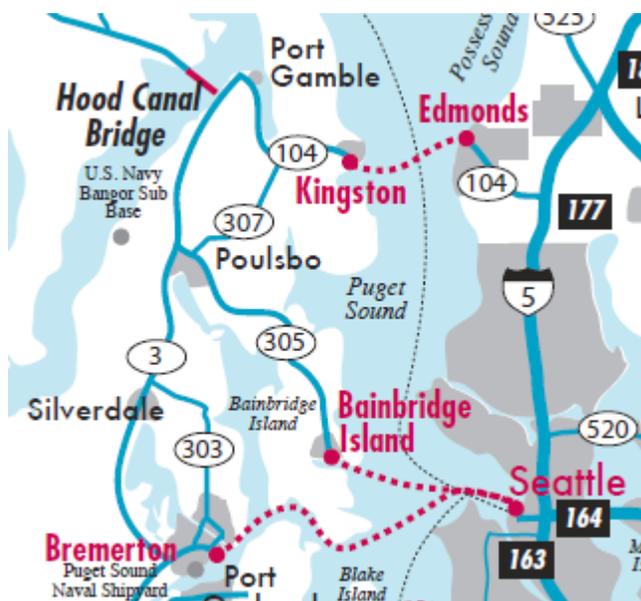


Table 8-1. WSF Schedules and Headways

<i>Route</i>	<i>2014 Ridership</i>	<i>Vehicles Carried</i>	<i>Hours of Operation (first- last sailing)</i>	<i>Crossing Time</i>	<i>Service Frequency</i>
Seattle/Bainbridge Island	6.32 million	1.95 million	5:30 am-2:10 am	35 min	40-50 min
Seattle/Bremerton	2.52 million	0.65 million	5:10 am-1:30 am	60 min	70-140 min
Kingston/Edmonds Ferry	4.00 million	2.10 million	5:10 am-1:00 am	30 min	40-70 min

Source: Washington State Ferries

Figure 8.1 Ferry Routes



Ferry LOS

WSF uses daily percentage of vessels at vehicle capacity as the measure of the Level of Service for ferry services. This methodology has changed since the last COBI Plan. The new methodology places an emphasis on using existing capacity as opposed to the prior method of measuring length of wait times at peak sailings which emphasized maintaining commute times for motorists.



Table 8-2 Ferry Operation LOS

Terminal and Mode	Level of Service
Seattle/Bremerton	???
Seattle/Bainbridge Island	???
Edmonds/Kingston	???

Source: WSF 2009 Long Range Plan

Kitsap Transit Passenger Only Ferry Proposals

WSF discontinued passenger-only ferry service in 2003. Both a private company, Aqua Marine and the Port of Kingston have attempted to restore high speed passenger only service from Kingston and Seattle. Both services have proven to be unsustainable financially due to limited ridership. The Port of Kingston ended its service in 2012.

Kitsap Transit proposed to develop a passenger only ferry service supported by a sales tax increase in Kitsap County in 2003. Proposition 1 was not supported by the voters at that time. In 2014 Kitsap Transit commissioned a study to evaluate the potential for passenger ferry service. Kitsap Transit is currently exploring creating a ferry district to fund passenger only ferry service.

In the past, passenger only ferry service has served only one port of call in Kitsap, limiting ridership. It is suggested that a return to a mosquito fleet model of service with multiple ports of call for each vessel in Kitsap be considered. Examples for this type of service would include Kingston, Indianola, Suquamish, Bremerton, and Port Orchard with shared service to these multiple ports and Seattle.

Ferry System Issues

The primary issue for ferry service is funding. With the erosion of the gas tax with more fuel efficient vehicles transportation funding has been in decline. Since the taxpayer backed tax cuts in the early 2000’s, WSF has been faced with raising fares, deferring maintenance of its fleet and terminals, and foregoing expanded operations.

