

# Transportation Profile

## Introduction

This section is the companion to the Transportation Element goals and policies. It summarizes the key aspects of current and projected transportation conditions and needs that Skagit County is obliged to plan for. The Growth Management Act requires that transportation plan elements include the following:

- *Land use assumptions used in estimating travel;*
- *Facilities and services needs;*
- *Financing;*
- *Intergovernmental coordination; and*
- *Demand management.*

Each of these major requirements is described below. The method used by the County to comply with the GMA requirements involves managing a complex and inter-related group of complementary studies, plans, inventories, and standards. In addition to the analyses and documentation prepared by the County, the State of Washington, the cities and towns and the Skagit Council of Governments also maintain similar plans that need to be acknowledged. While the rural road network



is the primary transportation mode that the County is responsible for managing, the County through its Comprehensive Plan also acknowledges and addresses the needs for non-motorized transportation, public transportation, aviation, and marine transportation. A recent survey of County rural residents indicated a concern for increased traffic congestion within the urban areas of the County. The County should consider increasing investment in transportation projects within or connected to the urban areas, in partnership with the cities and towns, state, and federal governments.

## Land Use Assumptions

The operation of the roadway network must be adequate to meet the travel demands created by residents, businesses, and visitors. The



comprehensive plan land use designations for all jurisdictions provide the basis for estimating. While each jurisdiction and transportation provider is responsible for developing its own transportation plan, there is also a need for consistency among them, to the extent that the need for facilities in one jurisdiction frequently is affected by the demand created from growth in neighboring jurisdictions. In this regard, regional coordination is the key. In the regional transportation model maintained by the Skagit Council of Governments, the entire County is divided into transportation analysis zones (TAZs). These are geographic areas based on census tracts, city limits, physical features, and other boundaries. TAZs are smaller in urbanized areas than in rural areas due to the relative concentration of population. Land use, housing, and employment data for the TAZs are the building blocks for assessing the future transportation system demands that result from growth.

The analysis that creates the 20-year picture requires assumptions to be made about future travel behaviors as well as the realities for maintaining level of service standards within anticipated funding and the feasibility of implementing construction programs within the context of other public policies.

The Countywide Planning Policies allocate the adopted population and commercial/ industrial growth targets among the various Skagit County jurisdictions. Comprehensive plan policies distribute that growth to urban and rural areas using residential densities and non-residential land use intensities of each jurisdiction's adopted zoning. This provides the starting point for estimating how future residents and employees will use the roadway system.

## Facilities and Service Needs

Along with the land use assumptions, the other building block of estimating the need for improvements to the transportation facilities and services is a cascading series of five steps.

### Inventory of Existing Facilities and Services

The County maintains an on-going database of current conditions of the County roadway network and the Guemes Ferry, the two county-owned and operated modes. For the roadway network, the inventory includes extensive information on the condition, utilization, and shortfalls that exist. Similar information for the ferry vessels and terminals is included. In addition to supporting planning, this information is used to program on-going maintenance of the system.

### Roadway Network

The County roadway network contains about 800 miles of roads, not including city streets, state and federal highways, and private roads. The network is categorized into a "functional classification system." This is based on federal and state guidelines for identifying roads first as to whether they are urban or rural in terms of the areas they serve and their design. Skagit County defers to the cities and towns in classifying their roads. Rural roads are classified as "Principal Arterials," "Minor Arterials," "Major Collectors," "Minor Collectors," and "Locals." This is a descending scale of function. Interstate 5 and SR 20 west of I-5 are the only Principal Arterials. Other state highways and segments are Minor Arterials. The County has 24.8 miles (3%)



of urban Minor Arterial roads. Major and Minor Collectors are the heart of the County system. These are the roads that connect the cities and towns and serve as farm-to-market roads in the rural area. The Locals are the other rural roads. Major Collectors constitute 19% or 152 miles of the system. Minor Collectors constitute another 20% (161 miles), and there are 384 miles of Locals (48%) as of 2006. The final 9% or 73 miles of roads are urban. While these amounts and proportions vary as road functions change or new roads are built, the general distribution does not change significantly.

