2012 WHATCOM TRANSPORTATION PLAN

May 2012

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Introduction

Whatcom County is changing. It is growing in population and economic diversity. Predicted population increases and economic growth may alter the region, bringing diverse communities together and changing lifestyles.

As the amount of trade and travelers crossing the U.S. – Canada border into Whatcom County continues to increase, additional demands are being placed upon the region's aging transportation system, and area jurisdictions must meet the growing needs with diminished resources. The recent recession substantially impacted available funds, and increased fuel costs have set the stage for costlier transportation services. All of these factors challenge Whatcom County's jurisdictions as they find ways to fund needed maintenance, preservation, and improvements to the transportation system.

This plan recommends a multi-modal and multi-faceted approach to address these challenges, and to meet predicted transportation needs in 2032. Through specific programs and select projects, Whatcom Council of Governments (WCOG)[1] member agencies hope to improve the system as a whole to accommodate increased trade and travel in a way that fits the region's objectives of remaining environmentally sustainable, healthy, and cost-effective.

About the Whatcom Council of Governments (WCOG)

WCOG was formed in 1966 under Washington Administrative Code along with other councils of governments in the state. In 1981 it was named the region's Metropolitan Planning Organization (MPO) and in 1990 also became the Regional Transportation Planning Organization (RTPO) under the Washington State Growth Management Act (GMA). In these roles, WCOG is charged with meeting transportation planning requirements specified by U.S. Federal Highway Administration (FHWA) and U.S. Federal Transit Administration (FTA) as well as the GMA.

WCOG is governed by a Full Council consisting of fifteen elected officials of Whatcom County jurisdictions, the Port of Bellingham, and two water districts, as well as several non-voting members from regional agencies.

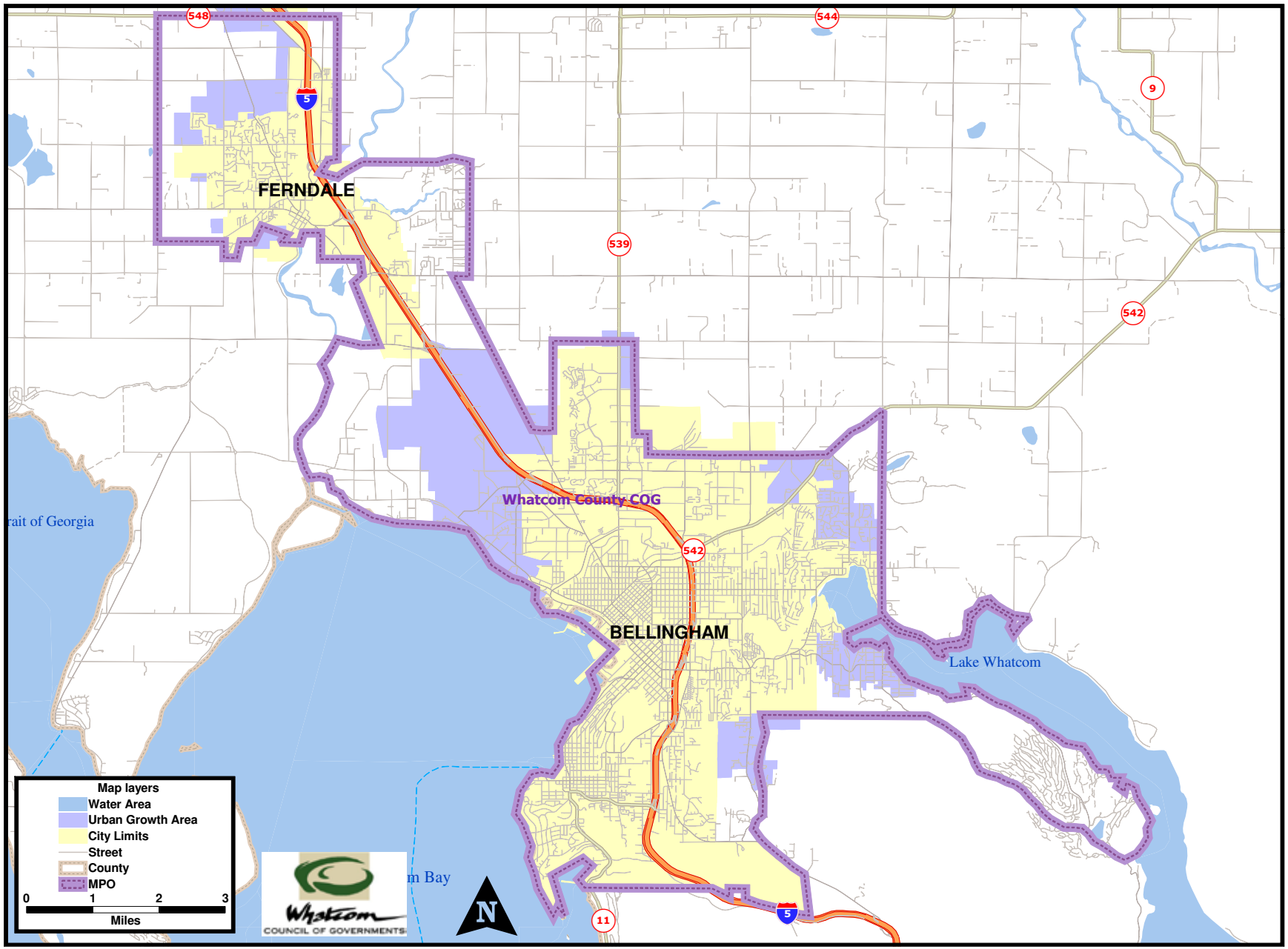
An eight-member Executive Board carries out Full Council policy decisions and supervises the administration and functions of WCOG.

The Whatcom Transportation Policy Board (WTPB) is the decision-making body for MPO and RTPO matters and works to improve intergovernmental coordination in transportation planning and project programming.

MPO planning focuses on the Metropolitan Planning Area (MPA). See Figure 1.

[1] Refer to *Appendix A: Glossary of Transportation Terms* if you have questions regarding transportation abbreviations and definitions.

Figure 1: Whatcom Council of Governments planning area



Federal planning requirements

This plan meets Federal and State transportation planning requirements contained in the 2005 Safe, Accountable, Flexible, Efficient, Transportation Equity Act A Legacy for Users (SAFTEA-LU) and the Washington State Growth Management Act (GMA). SAFETEA-LU is the current version of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA was modified in 1998 by the Transportation Equity Act for the 21st Century (TEA-21), and again amended by SAFETEA-LU in 2005. Each new program added features and programs to ISTEA in the way it addressed issues such as safety, equality, innovative financing, congestion relief, mobility/productivity, efficiency, environmental stewardship, and environmental streamlining. SAFETEA-LU expired September 30, 2009 but a series of continuing resolutions have sustained its planning requirements and programs until a new act is passed and signed. At the time of this plan update, it is unclear when that might happen.

WCOG is responsible for metropolitan transportation planning within the Whatcom County Metropolitan Planning Area. This responsibility is established by Title 23, (Highways) and Title 49, (Transportation) Code of Federal Regulations when the Governor of the State of Washington designated the WCOG as the "Metropolitan Planning Organization (MPO)" responsible for carrying out federal transportation planning requirements within the Metropolitan Planning Area of Whatcom County.

Federal CFR planning requirements administered by the U.S. Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) call for each urbanized area with population over 50,000 to prepare a transportation plan reflecting existing and future conditions. A current Metropolitan Transportation Plan is required for receipt of federal transportation funds and must be updated every five (5) years.

As an MPO, WCOG is required to update a metropolitan plan every five years to serve as a blueprint for transportation planning and implementation over at least a twenty year period. Planning factors defined in the U.S. Code of Federal Regulations (CFR)[2] guide the objectives of this plan and help define the strategy to meet anticipated future needs:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase accessibility and mobility for people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.

[2] 23 CFR 450.306(a) Scope of the Metropolitan Transportation Planning Process: http://www.gpo.gov/fdsys/pkg/CFR-2011-title23-vol1/pdf/CFR-2011-title23-vol1-sec450-306.pdf

MPO plans and programs include:

Whatcom Transportation Plan – this plan serves as a strategy to meet the future transportation needs of the community. The plan is fiscally constrained and described programs and projects designed to improve the region's transportation network over the next twenty years.

Transportation Improvement Program (TIP) – The TIP is a requirement every year and developed in conjunction with the WA State Department of Transportation (WSDOT). The TIP provides a comprehensive six-year listing of transportation improvements within the county that are on the regional transportation network and/or include projects with federal transportation funding.

Unified Planning Work Program (UPWP) – The UPWP is developed annually and serves as a guide for transportation planning activities conducted over the course of a fiscal year. Details include specific transportation planning tasks, a summary of the amount and source of state and federal funds used for planning activities, and what products will be produced that serve to meet CFR and RCW requirements.

Public Participation Plan (PPP) – WCOG crafted its PPP to provide guidelines for establishing and maintaining a high level of public involvement and to assess tools for evaluating the effectiveness of outreach efforts. The plan was developed in coordination with member organizations, federal, state, and local governments as well as a citizen advisory committee. The plan is attached as *Appendix B: Public Participation Plan*.

Title VI Plan – Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, sex, or national origin in programs or activities receiving federal financial assistance. WCOG evaluates its plans and programs for sensitivity to minority, low-income, and other disadvantaged populations as per the objectives within this plan, and the requirements for environmental justice. The plan is attached as *Appendix C: Title VI Plan*.

Whatcom Regional ITS Architecture – the Regional Intelligent Transportation Systems (ITS) Architecture is designed to show what advanced technology systems are currently deployed or being planned in Whatcom County with the objective of illustrating both opportunities for sharing resources and highlighting areas to improve overall system functionality. The most recent version has been developed based on the U.S. National Architecture version 7.0. The current version of the architecture is available as *Appendix D: Whatcom Regional ITS Architecture*.

Employment Access and Coordinated Human Services Transportation Plan (EACH) – As required by state and federal law, WCOG has developed this human service transportation plan based on the efforts of a committee comprised of representatives from special needs populations and a citizens advisory group. The plan sets forth strategies to improve service and efficiency so that public investments in transportation work better for the population as a whole. The plan is attached as *Appendix E: EACH plan*.

International Mobility & Trade Corridor Project (IMTC) – The International Mobility and Trade Corridor Project (IMTC) is a U.S. - Canadian coalition of business and government entities that identifies and promotes improvements to mobility and security for the Cascade Gateway, four border crossings that connect Whatcom County, Washington State and the Lower Mainland of British Columbia.

Whatcom Smart Trips - Whatcom Smart Trips provides education and encouragement to help community members make more of their trips by walking, bicycling, sharing rides and riding the bus, instead of driving alone. Participants are encouraged use these modes for any trip purpose. This is accomplished using websites, incentives, brochures, maps, public relations campaigns, promotional events, public presentations, educational courses, and partnerships with employers and schools. Whatcom Smart Trips programming and materials are varied to suit all ages and interest groups. Program participants learn about the costs and benefits of all transportation modes and their rights and responsibilities as they use them.

State planning requirements

As a result of provisions of the Washington State Growth Management Act, a Regional Transportation Planning Organization (RTPO) was formed in Whatcom County and WCOG was appointed by the governor as lead agency for regional transportation planning requirements imposed by the Washington State Growth Management Act (GMA), and subsequently codified in the Revised Code of Washington.

RTPO required duties include:

(1) Prepare and periodically update a transportation strategy for the region. The strategy shall address alternative transportation modes and transportation demand management measures in regional corridors and shall recommend preferred transportation policies to implement adopted growth strategies. The strategy shall serve as a guide in preparation of the regional transportation plan.

(2) Prepare a regional transportation plan as set forth in RCW 47.80.030 that is consistent with county-wide planning policies if such have been adopted pursuant to chapter 36.70A RCW, with county, city, and town comprehensive plans, and state transportation plans.