- Fund terminal reconstruction including the Seattle Ferry Terminal
- Fund vessel maintenance and replacement reserves
- Maintain operating funding to keep fares at 80% fare box recovery
- Develop long range plans and funding strategies for expanding services including investments in expanding existing service, additional routes, and multimodal transportation to more sustainably meet the region’s growing transportation needs. Examples may include upgrading the Edmonds Kingston Ferry terminals to better serve bus and other multimodal transportation, introducing ferry service from Southworth to Seattle and upgrading walk-on capacity and level of service to Bainbridge Island using three smaller auto capacity ferries to limit traffic congestion impacts to SR305.



Recommendations for Ferry Services

The City supports the retention and replacement of ferry systems to reduce the dependency on the Bainbridge Island terminal and SR 305, and to promote a more convenient and equitable ferry system. Elements of the recommendations include:

- *Parity of ferry services* – The City promotes services closer to home origins and to reduce demand at the Bainbridge Island ferry terminal and on SR 305. Examples include Vehicle / Passenger Ferry Service from Southworth to Seattle, and High Speed Passenger-Only Ferry Service from Kingston to Seattle, and direct bus service from Kitsap County to King County via the Kingston – Edmonds Ferry.
- *Ferry Priority* – The City supports the WSDOT and Kitsap Transit’s programs to encourage non-SOV use through priority boarding, through the development of facilities for bicycles and pedestrians.
- *Passenger Ferry Options* – The City supports the replacement and expansion of passenger only ferry services through public and private initiatives.
- *Walk on and bicycle capacity* - The City supports long range planning for capital improvement expenditures to enhance walk-on and bicycle capacity at peak sailings.
- *Motorized capacity*– The City supports long range planning for capital improvement expenditures to maintain a two-boat minimum wait-time for motor vehicle capacity at peak sailings.



- *Fair box recovery* – Maintain affordable fares for service to Bainbridge Island and Kitsap County.. The City supports long range planning and investment for State funding to subsidize operation and maintenance for the Ferry system.

Transit Service

Kitsap Transit, as the public transit service provider in Kitsap County, serves the County including the City of Bainbridge Island. One way bus service is provided for commuter hours to the Ferry Terminal. Kitsap Transit has an ACCESS program providing transportation for seniors and disabled persons who are unable to use regular-route buses. Starting in June 2014, dial-a-ride service was introduced providing day time inter-island bus service. Kitsap transit also provides park-and-ride lots, vanpool programs, and rideshare programs.

Existing Routes

Eleven bus routes serve Bainbridge Island providing service mainly to and from the Winslow ferry terminal. Figure 8-2 shows the routes as they relate to the roadway system and areas of the Island.

Table 8-3 provides details about the origins and destinations of the routes, the 2014 ridership levels, hours of operations, and service frequency. Most service is provided to meet peak morning and evening demand related to ferry terminal travel, with little or no mid-day service. Service also tends to be one-directional with transit vehicles “deadheading” back (not in service) to meet the demand from arriving ferry passengers.



A total of 534,226 annual passengers in 2014 used the KT routes that serve the ferry terminal (Routes 33, 90-106). WSF reports that 3,087,786 walk-on passengers for 2014. If the assumption is made that all of the ridership also used the ferry system, approximately 1 out of every 6 ferry riders use Kitsap Transit service.



Figure 8-2 Kitsap Transit Routes





Table 8-3. Kitsap Transit Services

Route	4 Ridership	Hours of Operation	Service Frequency
- Silverdale/Bainbridge	*	4:30-7:45 15:30-19:45	45-50 min
- Poulsbo/Bainbridge	204,524	4:50-8:05 15:50-20:05	45-50 min
- Kingston/Bainbridge	88,662	4:45-8:10 15:45-20:10	35-50 min
- Manzanita	35,205	4:55-7:40 15:55-19:40	40-55 min
- Agate Point	21,554	4:50-7:40 15:55-19:40	40-55 min
- Battle Point	44,878	4:50-7:40 15:50-19:40	45-55 min
- Sunrise	30,046	4:50-7:40 15:50-19:40	45-55 min
- Crystal Springs	34,845	4:50-7:40 15:50-19:40	45-55 min
- Fort Ward	26,940	5:00-7:40 16:00-19:40	45-55 min
- Bill Point	10	7:40 16:19:40	15 min
- Fletcher Bay	12	6:00	10 min
- A – Ride (1)	15	– 4:00	

1) – Dial-A-Ride started in _____ of 2014

Source: Kitsap Transit (www.kitsaptransit.org)



Park & Ride Lots

Kitsap Transit has developed a number of Park & Ride facilities along SR-305 and in North Kitsap County to provide hubs where passengers can leave a vehicle prior to boarding a bus. Park & ride facilities are used by Kitsap Transit bus riders, but can also serve as meeting locations for vanpools and carpools.