Another aspect of the functional road classification system involves facilities that have been identified in the state Freight and Goods Transportation System (FGTS) as trucking routes. This classification system is based on the estimates of gross freight tonnage that is carried on the roads.

Most County Major and Minor Collectors carry between 100,000 and 5,000,000 tons per year.

Traffic on County roads outside of the highways and arterials is fairly moderate. Nearly half of the roads carry fewer than 250 vehicle-trips per 24-hour day on average (ADT). About 10% of the roads carry more than 2,000 ADT, and fewer than 2% carry more than 5,000 ADT.

## Other Transportation Facilities

The Skagit County non-motorized transportation system is comprised of all streets and highways to which access by bicyclists and pedestrians is permitted, separated trails and pathways which have a transportation function as defined in the Non-Motorized Transportation Plan, and any system or design accommodations meant to serve non-motorized users. Segments of Bayview-Edison Road, LaConner-Whitney

Road, McLean Road, and West Big Lake Road are the only locations of signed bikeways. There are other off-road trails throughout the County. Skagit County owns and operates a ferry system including a vessel and terminals in Anacortes and Guemes Island. Skagit Transit is a public agency funded by the County and several of the cities that provides transit service in some portions of the County. Rail and marine transportation

facilities within Skagit County are owned and operated by the ports or private companies.

### *Plan Key: What's a "TAZ?"*

Growth and development have many implications for planning, and transportation is an important one. To make decisions manageable, the Skagit Council of Governments maintains a computerized transportation model divided into localized components called Transportation Analysis Zones, or TAZs, for short.

With TAZ modeling – informed by land-use assumptions, 20-year growth projections, system budgeting and more – Skagit County can forecast and plan for emerging service issues, making adjustments or setting new goals along the way.

## Level of Service

Capacity analysis results for roadways and intersections are described in terms of Level of Service (LOS). Roadway LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). Level of



service calculations for intersections determine the amount of ‘control delay’ (in seconds) that drivers will experience while proceeding through an intersection. The LOS/delay criteria for stop-sign controlled intersections are different than for signalized intersections because drivers expect that a signalized intersection is designed to carry higher traffic volumes and therefore result in greater delay. For signalized intersections the LOS ranges from “A” with a delay of less than 10 seconds, to “F” with a delay of more than 80 seconds. For stop-sign controlled intersections, LOS A also has a delay of less than 10 seconds, while LOS F has a delay of more than 50 seconds.

The Comprehensive Plan includes LOS standards that have been adopted as County policy. These standards are used to measure the performance of the system and identify the need for improvements. The County also works with the state and cities and towns to monitor the related LOS of their facilities.

The inventory of facilities includes an evaluation of current LOS for the roadway system, and Guemes ferry based on traffic counts for roads, and the capacity utilization of the ferry.

## Actions to Address LOS Shortfalls

When the Priority Array evaluation identifies road segments, intersections, and other facilities that are performing below their assigned LOS, it must prepare improvement plans and funding strategies for addressing these needs. The Six-Year Transportation Improvement Program (TIP) is a financially-feasible project listing that must be updated every year to look out to the next six years. It includes cost estimates and funding for each project. The TIPs for all county jurisdictions are compiled into the regional TIP and coordinated with the State of Washington.

For facilities that may be threatened by projected growth beyond the six year TIP horizon, the County and other jurisdictions can update their plans and the regional plans to identify solutions that may include system improvements, different funding strategies, or changes to land use densities and intensities that are the basis for the demand forecasts.

## Demand Forecasts

The land use assumptions, LOS policies, and facility inventories and planned improvements are used by the Skagit Council of Governments to model future County-wide conditions. The model is a computer program that is calibrated to existing baseline conditions using traffic counts and other information provided by the inventories. Each Transportation Analysis Zone is assigned trip generation forecasts for future years based on the land use assumptions, travel behaviors, and assumptions regarding system improvements and funding levels that are anticipated. The Regional Transportation Planning Organization and Metropolitan Planning Organization plans are based on this approach and have been prepared using a range of growth scenarios ranging from low to high growth. After evaluating these scenarios, the elected officials comprising the board of directors chose a low-mid range preferred alternative that produced the “financially constrained” plan for adoption. This is consistent with the adopted County-wide population forecast and with the level of local and state and federal transportation funding that is probable. For Skagit County, the regional plan includes the projects for implementation over the next 25 years listed below. It should be noted that this project list is dynamic – that is, it will change as conditions change, growth occurs, and the levels of funding change.