(3) Certify by December 31, 1996, that the transportation elements of comprehensive plans adopted by counties, cities, and towns within the region reflect the guidelines and principles developed pursuant to RCW 47.80.026, are consistent with the adopted regional transportation plan, and, where appropriate, conform with the requirements of RCW 36.70A.070.

(4) Where appropriate, certify that county-wide planning policies adopted under RCW 36.70A.210 and the adopted regional transportation plan are consistent.

(5) Develop, in cooperation with the department of transportation, operators of public transportation services and local governments

within the region, a six-year regional transportation improvement program which proposes regionally significant transportation projects and programs and transportation demand management measures. The regional transportation improvement program shall be based on the programs, projects, and transportation demand management measures of regional significance as identified by transit agencies, cities, and counties pursuant to RCW 35.58.2795, 35.77.010, and 36.81.121, respectively. The program shall include a priority list of projects and programs, project segments and programs, transportation demand management measures, and a specific financial plan that demonstrates how the transportation improvement program can be funded. The program shall be updated at least every two years for the ensuing six-year period.

(6) Designate a lead planning agency to coordinate preparation of the regional transportation plan and carry out the other responsibilities of the organization. The lead planning agency may be a regional organization, a component county, city, or town agency, or the appropriate Washington state department of transportation district office.

(7) Review level of service methodologies used by cities and counties planning under chapter 36.70A RCW to promote a consistent regional evaluation of transportation facilities and corridors.

(8) Work with cities, counties, transit agencies, the department of transportation, and others to develop level of service standards or alternative transportation performance measures.

(9) Submit to the Agency Council on Coordinated Transportation, as provided in chapter 47.06B RCW, beginning on July 1, 2007, and every four years thereafter, an updated plan that includes the elements identified by the council. Each regional transportation planning organization must submit to the council every two years a prioritized regional human service and transportation project list.

Six statewide transportation policy goals guide the work of RTPOs in Washington State:

Preservation: To maintain, preserve and extend the life and utility of prior investments in transportation systems and services.

Safety: To provide for and improve the safety and security of transportation customers and the transportation system.

Mobility (addressing congestion): To improve the predictable movement of goods and people throughout Washington state.

Environment: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities and protect the environment.

Stewardship: To continuously improve the quality, effectiveness and efficiency of the transportation system.

Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.

With these goals in mind, WCOG has developed this plan to remain consistent with statewide policies.

Contributing committees

In making transportation decisions, WCOG considers recommendations from numerous regional transportation committees. These committees represent a fundamental means for the community to get involved in transportation project planning. Input and efforts of these committees have been integral in crafting the strategies and programs within this plan.

Transportation Technical Advisory Committee

The Transportation Technical Advisory Committee (TTAC) is comprised of technically qualified representatives from cities, tribes, Whatcom County government, WSDOT, the Port of Bellingham and the Whatcom Transportation Authority (WTA). TTAC meets monthly to discuss planning and project funding, and to make recommendations to the WTPB.

Whatcom ITS Subcommittee

This subcommittee of TTAC members who control or maintain ITS components within Whatcom County meets on an as-needed basis to make changes to the architecture and discuss ways to better integrate ITS systems in the region.

Community Transportation Advisory Group (CTAG)

The Community Transportation Advisory Group (CTAG) is a citizen-based committee that meets monthly and advises the WTPB on the community's concerns to help reach a collaborative vision for Whatcom County's transportation system. CTAG was established in 2003, and its membership, along with some additional citizens, comprises the WTA Citizen Advisory Panel.

Employment Access and Coordinated Human-services Transportation (EACH) Stakeholder Group

The EACH stakeholder group is comprised of representatives from local social service agencies, transportation service providers, human services non-profit agencies, and transportation planners. The primary purpose of the group is to advise WCOG on the preparation and periodic update of the EACH Plan. Other goals of the stakeholder group include:

1. Identifying effective and efficient transportation services for people with special needs and strategizing methods to maintain or expand those services

2. Identifying gaps in the human services transportation system where additional service may be needed and defining project priorities for future funding

3. Coordinating transportation services among agencies to reduce duplication and increase efficiency.

Since 2007, EACH has served as a forum for improved transportation coordination among local and regional agencies and has helped secure over $13 million in grant funding for projects, such as WTA bus fleet replacement.

Farmhouse Gang

The North Sound Connecting Communities group, called the Farmhouse Gang, is a coalition of elected, agency, and citizen representatives from a five-county region: Whatcom, Skagit, Island, San Juan, and Snohomish. The group focuses on developing better ways to move people through the five-county region using all available modes with a focus on alternatives to single-occupancy automobiles.

International Mobility & Trade Corridor Project (IMTC)

As mentioned above, the IMTC coalition provides input to WCOG planning activities from the perspective of improving cross-border trade and travel.

Regional considerations

Whatcom County, with over three million people within 60 miles of the U.S. – Canada border to the north and to the south, experiences impacts from much higher levels of travel demand than other counties its size. To the north, the Lower Mainland of British Columbia, Canada produces substantial vehicle flow in trade, tourism and commuting. Similarly, Central Puget Sound to the south generates substantial cross-border movement in autos and commercial vehicles. The five border crossings between Canada and the United States are also international trade routes with national significance.

Over 32,000 cars and 2,700 trucks cross Whatcom County's border every day, carrying over $30 million in daily trade[3].

Whatcom County's location between two urban giants connected by a major trade route means it experiences increasing demands on transportation infrastructure that cannot be supported by shrinking local resources. Therefore the regions' planning objectives must strive to build and maintain a system that will serve a community greater than its own, in a way to assure the continued movement of goods and people to benefit not only Whatcom County, but the state and larger bi-national region as a whole.

Whatcom Transportation Plan strategies

To guide regional efforts to meet the transportation needs of the future, this plan has developed a series of strategies which represent the goals and interests of the region. CFR law also requires that MPO/RTPO goals must be coordinated so they don't conflict, and they must not conflict with the plans of jurisdictions within the region. Consistency is a requirement for all transportation plans beginning with the statewide transportation plan, and including metropolitan, regional and comprehensive plans.

The following strategies reflect recommendations from TTAC, CTAG, and WCOG staff._Implementation of these strategies will be accomplished through the coordinated work of member agencies and the WTPB.

Strategies have been organized to tie in with the eight planning

[3] *2012 IMTC Resource Manual*, Whatcom Council of Governments, 2012: http://resources.wcog.org/border/2012manual.pdf

factors required of MPOs and the Transportation Policy Goals (RCW 47.04.280) for RTPOs. More than half these strategies serve both MPO and RTPO requirements. Each strategy is marked as to whether it applies to MPO goals, RTPO goals, or both.

1. Public Information and Education **MPO/RTPO*

WCOG will use multiple methods of outreach to raise public awareness about regional transportation issues, laws, and regulations pertaining to all transportation modes.

Outreach through specific projects, websites, citizen-based advisory teams, and educational programs will provide information to the public about the transportation planning process, including meeting schedules, available data, and ways to consider all modes of transportation.

2. Safety **MPO/RTPO*

WCOG encourages maximizing the safety and security of transportation facilities and all transportation planning and project activities throughout Whatcom County. In coordinating with member jurisdictions, emergency access, deployment of ITS technologies, and bicycle, transit, pedestrian, and bicycle safety and education improvements are emphasized.

3. Access **MPO/RTPO*

Access refers to the need for a transportation system that is relatively free from gaps, impediments and hardships in the movement of people and goods. WCOG will work with regional jurisdictions and agencies to provide balanced access to transportation facilities, jobs, education, and services for all users.

Highway system access may be restricted by congestion. People may have difficulty reaching destinations if rail, transit, or walking is not possible. Those with disabilities or lacking resources face the

greatest challenges in accessing mobility. And vehicle access may be impeded by weather, or a degrading system that is not properly maintained. WCOG therefore encourages emphasizing system preservation across all modes to avoid degradation, and on ITS technologies to warn of unsafe weather conditions.

4. Environmental Justice **MPO*

WCOG will address the potential adverse effects of transportation plans and projects on low-income, disability and minority populations, and encourage consideration of their needs during any member-jurisdiction's environmental review process.

WCOG will implement these strategies by, wherever possible, ensuring that transportation decisions serve the needs of and do not have disproportionate adverse impacts on low-income, disabled, elderly, and minority populations. WCOG will also encourage WTA and local jurisdictions to seek input from low income, disability and minority populations early in their planning processes.

5. Connectivity **MPO*

WCOG will continue to encourage efficient connections among routes and modes and political boundaries, and provide for aquatic and terrestrial habitat connectivity.

For the economic vitality of the region, WCOG will continue to encourage provision of intermodal transportation facilities to provide more coordinated, efficient, safe and integrated system links for both private and public commuter services. In addition, WCOG will work with member jurisdictions in promoting street and trail system completeness and connectivity, and encourage them to maintain and restore ecological connectivity and natural ecosystem processes. WCOG will also encourage local and state agencies to provide safe and secure areas for public commuter services and commerce.

6. Freight Mobility **MPO/RTPO*

WCOG supports improving freight-related transportation infrastructure, data analyses, border operations, public education, and multi-modal solutions to provide for the safe, efficient movement of goods by all freight modes.

WCOG will contribute its ability to collect and provide freight and commercial vehicle movement data as a way to provide a robust foundation for member jurisdictions to implement improvements.

7. Congestion and Mobility **RTPO*

WCOG strives to address roadway congestion by identifying existing and future congestion points in the system, targeting projects on those locations, and developing alternatives such as increased transit and infrastructure for non-motorized transportation, and encouraging telecommuting and related options.

To sustain mobility, WCOG will promote and encourage new arterial connections that include multimodal features such as transit prioritization, pedestrian accommodation and dedicated bicycle lanes.

8. Transportation Demand Management **MPO*

Transportation Demand Management (TDM) includes a variety of techniques aimed at reducing the number of trips made in single occupant vehicles. Whatcom is an "affected county" under the WA State Commute Trip Reduction Law. WCOG continues to work with employers and schools to encourage people to walk, bicycle, share rides and ride the bus to work and school. WCOG's Whatcom Smart Trips program partners with area merchants to provide incentives for people make smart trips, and also with WTA to create an ongoing public relations and advertising campaigns to exceed regional TDM goals. Students of all ages are also encouraged, in the classroom, to walk and use bicycles whenever possible.

9. Multi-modal Transportation **MPO/RTPO*

As part of plan consistency review, WCOG will review member jurisdiction transportation elements for inclusion of alternatives to single occupancy vehicles, and the incorporation of multi-modal facilities in road and development projects whenever possible. The national Complete Streets program provides a comprehensive approach to improve connections among roadways, transit, pedestrians and cyclists. WCOG will continue to encourage implementation of Complete Streets, and acknowledge those jurisdictions that are currently implementing multimodal transportation networks.

10. Intelligent Transportation Systems (ITS) **MPO*

Through the Whatcom Regional ITS Architecture, WCOG assists member jurisdictions and regional agencies in providing transportation network improvements through ITS investments, and seeing that these investments are coordinated to improve their cost-effectiveness.

11. Land Use **RTPO*

WCOG will encourage transportation project designs that support all system users and modes in cities, urban growth areas and employment centers in unincorporated areas. As a step toward more comprehensive application of concurrency principles, member jurisdictions will be encouraged to use Bellingham's model of allowing concurrency credit for development providing enhanced access for transit bicyclists and pedestrians, to the extent this is practicable for them.

12. Health **MPO*

To improve the physical health of community members, WCOG will work with jurisdictions to provide safe and convenient routes and infrastructure to encourage increased active transportation choices such as bicycling and walking.

13. Public Participation **MPO/RTPO*

WCOG will provide increased opportunities for residents to be engaged and informed throughout all stages of the planning process. WCOG will continue to develop benefits-based messaging to affected groups or individuals, and contact interest groups to provide additional access to transportation information on planning and projects.