Table 8-4 describes the park & ride facilities located on transit routes that serve Bainbridge Island as identified by Kitsap Transit.

Table 8- 4. Park and Ride Facilities

Park & Ride Facility	Location	Spaces	Served by Bus Routes
Agate Pass	Suquamish	80	91
Georges Corner	Kingston	225	91
Gateway Fellowship	Poulsbo	138	33, 90
Liberty Bay Presbyterian Church	Poulsbo	75	33, 90
No. Kitsap Baptist	Poulsbo	57	90
Poulsbo Junction	Poulsbo	35	33, 90
Poulsbo Church of Nazarene	Poulsbo	100	90
Suquamish United Church of Christ	Suquamish	65	91
American Legion Post	Bainbridge Island	5	98
Bethany Lutheran Church	Bainbridge Island	80	94
Island Church	Bainbridge Island	37	93
Day Road	Bainbridge Island	25	90, 91

Source: Kitsap Transit (www.kitsaptransit.org)

Kitsap Transit provided spot observations Park & Ride facilities in 2014. Table 8-5 summarizes the park & ride lots' capacity, the number of observed vehicles, and parking utilization rates for park & ride lots on Bainbridge Island.



Table 8-5. Park and Ride Lot Utilization

Park & Ride Facility	Capacity	Observed 2014	Parking Utilization
American Legion	5	10	200%
Bethany Lutheran Church	80	65	81%
Island Church	37	18	49%
Overall	122	93	76%

Source: WSDOT Office of Urban Mobility

The study shows that area park & ride lots are well used but have adequate capacity. It appears that additional capacity at the American Legion location would be a benefit if a lease can be secured to utilize additional space.

Transit System Issues

Most transit agencies in the region, including Kitsap Transit, have not developed LOS measurements at this time. However, general assessments can be made about areas serviced, frequency, capacity, and access. Kitsap Transit has provided a morning and afternoon peak period transit service that meets the needs of many Island commuters. Mid-day (9:15am to 3:30pm) inter-island service is also provided. Review of the transit service reveals that the main issues relating to the transit are related to the expansion of transit services and improving the frequency of service. Issues related to transit include:

- With ferry passenger service expected to grow and increasing congestion on SR305 ridership capacity for buses for commuters is a critical element for achieving a viable transportation system. Capacity is an important aspect of level of service.
- With more congestion on SR305 attributed to commutes to employment both on and off island improving bus service within Kitsap County is an increasingly important element of a viable transportation system. Frequency of service and transfer efficiency are important aspects of level of service.
- Park and ride lots and bicycle parking at park and ride lots and bus stops are important to support commuters and encourage ridership. This includes park and ride lots at churches and other locations on Island for resident use and off-island park and ride facilities to support transit use.
- To better serve seniors and youth and persons with disabilities both short and long term support less reliance on the automobile for more sustainable growth inter-island bus transit is an important element of an effective transportation system. Extend of locations served and hours the service is provided are important aspects for level of service.
- Improving access to the Transit Center near the Ferry Terminal is needed. Currently the pedestrian facilities are sub-standard and do not provide adequate accommodation for a wide range and number of users and there are no bike facilities, on Olympic Drive.
 - Improving access to bus stops with in the Urban Center of Winslow and at the City's Urban Town Centers is needed. Both the lack of infrastructure and deficient infrastructure are barriers to access in some areas.
 - Improving King County Metro transit services at the Seattle ferry terminal to provide better connections to popular destinations including the airport.



