CHAPTER 2

SUSTAINABILITY AND QUALITY OF LIFE

Of great concern 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 of the transportation system, identifies how this Plan responds to these issues, and provides examples of transportation system features that illustrate these concepts. This chapter provides additional context to support the transportation issues, policies, and goals in the Transportation Element of the Comprehensive Plan.

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 SR 305 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 maintain 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 work and to obtain goods and services in the more densely developed areas of the Island.

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. Emissions from transportation, especially diesel particulates, are a significant health hazard. The City's Comprehensive Plan focuses growth in areas such as Winslow and the Neighborhood Centers. With good planning and implementation of mixed use and higher densities within these 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 opportunities for the Island to develop more sustainably, and improving the quality of life for Island residents.

Active transportation facilities improve accessibility for people of all ages and abilities. For example, barriers to travel by wheelchair or walker (such as curbs lacking curb cuts) and lack of resting places for people with limited stamina, greatly reduce people's ability to participate in community life. Many youth and seniors do not drive.

Infrastructure for active transportation also reduces the need for parking, which in turn improves walkability and bikeability, and access to transit by encouraging more compact development. Costs of owning cars are a major expense for families, and good non-motorized infrastructure

with compact development can make living on Bainbridge more affordable, allowing a more economically diverse community.

Transportation infrastructure and associated drainage have direct impacts on the environment. Stormwater run-off from roads can contribute to water pollution, flooding, and water temperature elevation in riparian stream habitat Corridors and Puget Sound. The road network right-of-way presents many opportunities to incorporate sustainable practices providing 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 access, and scenic and winding roads supporting all forms of transportation. [Comprehensive Plan]

Relationship to Transportation

The transportation elements related to community character include the highway, major streets, neighborhood roadways, and pedestrian and bicycle facilities. Community character includes natural and manmade features within the roadway right-of-way, such as trees with native understory 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.

Much of the character of the transportation system stems from the roadway 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 "mosquito fleet" foot ferry docks. As the Island became more developed, major transportation features were added, including the Agate Pass Bridge, SR 305, and the Washington State Ferry's Bainbridge Island 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. Designated centers, mainly Winslow, saw a higher level of development 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 defining and implementing an appropriate look and feel for its roadway and off-roadway transportation systems. 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 emphasizes the use of traffic calming to slow traffic speeds and promotes the development of pedestrian and sidewalk facilities within Winslow.
- 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 stormwater impacts of roads.

- The City developed a Non-Motorized Transportation Plan and created a Non-Motorized Transportation Advisory Committee 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 alternatives to the installation of traffic signals.
- The City continues to evolve its transportation vision to include complete streets, shoulder networks for cyclists, sidewalk improvements for better accommodation of a wide range of users, and trails including regional, intra-island, and local connecting pathways.
- The City with Kitsap County has developed the concept of the Sound to Olympics Trail (STO) – a regional trail crossing Kitsap between both Winslow and Kingston to the Hood Canal Bridge – which will link the Burke-Gilman Trail in Seattle and the Olympic Discovery Trail.

Community character transportation features

The IWTP is focused on identifying the infrastructure needed to improve mobility and safety of the transportation system. The Plan's alternatives and recommendations meet the Plan's goals for maintaining community character including:

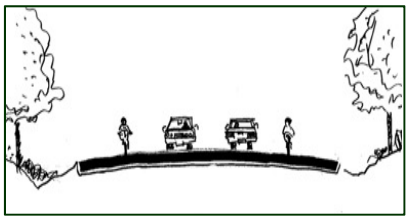
- ***Road development guidelines*** – Providing consistency with the adopted roadway standards that promote the retention of appropriate roadside vegetation and trees and follow the natural topography.
- ***Street design guidelines*** – Providing for and protecting the development of more urban features, such as parking, sidewalks, and bicycle facilities within designated centers, widened shoulders and separated paths in less urban areas. Providing context appropriate street designs that promote the use of all modes of transportation for all ages and abilities of people.
- ***Street lighting guidelines*** – Concentrating street lighting within Winslow and Neighborhood Centers and areas identified by safety or community planning needs.
- ***Scenic resource and habitat protection*** – Focusing the development of the transportation system within existing and carefully chosen new travel Corridors, while retaining trees with understory and standing or fallen deadwood.
- ***SR 305 Scenic Byway*** – Retaining the scenic character of SR 305 by discouraging new access points, and maintaining or enhancing vegetative buffers. SR 305 is a WSDOT designated Scenic Byway, and the community wishes to preserve, enhance, and restore healthy forested habitat along the Corridor. Trees, understory, standing and fallen deadwood all contribute to the desired view-shed and wildlife Corridor. Vegetative buffer screening adjacent development is important, both within WSDOT right-of-way, and within adjacent land bordering the highway. Development of the Sound to Olympics Trail in and along the SR 305 right-of-way is planned to reduce the need for more motor vehicle lanes, enhance vegetative buffers, and improve connections with transit. Reversible bus rapid transit lanes are being studied to move people more efficiently, and with minimum impervious surface.

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 conservation 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. The federal Centers for Disease Control (CDC) and the Kitsap Public Health District strongly encourage developing active transportation facilities to support moderate exercise for basic public health. Today prospective home buyers are presented with statistics such as walkability scores. A growing number of residents′ desire active transportation alternatives for daily trips including access to goods and services. 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, frequent updating of standards and incremental investments in transportation infrastructure, including non-motorized elements, are essential.