Implementing the strategies

WCOG works with all member agencies and all regional stakeholders to ensure their programs, projects and plans are consistent and supportive of the strategies listed above. In addition, WCOG has instituted other regional programs and methodologies for realizing the intent of the strategies. The remainder of this plan identifies how that will be accomplished over the twenty year planning period. Member agency goals and policies are located in *Appendix F: Agency goals and policies*.

THE SETTING

To identify future needs, WCOG has examined current and future forecasted demographics, land use, travel, congestion, and economic trends, and lifestyle choices of the region to better understand what challenges and opportunities the community will face in the next twenty years.

Socio-economic and demographic forecasts

Data from regional, statewide, and national agencies[1], and outputs from the Whatcom regional model show Whatcom County's population is expanding at a higher percentage than the statewide and national averages. By looking at population, employment (the location of work sites), labor force (the location where potential workers live), and household information (divided by income group), a map of current and future travel demand can be drawn to illustrate regional transportation needs.

Forecasting and the model

Forecasts for 2020 and 2032 were developed using the Whatcom County land capacity analysis methodology[2] and population and employment control total sets from WA State Office of Financial Management. Assumptions for the land use model, which are developed by the Whatcom County comprehensive planning team, include the amount of buildable land; zoning regulations; policies regarding density; and a variety of factors that make land more or less attractive for residential and commercial development.

These data were fed into the regional travel demand model, which simulates and develops forecasts based on current conditions and projected changes in socio-economic variables, and planned changes in the regional transportation system. The model provides decision-makers in the region with a valuable tool for long-range planning of transportation improvements.

Details regarding the development of the travel demand model can be found in the *Updated Whatcom Model*[3].

[1] Data Sources: Population from U.S. Census Bureau and the WA State Office of Financial Management; land use and household data from the Whatcom County Assessor's Office; employment data from InfoUSA employment database.

[2] *Whatcom County Land Capacity Analysis*, Whatcom County, August, 2009: http://www.co.whatcom.wa.us/pds/2031/pdf/LCA_Methodology_081409.pdf

[3] *The Updated Whatcom Model*, prepared for Whatcom Council of Governments by Caliper Corporation, March, 2010: http://resources.wcog.org/planning/model_whatcomcounty-report.pdf

Table 1: Socio-economic and travel indicators for the Bellingham area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	36,475	42,717	49,734	36.4
Household Population	84,231	97,645	112,650	33.7
Employment	56,547	66,791	78,682	39.1
Household Size	2.31	2.29	2.27	-1.9
Daily Trips	273,862	316,119	361,544	32.0
Daily Auto Trips	262,717	303,400	347,291	32.2
Daily Transit Trips	11,145	12,719	14,253	27.9
Daily VMT	1,689,769	1,951,269	2,216,894	31.2
Daily VHT	45,368	55,892	68,339	50.6
Time to Work	9.25	9.47	9.76	5.5

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 2: Socio-economic and travel indicators for the Blaine area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	1,968	2,761	4,001	103.3
Household Population	4,649	6,674	9,833	111.5
Employment	2,899	3,929	5,283	82.2
Household Size	2.36	2.42	2.46	4.0
Daily Trips	13,112	17,069	22,445	71.2
Daily Auto Trips	12,753	16,603	21,888	71.6
Daily Transit Trips	359	467	556	55.1
Daily VMT	78,953	106,963	133,505	69.1
Daily VHT	1,924	2,775	3,640	89.2
Time to Work	18.66	19.16	19.59	5.0

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 3: Socio-economic and travel indicators for the Everson area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	818	1,036	1,286	57.2
Household Population	2,239	2,882	3,620	61.7
Employment	815	997	1,320	62.0
Household Size	2.74	2.78	2.81	2.8
Daily Trips	4,287	5,162	6,166	43.8
Daily Auto Trips	4,219	5,086	6,082	44.2
Daily Transit Trips	69	76	84	22.3
Daily VMT	35,990	33,122	39,787	10.5
Daily VHT	901	916	1,136	26.1
Time to Work	20.21	20.92	20.99	3.8

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 4: Socio-economic and travel indicators for the Ferndale area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	4,215	5,798	7,703	82.8
Household Population	11,512	15,761	21,162	83.8
Employment	5,413	7,563	10,470	93.4
Household Size	2.73	2.72	2.75	0.6
Daily Trips	26,208	34,030	43,816	67.2
Daily Auto Trips	25,444	33,102	42,614	67.5
Daily Transit Trips	764	928	1,201	57.2
Daily VMT	404,472	488,788	585,187	44.7
Daily VHT	8,172	10,696	13,856	69.6
Time to Work	13.45	13.78	14.21	5.7

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 5: Socio-economic and travel indicators for the Lynden area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	4,452	7,020	7,652	71.9
Household Population	11,456	17,167	19,009	65.9
Employment	5,801	7,596	9,821	69.3
Household Size	2.57	2.45	2.48	-3.5
Daily Trips	28,027	37,843	44,257	57.9
Daily Auto Trips	27,572	37,247	43,497	57.8
Daily Transit Trips	455	595	761	67.2
Daily VMT	121,610	155,042	176,578	45.2
Daily VHT	3,505	4,694	5,522	57.5
Time to Work	17.80	18.38	18.16	2.0

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 6: Socio-economic and travel indicators for the Nooksack area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	409	566	844	106.4
Household Population	1,227	1,723	2,584	110.6
Employment	271	356	495	82.7
Household Size	3.00	3.04	3.06	2.1
Daily Trips	2,310	2,937	3,991	72.8
Daily Auto Trips	2,274	2,893	3,930	72.8
Daily Transit Trips	36	44	61	68.6
Daily VMT	15,449	19,804	23,808	54.1
Daily VHT	410	540	672	64.0
Time to Work	21.11	21.69	21.68	2.7

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 7: Socio-economic and travel indicators for the Sumas area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	495	647	847	71.1
Household Population	1,298	1,696	2,219	71.0
Employment	417	596	901	116.1
Household Size	2.62	2.62	2.62	-0.1
Daily Trips	2,225	3,005	4,106	84.5
Daily Auto Trips	2,210	2,981	4,068	84.1
Daily Transit Trips	15	24	38	152.9
Daily VMT	19,299	24,818	30,785	59.5
Daily VHT	490	641	879	79.3
Time to Work	24.86	25.14	24.58	-1.1

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Table 8: Socio-economic and travel indicators for the unincorporated area

Indicator	2008	2020	2032	Percent Change 2008 to 2032
Households	26,216	28,781	31,796	21.3
Household Population	69,192	75,936	83,854	21.2
Employment	15,881	18,030	20,932	31.8
Household Size	2.64	2.64	2.64	-0.1
Daily Trips	88,235	97,275	108,292	22.7
Daily Auto Trips	86,953	95,856	106,687	22.7
Daily Transit Trips	1,282	1,419	1,605	25.3
Daily VMT	1,781,193	2,147,799	2,540,351	42.6
Daily VHT	41,961	50,990	61,187	45.8
Time to Work	18.43	18.84	18.95	2.8

Source: WCOG, OFM, 2008 North Sound Travel Survey
Note: Jurisdiction boundaries are based on traffic analysis zones that approximate urban growth areas.

Population

Population in Whatcom County is expected to increase by 36 percent from 191,164 in 2008 to approximately 260,584 in 2032, a growth rate of approximately 1.6 percent annually. Other sub-regions vary in percentage increases over the next twenty years, from a projected 34 percent increase in Bellingham to a forecasted 111 percent growth rate in the Blaine community. These predicted growth rates have been developed based on land use assumptions developed by Whatcom County. Figure 2 depicts the population growth forecasted for the Whatcom region.

Number and size of households

The number of households in the region is projected to increase at generally the same rate as population, while household size is expected to remain steady.

Table 9: Population trend and forecast by jurisdiction

Jurisdiction	1990	2000	2010	2020	2032
Whatcom County	127,780	166,814	201,140	224,980	260,584
Bellingham	52,179	67,171	80,885	103,030	118,188
Blaine	2,489	3,770	4,684	6,722	9,883
Everson	1,490	2,035	2,483	2,887	3,625
Ferndale	5,398	8,758	11,415	15,761	21,162
Lynden	5,709	9,020	11,951	17,167	19,009
Nooksack	584	851	1,338	1,723	2,584
Sumas	744	978	1,319	1,696	2,219

Source: WCOG, OFM, US Census

Note: Population includes both people living in households and group quarters.

Table 10: Household trend and forecast by jurisdiction

Jurisdiction	1990	2000	2010	2020	2032
Whatcom County	48,543	64,450	80,370	89,326	103,863
Bellingham	21,189	27,999	34,671	42,717	49,734
Blaine	1,034	1,496	1,994	2,761	4,001
Everson	540	684	820	1,036	1,286
Ferndale	1,985	3,147	4,210	5,798	7,703
Lynden	2,126	3,426	4,594	7,020	7,652
Nooksack	174	280	434	566	844
Sumas	304	355	504	647	847