Recommendations for Transit System

The City supports the development and improvement of transit services on Bainbridge Island and those services that provide options for non-Island commuters. The following recommendations are forwarded:

- *Transit LOS* – Encourage Kitsap Transit to monitor system use to ensure that current and forecasted demand is met for the SR305 corridor. Additionally monitor underserved Island locations for transit service expansion as Island development occurs.
- *Public Transit Ferry Access* – Support changes to transit services that promote ferry use, including the airport service, popular destinations, and special events.
- *Expansion of Island Transit* – Supports the expansion of bus services on the Island to better serve commuters, non-commuters, residential areas, and neighborhood access centers, and disabled users. This includes the Access Bus and BI Ride (Dial-a-Ride) services.
- *Ferry Commute* – Improve service with high capacity buses as needed to meet demand. This should include expanding accommodation for riders with bicycles.
- *Route 90 to Poulsbo* – Improve frequency of service between the Bainbridge Ferry Transit Center to the Poulsbo Transit Center with transfers to Kingston at Suquamish and Bremerton and other locations from Poulsbo.
- *BI Ride* – Extend hours of service to include afternoon and evenings.

Non-Motorized System connectivity to Transit

Active modes of transportation such as walking and bicycling are important to many island residents. The City has invested in planning and implementation for pedestrian and bicycle infrastructure to accommodate a wide range of users. Providing connectivity to transit is one important aspect for non-motorized improvements. Opportunities include development of a network of bike lanes that link commuters to the ferry terminal and regional and interisland trail systems that link pedestrians and cyclists to transit stops along SR305 and throughout the island.



Multimodal – Transportation Demand Management

The Steering Committee strongly felt that the transportation solutions addressed in the IWTP should consider providing a multimodal approach and solution that will encourage drivers to share rides, use transit or commute by non-motorized means.

A key to the development of a multimodal system is through the use of Transportation Demand Management (TDM). TDM is a series of methods and strategies that discourage the use of single occupant vehicles and encourage non-motorized and transit travel. TDM implies the “management of travel demand”, that supplement the development of travel alternatives such as transit, carpools, park-and-ride facilities, or passenger ferry service. TDM strategies are focused on increasing the use of alternatives to single driver automobile



trips through a mix of incentives and disincentives. These programs tend to be lower in cost compared to roadway or other capital projects.

While TDM programs may increase the number of person trips through a corridor by increasing use of buses, carpools, and diverting trips to off-peak hours; traffic levels may not decrease due to unmet travel demand replacing any reductions from TDM programs (latent demand for travel).

TDM Programs on Bainbridge Island

There are many TDM programs currently in effect on Bainbridge Island. Agencies and major employers have implemented these programs to discourage the single use of single occupant vehicle (SOV) trips during commute periods.

Agency-Based Programs

The City of Bainbridge Island, Kitsap Transit, and Washington State Ferries have programs that encourage the use of transportation alternatives to the SOV.

Examples of TDM Programs promoted by these agencies include:

- *Ferry Terminal Parking Restrictions* – The City has limited amount of parking at the ferry terminal and charging an hourly or daily fee reduces the number of persons who drive to access the ferry. As parking becomes more difficult or expensive, fewer drivers will desire to use the parking areas. On the other hand, restricted parking may increase the amount of drop-off/pick-up activity at the terminal or encourage parking in adjacent neighborhoods.
- *Commercial Parking Tax* – The City has charged a tax on commercial parking lots since 1999. The current rate is a 30% tax that provides funds for the City’s general fund. This tax, if added to the parking fee, increases the out-of-pocket costs for automobile commuters, encouraging ridesharing, non-motorized travel, and transit use.
- *Carpool Parking Areas* –The City provides reserved parking areas for carpools at its ferry terminal lot. Providing reserved spaces or reduced parking rates encourages drivers to form carpools, increasing the occupancy of vehicles.

Rideshare Programs – Programs that promote the formation of carpools and vanpools can increase the rate of vehicle occupancy by increasing the number of persons

moved during peak times. Kitsap Transit has a program to match interested commuters into carpools and vanpools using the RideshareOnline.com database.

- *Vanpool Programs* – Kitsap Transit also administers a vanpool program that provides vans for commuters for a monthly fee. WSF provides additional incentives to registered carpools and vanpools who receive preferential boarding. Vanpools also receive a reduced ferry rate.