## System Expansion Needs

### Current Needs

The County determines current needs in several categories: resurfacing, restoration, rehabilitation, and reconstruction. This is a graduated scale of need ranging from “routine” maintenance to major work that is necessary to support significant changes in capacity or safety. Roadway segments that exceed 7,000 ADT measured on an annual basis may exceed the adopted LOS and therefore require improvements beyond normal maintenance and repair. This may include intersection improvements, widening, traffic controls, and other actions. Some of these projects fall into the six-year TIP and others are expected to be needed beyond the six-year horizon. The County generally looks ahead 15 years.

### Future Needs

The needs for future improvements show up in the County’s analysis and also in the Regional Transportation Planning Organization (RTPO) and Metropolitan Planning Organization (MPO) modeling. Projects of regional significance, including state Department of Transportation projects, are coordinated for possible joint implementation and funding.

## Finance

Transportation system funding comes from a wide range of sources from local property, timber, and fuel taxes, federal grants, and ferry tolls. Local tax revenues are allocated from the general fund. Fuel taxes are proportionate shares of the state’s collections. The state Legislature may identify specific projects funded by the fuel tax. The 2005 “nickel tax”

will fund improvements to state highways that will also support County goals. These include state/County roadway intersections, transit facilities, seismic upgrades to bridges, and water quality improvements. Forest and timber taxes come from federal, state and private timber sources. In recent years (1998-2002), the total revenues for all County transportation funding have averaged about \$16 million. Of this, about half is property tax revenue. Other sources fluctuate depending upon economic activity and outside influences. The volatile state of fuel costs and state tax rates appears to be a significant unknown in the next few years. The County has taken a conservative, financially-constrained approach to forecasting funding for the next 10 years, to 2017. Annual expenditures are expected to be in the range of \$21-29 million. These expenditures will be divided generally in equal thirds for



maintenance, construction and “general expenses” that include drainage, Guemes Ferry, and administration.

## Intergovernmental Coordination

The Skagit-Island County Regional Transportation Planning Organization function was reorganized when Skagit County was also designated a Metropolitan Planning Organization due to the population count in the 2000 Census. As a result, the Skagit Council of Governments has become the lead agency for coordinating the transportation planning efforts of local jurisdictions. In this new role, the organization is responsible for maintaining a County-wide transportation plan that frames the policy basis for coordinating transportation planning and improvements within Skagit County, including County, city and town, and other public transportation service providers. The Skagit Metropolitan Plan and Sub-Regional Transportation Plan (MTP/S-RTP) is the product of this effort. The SCOG maintains the regional transportation forecasting model and facilitates discussion and decision-making among all of the stakeholders. The MTP/S-RTP includes performance measures that are being used to evaluate the following activities of the local jurisdictions:

- *Inter-modal connectivity;*
- *Relationships between the local and regional plans;*
- *Maintenance of the existing system;*
- *Technical support, private sector involvement, and financial support; and*
- *Public involvement.*

In addition to the coordination provided by SCOG described above, the County and the cities and towns coordinate transportation planning and improvements that affect common interfaces of roads, non-motorized facilities and transit. In particular, the 1992 Framework Agreement between the County and the cities and towns directs the jurisdictions to address LOS, concurrency, and related transportation system development in the UGAs.

## Demand Management

Beyond the requirements related to anticipating how physical transportation facilities are capable of accommodating the demands of growth, the County and other jurisdictions are responsible for identifying possible optional means such as management of services in creative ways that leverage the capacities of the facilities. This includes increased use of non-motorized travel, transit and car-pooling, coordination of land use and transportation decisions, and encouraging major trip generators to plan their activities in such a way that peak hour travel demands are minimized.