Source: WCOG, OFM, US Census

Figure 2: Forecast population growth in the Whatcom region, 2008-2032

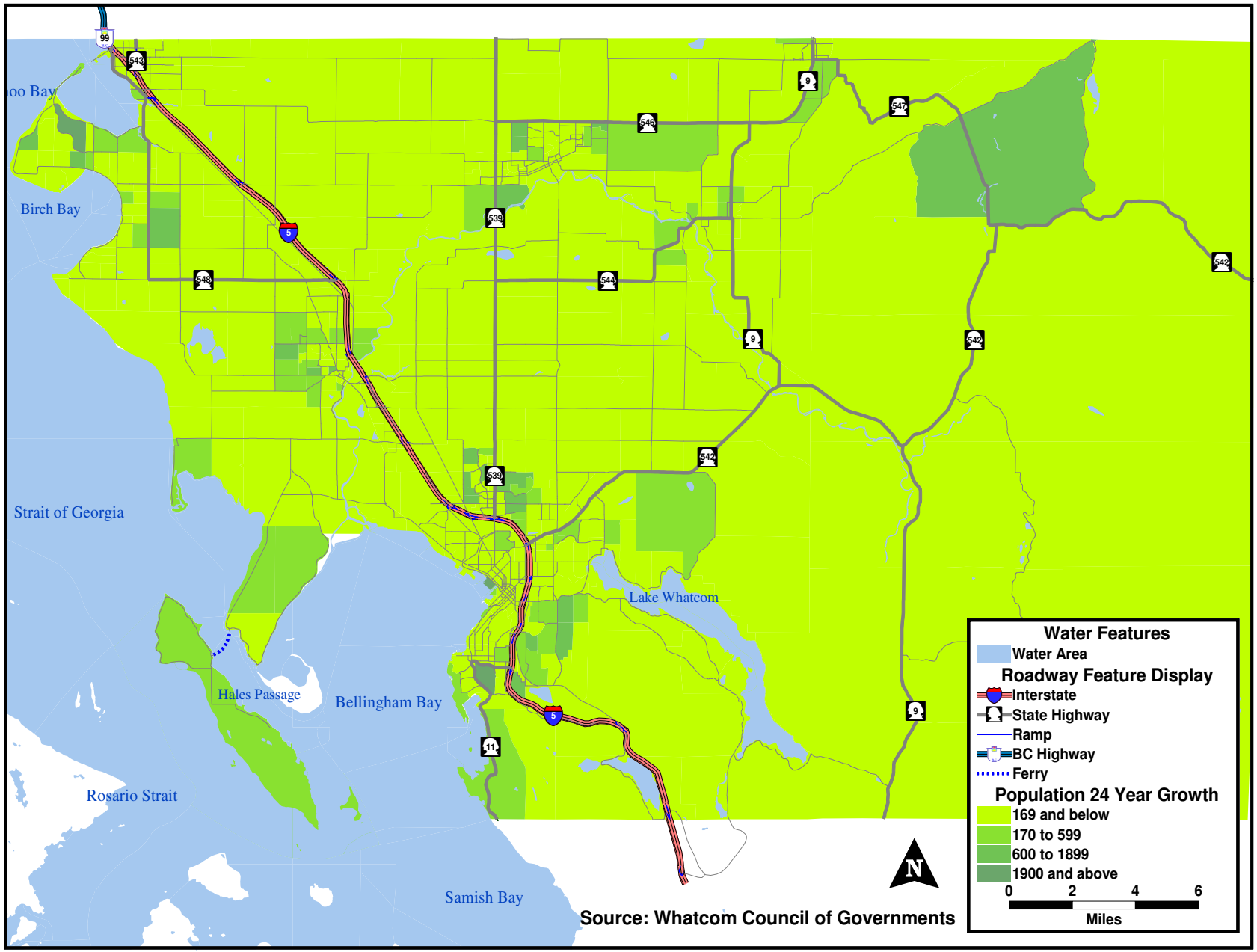
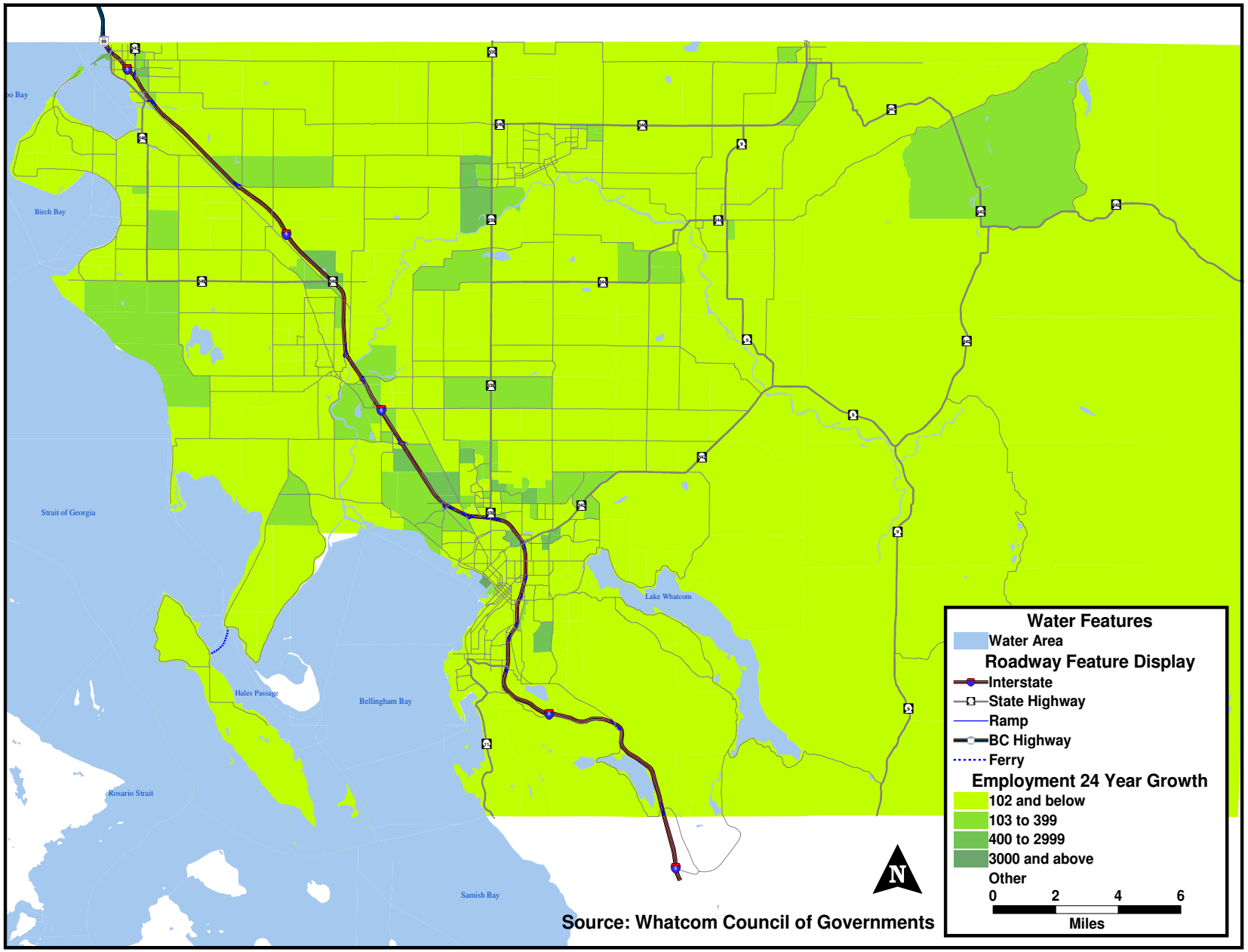


Figure 3: Forecast employment growth in the Whatcom region, 2008-2032



Employment and labor force

The number of jobs in the region increased 47 percent, or about 25,000 from 1990 to 2010. Employment is expected to continue to grow over the next twenty years at that same rate of 4.7% per year.

The number of eligible workers increased at a higher rate than the number of jobs, growing from 68,185 to 106,627 workers, or 56 percent, between 1990 and 2010. Over the next twenty years the labor force is expected to increase by about 38 percent.

Travel demand forecasts

Given the socio-economic forecasts above, there will be increased demand on the region's transportation system. Origin-destination and frequency of travel are key factors in planning a future system with enough capacity to meet regional goals.

Travel demand forecasts listed here are based on no-build scenarios. A no- build scenario assumes certain future development actions with but no accompanying modeled transportation system improvements and uses the current system's capacity.

Table 11: Employment and labor force trends

Year	Whatcom Residence Labor Force	Whatcom Residence Employed	Whatcom Residence Unemployed	Whatcom Residence Unemployment Rate	Employment in Whatcom County
1990	68,185	64,721	3,464	5.1%	52,770
1991	69,308	64,818	4,489	6.5%	53,829
1992	72,539	67,173	5,367	7.4%	56,054
1993	74,345	68,896	5,449	7.3%	57,532
1994	74,864	69,196	5,668	7.6%	58,997
1995	78,812	73,332	5,480	7.0%	59,933
1996	79,309	74,161	5,149	6.5%	61,807
1997	79,841	75,487	4,354	5.5%	63,640
1998	81,323	77,254	4,070	5.0%	64,851
1999	85,477	81,359	4,118	4.8%	65,877
2000	88,022	83,508	4,514	5.1%	67,266
2001	87,723	82,027	5,696	6.5%	68,918
2002	91,823	85,483	6,340	6.9%	70,307
2003	95,372	88,924	6,447	6.8%	72,409
2004	99,060	93,277	5,783	5.8%	74,987
2005	102,045	96,931	5,113	5.0%	78,491
2006	102,264	97,667	4,597	4.5%	80,180
2007	105,553	101,183	4,369	4.1%	82,551
2008	108,518	103,136	5,383	5.0%	83,167
2009	107,824	98,693	9,131	8.5%	79,164
2010	106,627	97,248	9,379	8.8%	77,779

Source: Washington State Employment Security Department

Travel time

Travel times to and from work are expected to increase across all Whatcom County cities with the exception of Sumas, which is expected to remain the same. The amount of travel time for residents of Bellingham is expected to increase more than those living in smaller cities. Figure 4 shows forecasted mean travel times for all regional cities.

Inter- and intra-city travel

The majority of travel in Whatcom County consists of trips to and within the City of Bellingham. This number is expected to increase over the next twenty years. Cars are the dominant mode of transportation both within and between cities, and this is assumed to remain true in the 2032 forecast year.

Figure 4: Average time to work in the Whatcom region

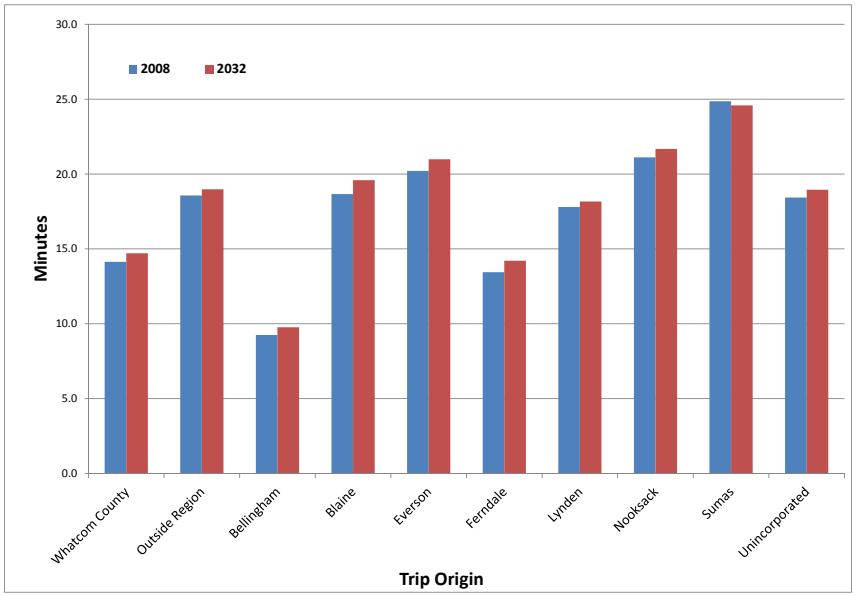


Table 12: Average time to work in the Whatcom region

Home/ Origin Zone	2008 Average Travel Time	2032 Average Travel Time	Percent Change
Whatcom County	14.1	14.7	4.01
Outside Region	18.6	19.0	2.23
Bellingham	9.3	9.8	5.54
Blaine	18.7	19.6	5.00
Everson	20.2	21.0	3.85
Ferndale	13.4	14.2	5.68
Lynden	17.8	18.2	2.03
Nooksack	21.1	21.7	2.66
Sumas	24.9	24.6	-1.12
Unincorporated	18.4	19.0	2.84

Source: WCOG and 2008 North Sound Travel Survey

Table 13: Auto daily city to city trips (2008)

Jurisdiction	Bellingham	Blaine	Everson	Ferndale	Lynden	Nooksack	Sumas	Uninc.	External	Total
Bellingham	189,067	2,620	997	10,755	5,413	456	304	34,958	18,146	**262,717**
Blaine	2,620	2,769	45	984	667	21	25	3,334	2,288	**12,753**
Everson	997	45	389	112	694	260	105	1,288	329	**4,219**
Ferndale	10,755	984	112	4,660	981	47	36	6,501	1,368	**25,444**
Lynden	5,413	667	694	981	10,348	356	337	6,546	2,229	**27,572**
Nooksack	456	21	260	47	356	106	83	733	212	**2,274**
Sumas	304	25	105	36	337	83	144	628	547	**2,210**
Unincorporated	34,958	3,334	1,288	6,501	6,546	733	628	24,392	8,572	**86,953**
External	14,171	1,927	271	1,091	1,682	159	462	5,074	2,533	**27,370**
Total	**258,742**	**12,392**	**4,161**	**25,167**	**27,024**	**2,221**	**2,125**	**83,455**	**36,224**	**451,512**

Note: Shaded cells indicate number of trips within each city.