- *Land Use Policies* – The City’s promotion of higher-density residential in the Winslow area promotes increased opportunities for residents to walk, or use bus service rather than drive.
- *Parking Restrictions and Enforcement* – The development and enforcement of parking policies and rules may reduce undesired parking behaviors, such as in neighborhoods adjacent to the ferry terminal area. Types of parking restrictions include hourly parking limits, residential parking zones, and area re-parking restrictions.
- *Car sharing Program* – A car sharing program allows people to have access to a vehicle that they rent on an hourly and/or mileage basis. This type of program reduces vehicle ownership, encourages transit and non-motorized travel, and lowers overall driving behavior.

Employer-Based Programs

Major employers (100 or more employees) are required by the State’s Commute Trip Reduction law to promote ridesharing and transit use by developing in-house incentive programs that encourage employees to use ridesharing, transit use, and non-motorized travel. Kitsap Transit administers the program within the county. According to Kitsap Transit data only two Island employers have formal CTR programs. Each major employer is required to designate an in-house coordinator and develop a Commute Trip Reduction Plan indicating how the employer will meet the required trip reduction targets. Some of the examples of employer-based programs in use includes:

- *Transit subsidies* – Employers can provide or partially-subsidize the cost of monthly transit passes to their employees
- *Flextime programs* – Employees are allowed to shift their work schedule to avoid travel during peak travel periods, or to meet transit schedules.
- *Telecommute programs* – Employees are allowed to work from home offices in order to reduce the amount of commute travel.
- *Guaranteed Ride Home Program* – This program provides employees who commute by transit, carpool, vanpool, bicycle, or foot a free taxi ride in the event they need to return home on an emergency basis during mid-day and late evening hours.
- *Commute Subsidies* – Employees are eligible for a monthly subsidy if they commute by transit, bicycle, foot or carpool to work.

Regional Coordination

The Growth Management Act requires that cities coordinate planning efforts with adjacent jurisdictions, the county and the region. This coordination is particularly important for transportation, where plans by one jurisdiction may have a substantial effect on the traffic on another. Regional planning allows a long-range vision to be established for a region as a whole, allowing predictability and consistency between jurisdictions, while still allowing flexibility to meet community goals.



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There are a number of regional plans that could affect the transportation system of Bainbridge Island. Many of the regional concepts depend on the availability of funds that may or may not occur in the future. This memorandum discusses potential regional plans from WSDOT, Kitsap Transit, and Kitsap County and discusses how these plans might impact the findings of the IWTS.

WSDOT Plans

The Washington State Department of Transportation (WSDOT) identified a number of improvements to the state route system in its *Washington Transportation Plan* (WTP). In the Puget Sound Region, these projects are first identified in the Puget Sound Regional Council's *Metropolitan Transportation Plan "Destination 2030"* (MTP) plan. This plan sets the transportation plans and policies over a 30-year period, with the emphasis on the first 20-year time frame. The MTP identifies three improvements to the SR 305 corridor.

- *SR 305 Corridor Improvements (Winslow Ferry Terminal to Agate Pass Bridge)* - Access management, intersection improvements, HOV queue jump lanes, and bicycle improvements.
- *SR 305 Corridor Improvements (Agate Pass Bridge to Poulsbo)* – Access management. Monitor for future improvements.
- *SR 305 Corridor Improvements (Poulsbo to Bond Road)* – Widen to 4/5 lanes with HOV lanes. Completed in 2010.

Consistency with IWTP

These projects should improve the overall mobility of the SR 305 corridors. The improvements along SR 305 between the ferry terminal and Agate Pass Bridge are unlikely to affect overall traffic levels, but may shorten transit travel times and improve the safety for bicyclists. The off-Island improvements will complement the SR 305 alternatives considered on Bainbridge Island, but will not significantly affect the City's traffic situation.

Kitsap County Plans

Kitsap County has the responsibility to maintain and fund improvements to County roadways. The County's 1998 Capital Facility Plan identifies a number of improvements to County-owned roadway facilities; however, none of these improvements directly impact the Bainbridge Island roadway system.