- ***Roadway Standards*** – Pedestrian and bicycle facilities provide for active modes of transportation and recreation. Street lighting is to be appropriate for routes where residents are walking or cycling to school, work, or transit in the dark during fall and winter months. This is particularly important for people with low vision, including seniors. Recognizing that investments take time, provide interim measures for additional non-motorized safety through means such as reducing speed limits, providing wider shoulders, and installation of signage.

- ***Complete Streets*** – Investments over time in pedestrian and bicycle facilities within both designated center areas will provide for greater connectivity. Many streets lack sufficient sidewalks and bike lanes. Many secondary arterial roadways lack shoulders and separated facilities.
- ***Multi-use pathways*** – Investments in separated pathways with regional, intra-island and local connectivity.
- ***ADA Transition Plan*** – The City is continuing a process of identifying ADA-accessible routes for people with reduced mobility, many using assistive devices such as wheelchairs (motorized and manual) and walkers.

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. Designated centers such as Winslow need a high level of development with pedestrian and bicycle facilities, transit access, and a development of residential street character. In conservation areas, residents are concerned about the impacts of traffic flow, the development of non-motorized facilities and improving future connections and circulation.

Relationship to Transportation

Provide a safe roadway system in residential areas for adults and children walking, bicycling, 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, reviews complaints about inappropriate speeding or cut-through traffic on neighborhood streets.
- ***Traffic enforcement*** – The City of Bainbridge Island Police Department responds to neighborhood concerns about high traffic speeds through residential areas.
- ***Roadway standards*** – The City of Bainbridge Island has developed its roadway design standards to act as traffic calming features using 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 people using the transportation system. The alternatives and recommendations meet the Plan's goals for maintaining the neighborhoods including:

- ***Reducing neighborhood cut-through traffic*** – Focus development of the 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. Provide non-motorized connectivity between neighborhoods through City review of new development projects

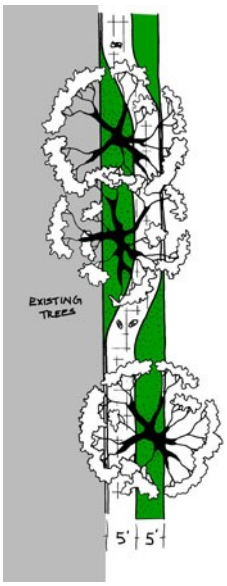
- ***Winslow street visualization plan*** – Promoting the design and unique character of each street within the Winslow area.

Desired features for Neighborhoods

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

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

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



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

Environment

Maintaining a natural 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, federal government agencies, and Tribes all playing roles.

Bainbridge Island residents voted to fund a $10 million bond to purchase open space, and that money was heavily leveraged through the City's Open Space Commission to vastly increase open space on the Island. Bainbridge voters approved a Levy Lid Lift for the Bainbridge Island Metropolitan Parks and Recreation District to purchase land to strategically increase open space for recreational usage. The City completed an Open Space Study, which provides guidance for land use planning regarding environmentally sensitive areas.

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. The Island's 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 on the environment in the planning and design of a project.

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, native 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.
- ***Stormwater management***. – Providing for environmentally-sensitive design of stormwater collection and detention facilities. Combining traffic calming and stormwater 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, thus lessening the impact on regional air quality.
- ***Wildlife Corridors and networks*** – Recognizing and promoting the maintenance of wildlife Corridors and networks.

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.

Stormwater Management and Green Infrastructure

Protection of environmental resources such as the Ravine

Roadside vegetation filters run-off

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

Stormwater planters to control run off and improve water quality

Special stormwater containment features can control water runoff roadway surfaces

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 stormwater 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 stormwater 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 stormwater management approach that attempts to mimic the natural stormwater hydrology of pre-development conditions. LID uses techniques that infiltrate, filter, detain, evaporate, and attenuate stormwater 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 stormwater infrastructure within traffic calming features such as curbs, bulbs, or by adding planting strip rain gardens that provide an additional buffer between the street and the sidewalk.

Balancing Community Needs

With thoughtful planning, new transportation infrastructure can often protect environmental functions, as when LID facilities replace more traditional stormwater piping, or when pedestrian, bicycle, and/or transit facilities reduce the need for impervious and expensive parking facilities.

One of the more challenging 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 or separated pathway on one side of the roadway rather than on both sides in order to reduce impacts to vegetation. Balancing needs of non-motorized users and goals of vegetation protection will require analysis and public engagement to design improvements that best meet competing interests.

Creating designs that improve transportation systems and evaluating the trade-offs where they exist (weighing the importance between community goals and design guidelines) is an important function of the City of Bainbridge Island Public Works Department. Table 2-1 illustrates the issues that can arise for a variety of transportation improvements.

Table 2-1: Competing Community Needs

Project Type	Community Character concerns	Environmental concerns	Neighborhood concerns
Widen roadway to include bicycle lanes	Increased paved width of roadways changing the road's look and feel	Promotes use of non-motorized, 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 impact 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-motorized vehicles	Provides safe access for pedestrians

As illustrated in the table above, each of these examples could have competing concerns. In other words, a highly desired project for one sector of the community may be 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 larger 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.