Source: WCOG and 2008 North Sound Travel Survey

Table 14: Auto daily city to city trips (2032)

Jurisdiction	Bellingham	Blaine	Everson	Ferndale	Lynden	Nooksack	Sumas	ncorporated	External	Total
Bellingham	248,939	3,660	1,311	15,828	7,005	711	441	38,292	31,067	**347,255**
Blaine	3,660	5,419	77	2,003	1,213	45	50	5,317	4,101	**21,886**
Everson	1,311	77	559	199	1,141	410	175	1,652	557	**6,081**
Ferndale	15,828	2,003	199	9,823	1,926	100	74	9,852	2,808	**42,614**
Lynden	7,005	1,213	1,141	1,926	17,924	720	682	8,792	4,093	**43,496**
Nooksack	711	45	410	100	720	205	181	1,105	451	**3,930**
Sumas	441	50	175	74	682	181	336	1,038	1,091	**4,068**
Unincorporated	38,292	5,317	1,652	9,852	8,792	1,105	1,038	28,479	12,158	**106,685**
External	23,534	3,610	401	2,134	2,927	268	956	7,595	4,223	**45,649**
Total	**339,721**	**21,395**	**5,925**	**41,939**	**42,330**	**3,747**	**3,933**	**102,121**	**60,551**	**621,663**

Note: Shaded cells indicate number of trips within each city.
Source: WCOG and 2008 North Sound Travel Survey

Table 15: Transit daily city to city trips (2008)

Jurisdiction	Bellingham	Blaine	Everson	Ferndale	Lynden	Nooksack	Sumas	Uninc.	Total
Bellingham	10,219	31	9	324	55	2	4	502	**11,145**
Blaine	31	208	0	28	8	0	0	83	**359**
Everson	9	0	12	1	13	14	1	19	**69**
Ferndale	324	28	1	229	14	0	1	168	**764**
Lynden	55	8	13	14	297	4	1	61	**455**
Nooksack	2	0	14	0	4	5	1	10	**36**
Sumas	4	0	1	1	1	1	1	6	**15**
Unincorporated	502	83	19	168	61	10	6	431	**1,282**
Total	**11,145**	**359**	**69**	**764**	**455**	**36**	**15**	**1,282**	**14,124**

Note: Shaded cells indicate number of trips within each city.
Source: WCOG and 2008 North Sound Travel Survey

Table 16: Transit daily city to city trips (2032)

Jurisdiction	Bellingham	Blaine	Everson	Ferndale	Lynden	Nooksack	Sumas	Uninc.	Total
Bellingham	13,159	39	10	455	62	4	5	579	**14,313**
Blaine	39	341	1	52	15	0	1	112	**560**
Everson	10	1	12	2	18	17	2	24	**86**
Ferndale	455	52	2	417	30	1	1	244	**1,202**
Lynden	62	15	18	30	529	7	6	94	**762**
Nooksack	4	0	17	1	7	14	4	15	**61**
Sumas	5	1	2	1	6	4	5	13	**38**
Unincorporated	579	112	24	244	94	15	13	528	**1,608**
Total	**14,313**	**560**	**86**	**1,202**	**762**	**61**	**38**	**1,608**	**18,630**

Note: Shaded cells indicate number of trips within each city.

Source: WCOG and 2008 North Sound Travel Survey

Vehicle miles and hours traveled

Vehicle miles traveled (VMT) is a common measurement to describe the extent of automobile use on a daily or annual basis, and is an indicator of changes in travel demand across the region.

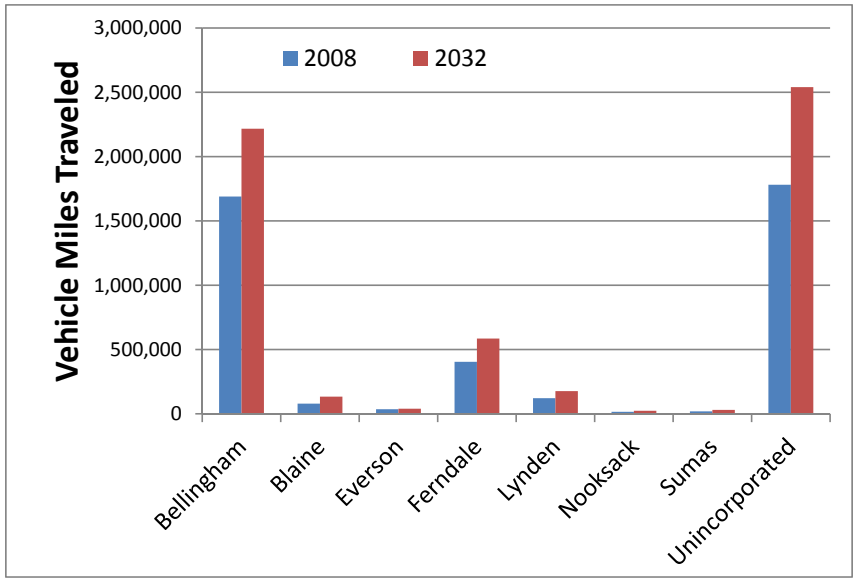
Because job growth can increase VMT, the region's VMT is expected to rise by approximately 1.43 percent annually between 2008 and 2032, or about 32 percent over a twenty-four year period. The City of Blaine is expected to have the highest increase in VMT at 69 percent.

Table 17: Daily vehicle miles traveled by jurisdiction

Jurisdiction	2008	2032
Bellingham	1,689,769	2,216,894
Blaine	78,953	133,505
Everson	35,990	39,787
Ferndale	404,472	585,187
Lynden	121,610	176,578
Nooksack	15,449	23,808
Sumas	19,299	30,785
Unincorporated	1,781,193	2,540,351

Source: WCOG & 2008 N. Sound Travel Survey

Figure 5: Daily vehicle miles traveled by jurisdiction



Vehicle hours traveled (VHT) reflects the efficiency of travel in terms of the average speed of travel when compared with VMT. As a corollary measure, VMT divided by VHT produces an overall transportation system average vehicle speed for non-transit vehicles region-wide.

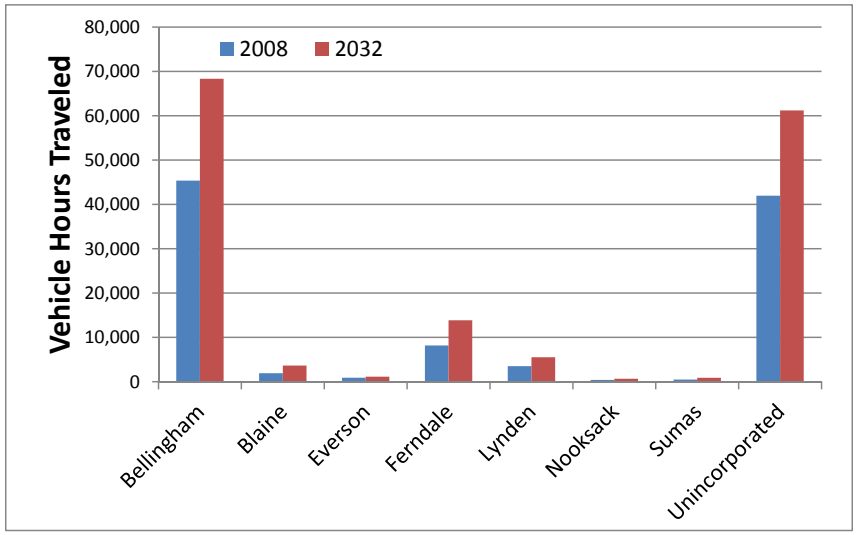
VHT is expected to rise by 2 percent annually in this region, or 51 percent by 2032. As with VMT, the City of Blaine should see the greatest increases, with an 89 percent increase.

Table 18: Daily vehicle hours traveled by jurisdiction

Jurisdiction	2008	2032
Bellingham	45,368	68,339
Blaine	1,924	3,640
Everson	901	1,136
Ferndale	8,172	13,856
Lynden	3,505	5,522
Nooksack	410	672
Sumas	490	879
Unincorporated	41,961	61,187

Source: WCOG & 2008 N. Sound Travel Survey

Figure 6: Daily vehicle hours traveled by jurisdiction



Volume over capacity

The volume of traffic on a particular roadway, when divided by the capacity of that roadway, provides a means to analyze network performance and the operating conditions a driver will experience when traveling at a specific time. The volume-to-capacity ratio (V/C) is used to determine a roadway link's level of service (LOS) and given a related grade. If travelers experience little or no delay, that roadway is experiencing LOS A. However if the V/C shows the potential for long delays and congestion (e.g. v/c>.9), the roadway is performing at LOS F.

By analyzing roadway intersections at peak hour traffic conditions, planners and engineers can determine which areas require additional analysis or future improvements.

Figures 7, 8, and 9 depict the volume-to-capacity for existing conditions (2008) and forecasted demand (2032).

Figure 7: 2008 volume over capacity during the 4 PM to 6 PM time period

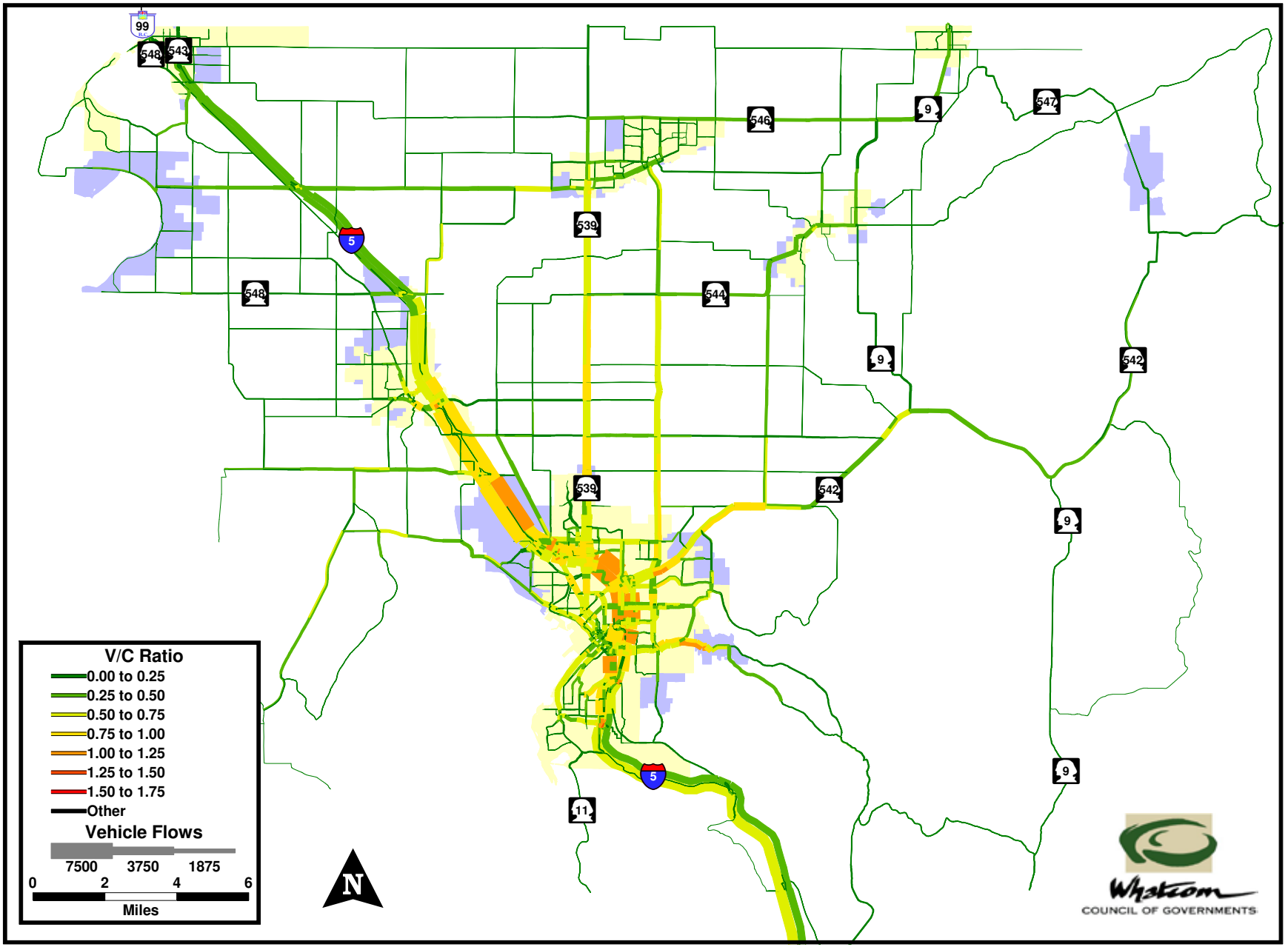


Figure 8: 2032 volume over capacity during the 4 PM to 6 PM time period with no improvements