Kitsap Transit Plans

Kitsap Transit is aggressively looking to developing future alternatives to expand transit throughout its service area. Kitsap transit has considered a variety of approaches including dedicated high-capacity bus service, passenger rail or monorail service, and passenger ferry services.

- *High Capacity Transit Facilities* – This “long-range” concept of the high-capacity transit service would improve transit travel times by developing dedicated transit lanes and/or rail facilities. A Bus Rapid Transit system has been identified as a priority.



- *Light Rail or Monorail* – A light rail or monorail system could be used to quickly move people between park-and-ride lots and the Bainbridge Island ferry terminal, Winslow, and other destinations served by stations. This could be an alternative to or an addition to the high capacity bus lanes. The effectiveness of these services would depend on the ridership cost, convenience, and time-savings to drivers.

Consistency with IWTP

Any of the transit proposals would be compatible with the IWTP SR305 Alternative A and Alternative B scenarios. Depending on the level of transit ridership and the success of Transportation Demand Management (TDM) programs to control single occupant vehicle use, this concept would likely improve SR 305 levels of service if constructed.

CHAPTER 9 FINANCING



The City of Bainbridge Island utilizes a fiscally sound approach, using a variety of resources in order to secure funds for the design, right-of-way procurement, and construction of transportation facilities. Taxpayers, developers, and County, State and Federal programs all contribute to the development of the transportation system. The City prepares a biennial budget, a financial capacity analysis, and a 6-year Capital Improvement Plan CIP to provide an updated look at the projects to be completed for the year and in the upcoming years ahead, as well as financing plans for those projects. The State of Washington's Growth Management Act (RCW 36.70A.070) requires that the transportation element of a comprehensive plan include:

- An analysis of funding capability
- A multiyear financing plan based on the needs identified
- A discussion of how the jurisdiction will address funding shortfalls through a reassessment strategy.

This chapter describes how the City plans to pay for the transportation improvements identified in the IWTS along with projects that appear in the current Capital Improvement Plan (CIP). Included in this section is a discussion of the City's funding capabilities, discussion of the potential funding sources, the 6-year and 20-year transportation improvement plans, and reassessment strategy.

Funding Capabilities

The City of Bainbridge Island has implemented a variety of revenue sources and financing mechanisms to fund City services and capital improvements. One indication of the City's funding capability is the analysis of historic revenue sources.

Table 9-1 summarizes the revenue sources from 2011 to 2014 for the City's Streets Fund, Capital Project Grants, and for overall City revenues. The City has consistently allocated a large portion of its funding outside of the operating budget for transportation. Over the last few years, the City has aggressively pursued transportation grant funding from State and Federal sources. The City recently implemented a Transportation Benefit District and is currently evaluating Transportation Impact Fees providing for more revenue. The City supplements dedicated transportation revenues to pay for operating costs such as salaries, benefits, and other associated costs.





Table 9-1. Historical Transportation Funding Sources

	<i>Actual</i>	<i>Actual</i>	<i>Actual</i>	<i>Actual</i>
<i>(All numbers are in 1000s)</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
<i>Commercial Parking Lot Tax</i>	\$552	\$588	\$715	\$753
<i>Motor Vehicle Fuel Tax</i>	484	471	477	478
<i>Parking Fees (City lots)</i>	337	4	0	0
<i>Interest and Other</i>	72	1,334	50	738
<i>Total Street Fund Revenue</i>	\$1,446	\$2,398	\$1,242	\$1,970
<i>Transportation Grants (Federal)</i>	1,987	200	809	1,502
<i>Transportation Grants (WA State)</i>	1,379	288	465	0
<i>Total Capital Grants</i>	\$3,366	\$488	\$1,273	\$1,502
<i>Transportation Benefit Dist. funding</i>	0	0	122	391
<i>Total City Non-Utility Revenue Sources</i>	\$22,901	\$19,629	\$20,781	\$22,048

Source: City of Bainbridge Island financial statements

Overall, the City has annual non-utility revenues of more than \$20 million. The City's 2015-2016 biennial budget projects relatively flat revenue trends for both years. In addition, the City has significant additional bonding capacity. As of 12/31/2014, the City is at 28% of its general obligation bond limit (not requiring a vote of the taxpayers) and 7% of its limit for special levy bonds that could be used for transportation projects (requiring a 60% majority vote of the taxpayers).

Types of Funding Sources

The implementation of the 6-year and 20-year CIPs depends on the availability of transportation funds. This section describes the sources of transportation funds applicable to the City of Bainbridge Island.

General Funds

City general funds are made up of a variety of revenue sources and can be used to pay directly for transportation improvements or to meet the City's local funding requirement – or “match” – for other funding sources. Some revenues are specifically dedicated for transportation projects, such as the City's share of the State's Motor Fuel Tax, and are dedicated to particular activities like roadway repair and construction. . Other City revenues from the general fund can also be used for transportation according to City funding priorities or to pay for transportation improvements that also benefit other funds such as water, sewer, and storm water. For 2015, the City budgeted approximately \$1.5 million of dedicated operating revenues and \$6.1 million for capital expenditures.

Grants

There are numerous state and federal grant programs for improving the mobility or safety of the transportation system. Some sources of funds allow a local agency to apply directly, while other grant programs require submittals through a coordinated application process through the jurisdiction's Metropolitan Planning Organization. In addition, there are other sources of funding available to only counties or WSDOT, requiring the City to advocate for improvements through coordination with these eligible agencies. Most grants are issued on a competitive basis and require local jurisdictions to contribute between 10-25 percent of the cost. A higher local match percentage can



make a project more competitive for grant funds. In 2015, the City has budgeted receiving \$4.4 million for transportation projects.

General Obligation Bonds

General Obligation Bonds are an important method for the building and construction of transportation facilities. The City can issue bonds up to 1-1/2 percent of the assessed property values within the City without a vote of the people and an additional 2-1/2 percent with a vote of the people. A bond can allow the rapid development of the transportation system within a short period of time. Bonds are used by cities to finance major improvements and are repaid either through general funds, special taxes or assessment, or roadway tolls. In 2007 through 2010, the City used two general obligation bond issues for street, sidewalk and other non-motorized improvements though-out the island. General obligation bonds can be funded by revenues from growth and are one alternative to fund infrastructure to accommodate growth as it occurs.

Developer Contributions

Development provides an opportunity for the portions of the system to be built without the expenditure of public funds. Where roadway improvements are required (as indicated in the City's Comprehensive Plan), developers construct the facilities along the length of the property as part of their street frontage improvements. Typically, two to three projects are developer-funded during each year.

Concurrency

The City of Bainbridge Island adopted Transportation Concurrency Ordinance #2001-09 in April 2001. This action added Chapter 15.32 Transportation Concurrency to the Bainbridge Island Municipal Code. The ordinance establishes the requirements, procedures, test, and appeals process for establishing if a new development meets concurrency within the City of Bainbridge Island.

Generally, certain permit applications that exceed the adopted thresholds (15.32.030) must submit necessary documentation to the City Engineer, who conducts the concurrency test. The concurrency test determines if the addition of the proposed development will exceed the Level of Service Standard adopted in the Transportation Element of the Comprehensive Plan. If the application passes the test, a certificate of concurrency is submitted with the development permit. Otherwise, the applicant may revise the project or appeal the test following the provisions of the appeals process (15.32.070). The City is required to produce an annual report summarizing the current level of service on City's roads; identifying significant current and future development activities; and identifying where changes in the six-year Capital Improvement Program and Capital Facilities Plan are needed.

Impact Fees

An impact fee, or transportation mitigation fee program can be established by a city to collect fees for every new vehicle trip added to the roadway system. Developments are charged the fee based upon the number of new vehicle trips added to the road. These fees must be used to improve roadways that will be impacted by the new development. The City currently is in the process of implementing an impact fee.

Transportation Benefit District Fees

Cities and Counties are provided a mechanism to raise revenues for transportation programs charging a fee for vehicles licensed in their jurisdictions in accordance with



RCW 36.73.020. The City currently levies a fee of \$20 per year on qualifying licensed vehicles.