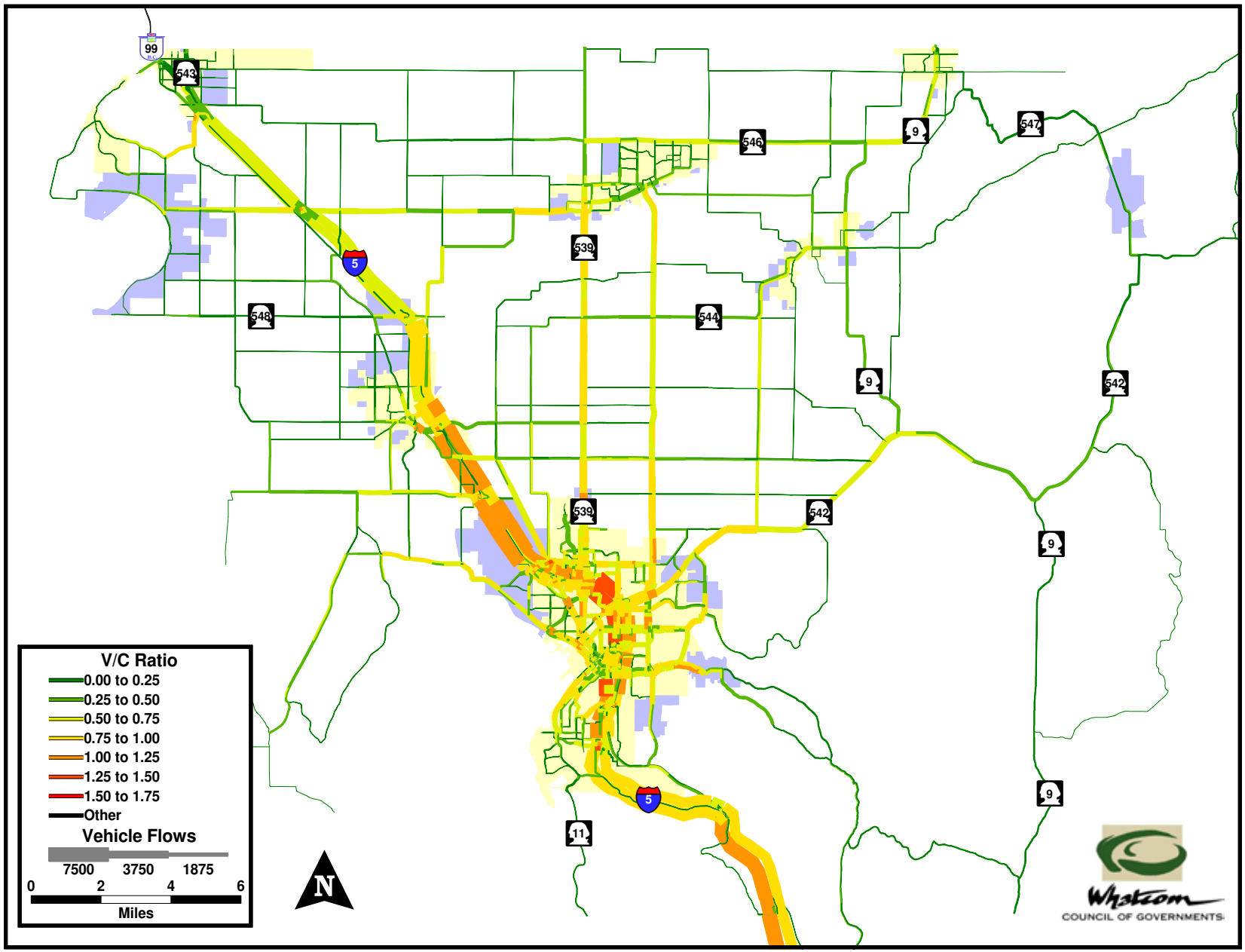
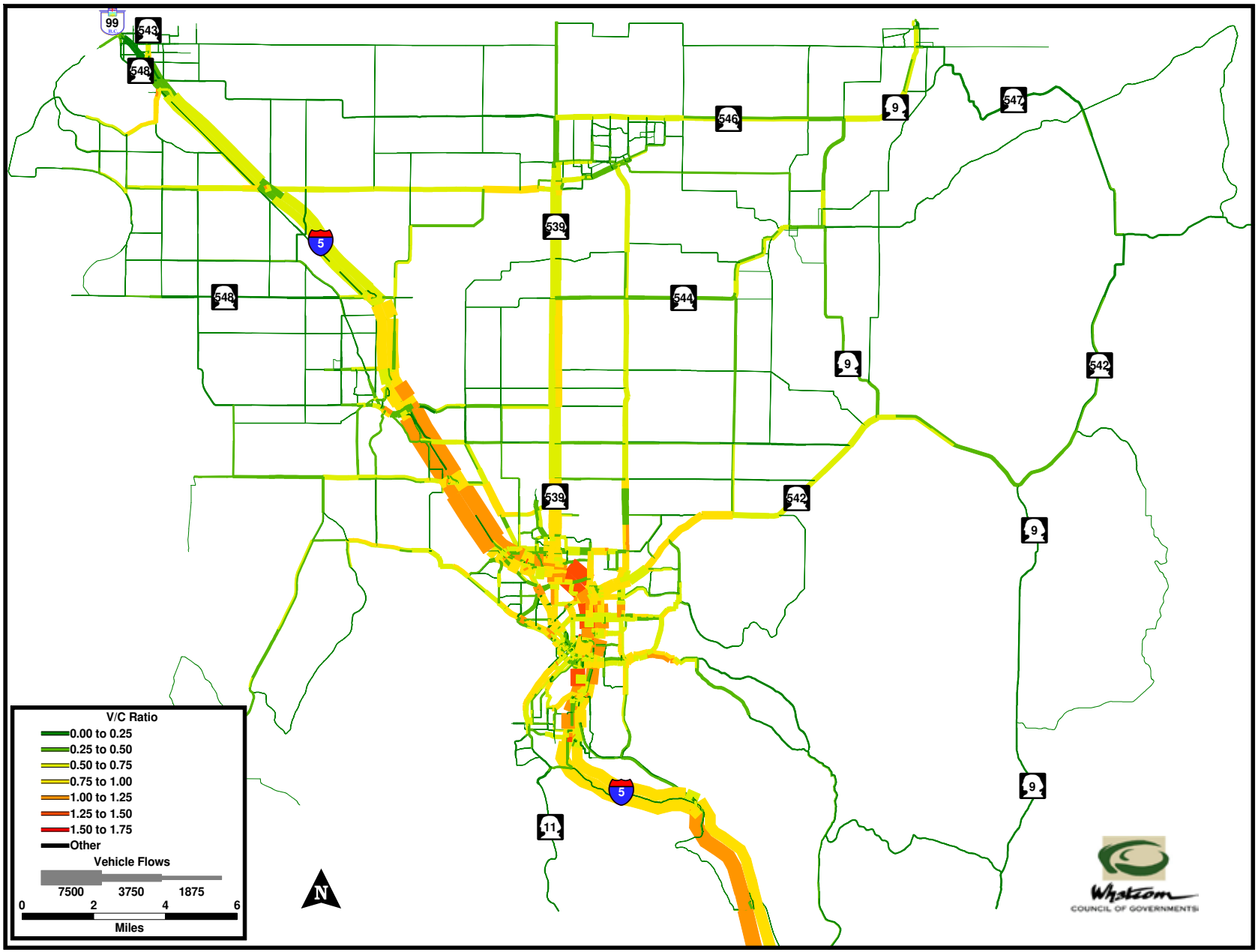


Figure 9: 2032 volume over capacity during the 4 PM to 6 PM time period with planned improvements



Transit demands

The regional transportation model provides current and forecasted flows of transit vehicles as expressed by the number of persons making trips on transit. These flows are developed for mid-day (MD) and evening (PM) time periods. Bellingham has the highest volumes of transit trips, focusing around Western Washington University during the MD period and downtown in the PM period. A noticeable increase in transit ridership is forecasted for travelers between the cities of Bellingham and Ferndale.

Commercial vehicle demands

Since Whatcom County includes five border crossings with Canada that serve over $40 million in trade each day[4], the movement of commercial goods is a critical component of the regional transportation network.

To better understand the impacts of freight movements on the region, WCOG worked with Transport Canada and through the IMTC forum to develop a cross-border truck model to depict future scenarios of commercial movements and the impacts on the region's transportation system.

The 2020 and 2032 base case scenarios depicted in the following tables illustrate where commercial travel demand is expected to increase and the possible impacts to these flows based on border-related initiatives, including such programs as the Free and Secure Trade (FAST) program for pre-approved carriers, drivers, and shippers, and other initiatives to expedite commercial movements.

It is important to note that these predictions show a growth in truck trips which is in contrast to recent trends. Regional cross-border truck volumes have been steadily decreasing since 2001, and only in 2010 showed an increase from the previous year. Therefore

[4] Transborder Surface Freight Database, U.S. Bureau of Transportation Statistics: http://www.bts.gov/programs/international/transborder/

Table 19: Daily border crossing statistics and changes from 2010 to 2020

Truck Type/ Crossing	2009 rebase Scenario			2020 Future Scenario			% Change (vs. 09 Base)		
	NB	SB	Both NB & SB	NB	SB	Both NB & SB	NB	SB	Both NB & SB
FAST Trucks-Pacific Highway	20	300	320	30	400	430	49%	33%	34%
FAST Trucks - Lynden/ Aldergrove									
FAST Trucks-Sumas/ Huntingdon									
FAST Trucks-All Crossings	**20**	**300**	**320**	**30**	**400**	**430**	**49%**	**33%**	**34%**
GP Truck-Pacific Highway	1,460	990	2,450	2,340	1,350	3,690	60%	36%	50%
GP Lynden/ Aldergrove	50	60	110	80	80	160	69%	34%	50%
GP Trucks-Sumas/ Huntingdon	200	630	830	360	880	1,240	77%	40%	49%
GP Trucks-All Crossings	**1,720**	**1,680**	**3,390**	**2,790**	**2,300**	**5,090**	**62%**	**37%**	**50%**
Total (FAST + GP Trucks)	**1,740**	**1,980**	**3,710**	**2,820**	**2,700**	**5,520**	**62%**	**37%**	**49%**

Source: Transport Canada

Table 20: Daily border crossing statistics and changes from 2010 to 2030

Truck Type/ Crossing	2009 rebase Scenario			2020 Future Scenario			% Change (vs. 09 Base)		
	NB	SB	Both NB & SB	NB	SB	Both NB & SB	NB	SB	Both NB & SB
FAST Trucks-Pacific Highway	20	300	320	30	460	490	64%	52%	53%
FAST Trucks-Lynden/ Aldergrove									
FAST Trucks-Sumas/ Huntingdon									
FAST Trucks-All Crossings	**20**	**300**	**320**	**30**	**460**	**490**	**64%**	**52%**	**53%**
GP Truck-Pacific Highway	1,460	990	2,450	2,620	1,550	4,170	79%	57%	70%
GP Lynden/ Aldergrove	50	60	110	100	90	190	93%	57%	74%
GP Trucks-Sumas/ Huntingdon	200	630	830	410	1,040	1,450	103%	65%	74%
GP Trucks-All Crossings	**1,720**	**1,680**	**3,390**	**3,130**	**2,680**	**5,810**	**82%**	**60%**	**71%**
Total (FAST + GP Trucks)	**1,740**	**1,980**	**3,710**	**3,160**	**3,140**	**6,300**	**82%**	**59%**	**70%**