Local Improvement Districts

A final funding option is the development of Local Improvement Districts (LIDs). Generally, an LID requires a petition or survey with approval from a majority of property owners to the formation of the special assessment district and is repaid by members of that district. LIDs are most often used in places where the improvements also have an economic incentive; for example, a retail area may form a LID to widen sidewalks in order to create a more pedestrian-friendly area that could translate into higher sales. The City has used LIDs for transportation and utility improvements.

User Fees

This funding mechanism attempts to pay for all or part of the cost of an improvement by charging the users of the facility. Roadway and bridge tolls, and the WSF ferry service are all examples of transportation-related user fees. Toll is usually tied to the repayment of General Obligation Bonds for a specific set of transportation improvements. Toll is most common for the funding of bridges and other major improvements. The City is not currently using tolling at this time.

Proposed Projects and Funding Needs

The development of a transportation development plan identifies a schedule for planned expenditures over a six-year period. Table 9-2 is a list of recommended improvements to meet Level of Service (LOS) standards and accompanying proposed funding sources. Table 9-3 is a list of transportation projects that have been identified in the City's Capital Improvement Plan, including discretionary projects in addition to those needed to meet LOS standards.

Funding for the projects needed to meet LOS standards will come from a combination of Local, State, and Federal Sources. The Wyatt Way Reconstruction project will be funded with significant support from a State grant. In the next six years given the past history of with Federal grant funding it can be reasonably anticipated that grant funding can be secured for the Sportsman's Club/ New Brooklyn Intersection Improvement project. In summary, the City is well positioned to address projects to maintain LOS standards over the next six years.

Many non-motorized improvement projects have been identified in the City's CIP. Over the next six years the number of discretionary transportation projects exceeds the City's ability to fund them. Establishing priorities for funding and securing new funding sources is needed if a sizable portion of these projects are to be delivered.

The most significant and expensive current needs to meet LOS standards are along SR305. At this time WSDOT is responsible to plan and develop capacity projects to meet LOS standards on SR305, while the City performs much of the routine maintenance along the SR305 corridor. The City's population is approximately 23,000 and is expected to reach 25,000 in the next 5 to 7 years. At that time the City may become responsible for improvements on some segments of SR305 depending on access requirements. The City should consider partnerships with WSDOT to address current needs. This Plan identifies needs for capacity improvements and includes a



special study that proposes both at grade and separated grade solutions. The City has developed projects along the corridor such as the Olympic Drive project that was funded by a State Grant and could consider implementing additional projects. This could include funding elements of WSDOT projects or the City undertaking and funding its own projects along the corridor by obtaining development permits from the State.

Proposed Sources of Funding

To increase funding capacity both in the short term for non-motorized projects and in the long term for capacity projects the city could consider increasing the TBD fees and/or issuing bonds. A bond issue could provide for investments in non-motorized transportation so that more complete networks of bicycle and pedestrian facilities could be realized in a shorter time frame. Alternatively, revenues from the current mix of resources could be directed to transportation rather than other City programs and services.

Reassessment Strategy

At the time of this Plan, no funding shortfalls for capacity projects to meet LOS standards were anticipated for the CIP six year time horizon. However, if the City is unable to secure grant funding or suffers other financial setbacks, the City may need to reassess in future years.

The Growth Management Act requires that jurisdictions develop a reassessment strategy in the event that funding shortfalls occur that limit the City's ability to carry out the transportation improvement plan. In the event that the City cannot fund the transportation capital improvements needed to maintain the adopted roadway LOS standards (as identified in the Level of Service section), then the City shall take one or a combination of the three following actions as directed by the City Council:

1. Phase proposed land developments that are consistent with the City's land use plan until such time as adequate resources can be identified to provide adequate transportation improvements.
2. Reassess the City's transportation financing strategy to identify additional funding opportunities with federal and regional grants and funding programs, and through the development of new partnerships with WSDOT, Kitsap County, and the private sector.
3. Reassess the City's adopted roadway LOS standards to reflect service levels that can be maintained under the known financial resources.