Source: Transport Canada

Figure 10: 2008 mid-day transit flows

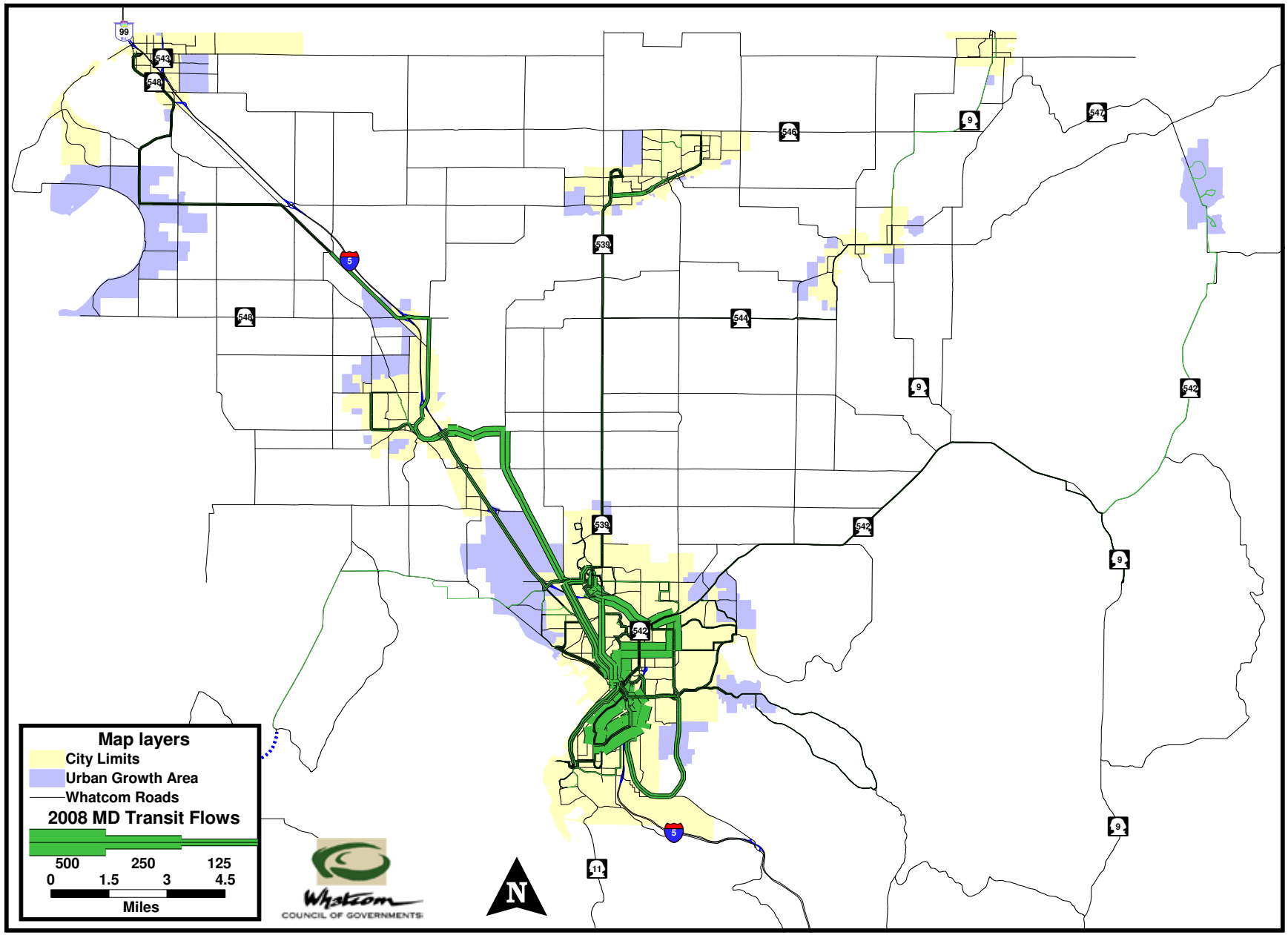


Figure 11: 2008 evening transit flows

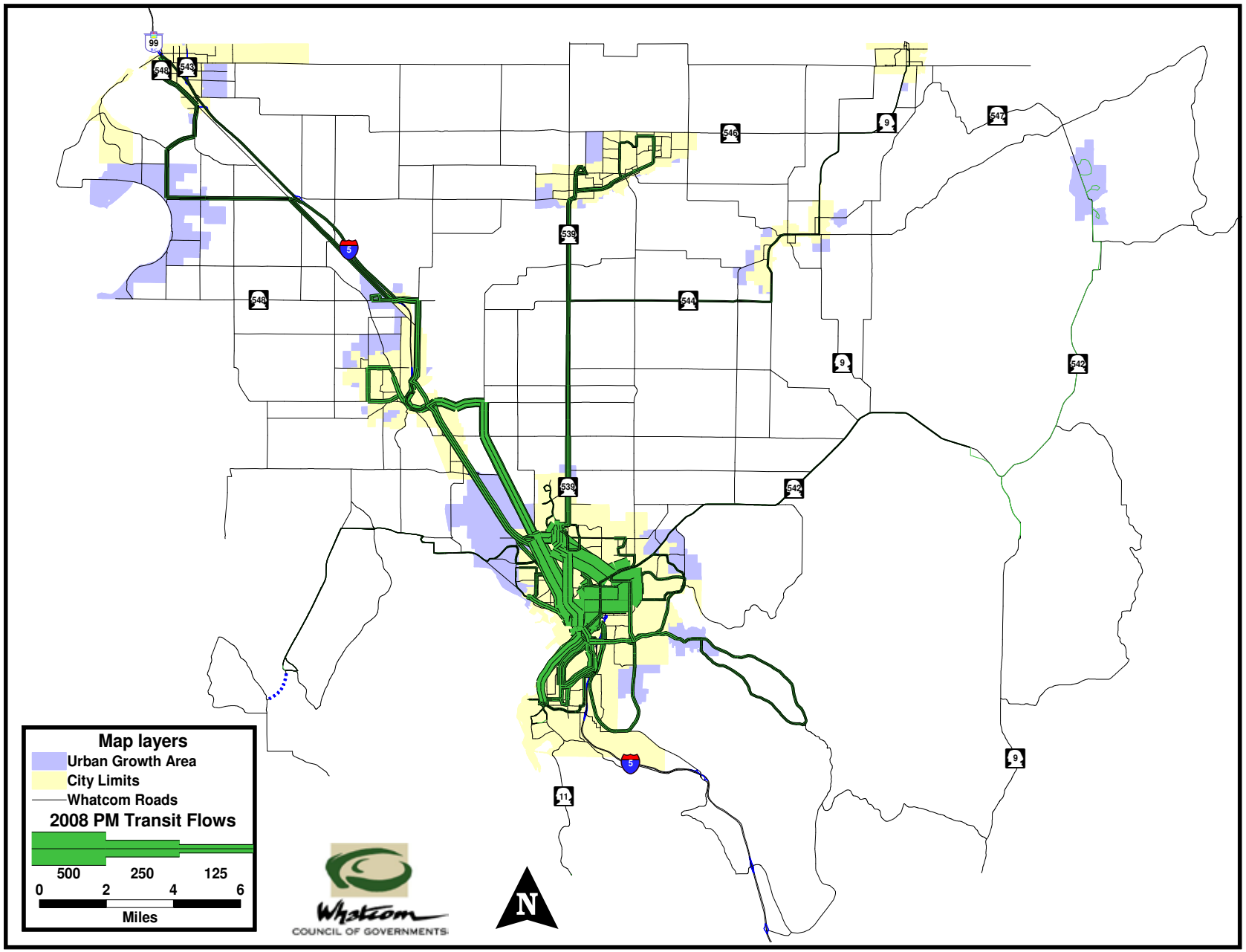


Figure 12: 2032 mid-day transit flows

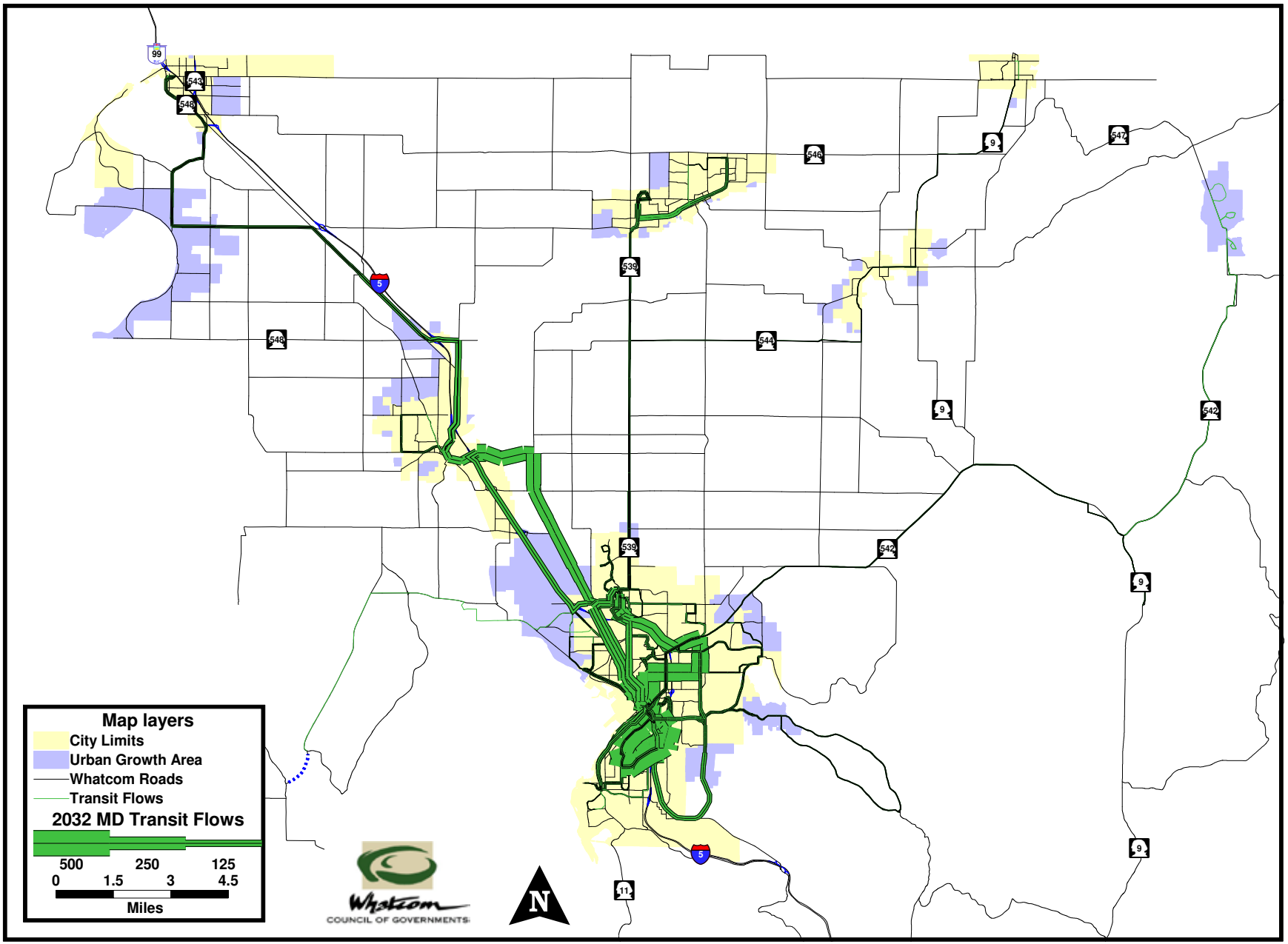
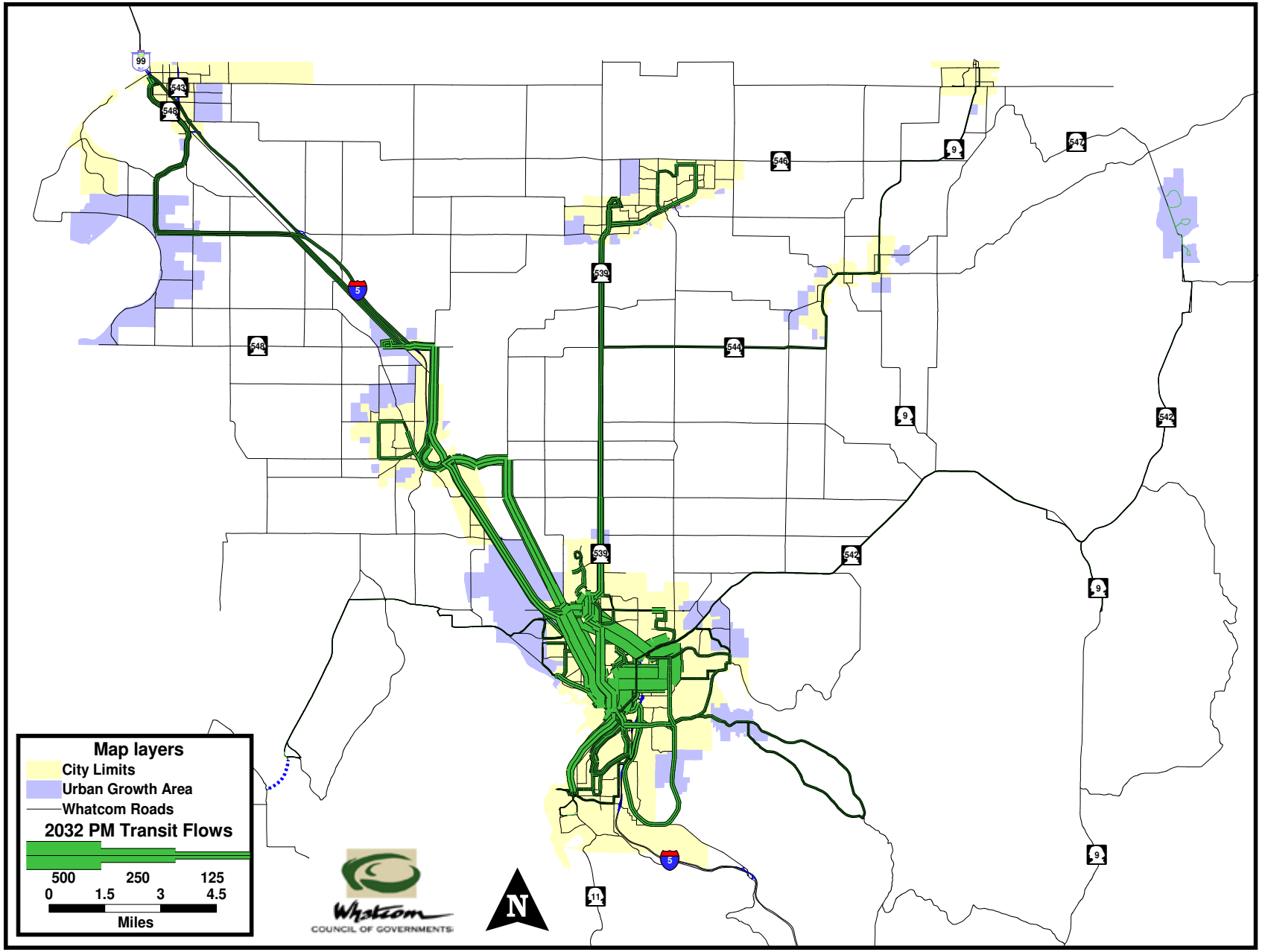


Figure 13: 2032 evening transit flows



the scenarios described here are based on the assumption that commercial demand will increase, rather than historic trends over the last decade.

Regional lifestyle trends

A number of demographic and socioeconomic trends will influence people's lifestyle choices and their demand for transportation that are not accounted for in the travel demand model.

The region's population is aging, which effects household size, income and employment[5]. Given the proportion of the Whatcom County population over age 65 it is important to consider how people in this demographic might travel, and what possible allowances for such modes should be considered.

Rising gas prices are also likely to have a large impact on travel demand for the foreseeable future. Denser residential areas that are closer to jobs and other regional activities centers may become more attractive relative to outlying areas that are more car-dependent[6].

[5] US Census: http://www.census.gov

[6] *The Future Isn't What It Used To Be: Changing Trends And Their Implications for Transport Planning*, Victoria Transport Policy Institute, 2012: http://www.vtpi.org/future.pdf

Community health preferences will also impact travel demand and predictions of how it will change in the future. As an example, there is increasing concern about obesity rates and links with over reliance on automobile travel. In Whatcom County, there is evidence that public awareness of the problem is beginning to influence individual transportation choices. Refer to *Appendix G: Transportation and health* for additional information about the health benefits using non-motorized modes.

Future needs

Given Whatcom County's population growth, diminishing levels of service and increased VMT predictions, continuing levels of nationally-significant commercial vehicle traffic from the fourth busiest U.S. – Canada border crossing, and lifestyle changes of an aging population, the region must prepare for numerous challenges to the existing transportation system while working with, most likely, reduced resources.

WHATCOM'S SYSTEM

As the strategies listed in Chapter 1 illustrate, there is strong interest in increasing sustainability of the region's transportation system. For personal travel, this can mean decreasing vehicle trips and increasing trips made by walking, bicycling and transit. For this to occur, improving bicycle and pedestrian infrastructure and increasing transit service may be necessary. Results of implementing Whatcom Smart Trips have shown it is possible to significantly increase walking, bicycling and transit trips through education and encouragement programs. For freight, sustainability means using all modes, including commercial vehicles, rail, water, and air; as well as improving processing times at the border with British Columbia. In later chapters, this plan proposes investing in all of these strategies. This chapter provides a summary of the important transportation modes and facilities for people and freight in this region.

In 2011, CTAG hosted a Complete Streets seminar with the goal of helping jurisdictions in the region adopt Complete Streets policies. Complete Streets are designed and operated to enable safe access for all users – pedestrians, bicyclists, motorists, and public transportation users. Incomplete streets – those designed with only cars in mind – limit transportation choices by making walking, bicycling, and taking public transportation inconvenient, unattractive, and often dangerous. By adopting Complete Streets policies, communities direct their transportation planners and engineers to routinely design and operate the entire right of way to enable safe access for all users, regardless of age, ability, or mode of transportation. The City of Bellingham, for example, has adopted programs and policies reflecting Complete Streets policies and other jurisdictions participating in the seminar expressed interest in adopting policies.

Non-motorized transportation

Walking

Walking is the foundation of our transportation system. Every trip includes some walking, and all users of the regional transportation system are pedestrians during some portion of their trips. At a minimum, walking connects us to motorized transportation facilities. In Whatcom County, trips where walking was the only mode account for 10.7 percent of all trips[1]. For people living in more urbanized areas of our region, walking can be a very important mode of transportation. In Bellingham, 24 percent of all trips are one mile or less, and 12 percent of all trips are made by walking.[2] Walking is even more significant for the roughly 30 percent of the general population with physical or economic limitations that prevent driving, including seniors and children.[3]

[1] North Sound Travel Survey Final Report, Whatcom Council of Governments & Skagit Council of Governments, 2008: http://resources.wcog.org/projects/travelsurvey_finalreport.pdf

[2] *The Surprising Story of Travel Behavior in Bellingham, Washington,* Whatcom Council of Governments, 2012

[3] Data Sources: 2010 U.S. Census and the Research Institute for Transportation Analysis

Bicycling

Citizens, elected officials and WCOG staff have made significant efforts to increase bicycling trips in the region in the past decade. In Whatcom County, 2.9 percent of trips are currently made by bicycle.[4] But like walking, bicycling is more practical in urbanized areas. In Bellingham, the mode share for cycling is 6 percent city-wide, and 11 percent in the area west of I-5, where there is greater street connectivity, more employment and shopping destinations, higher residential density and fewer streets designed for high volumes of faster-moving cars. As jurisdictions in the region respond to the challenges of a growing population, a greater focus on bicycling as an option is needed.

[4] *North Sound Travel Survey Final Report*, Whatcom Council of Governments & Skagit Council of Governments, 2008: http://resources.wcog.org/projects/travelsurvey_finalreport.pdf

Figure 14: Regional bike routes

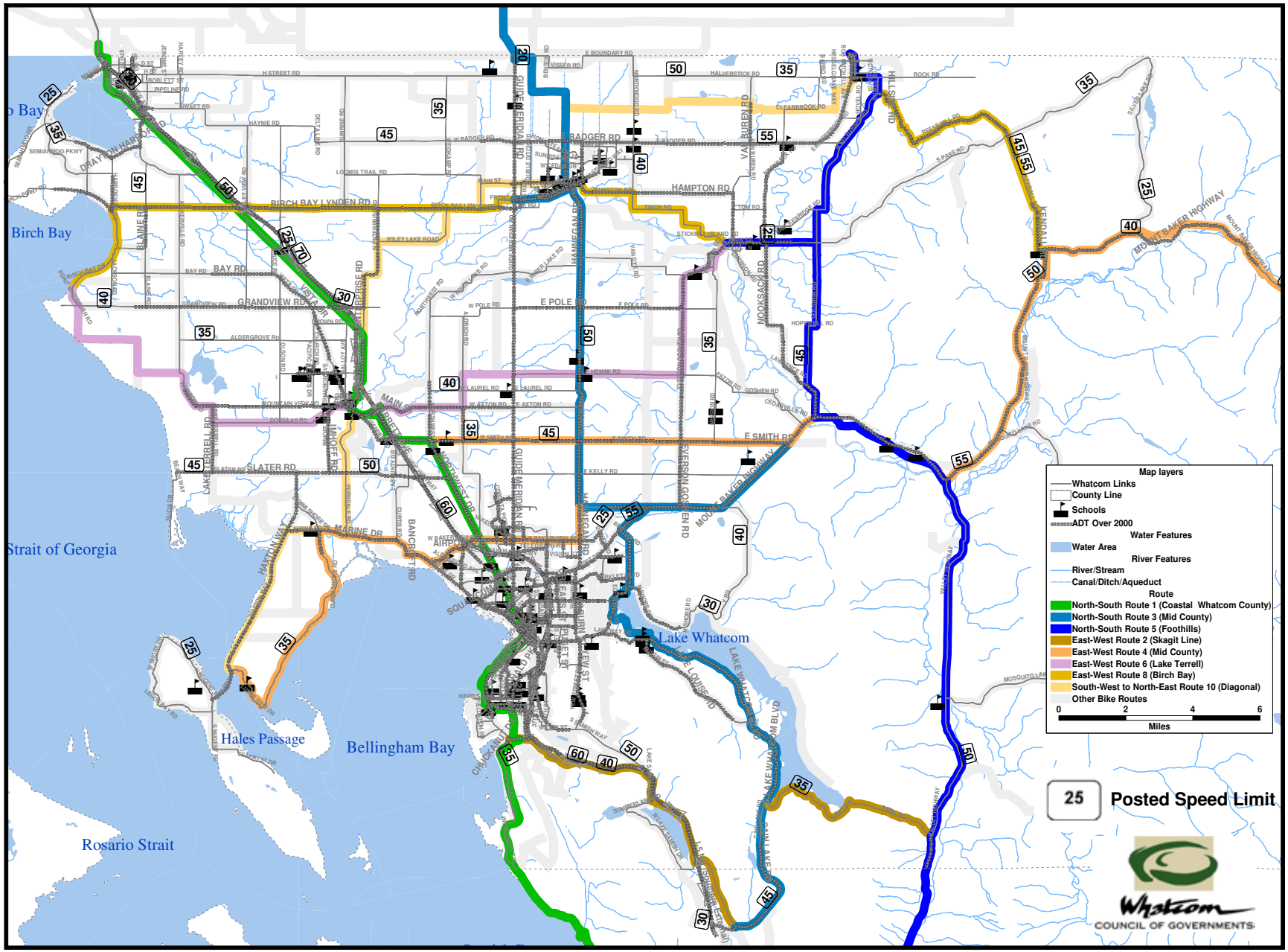
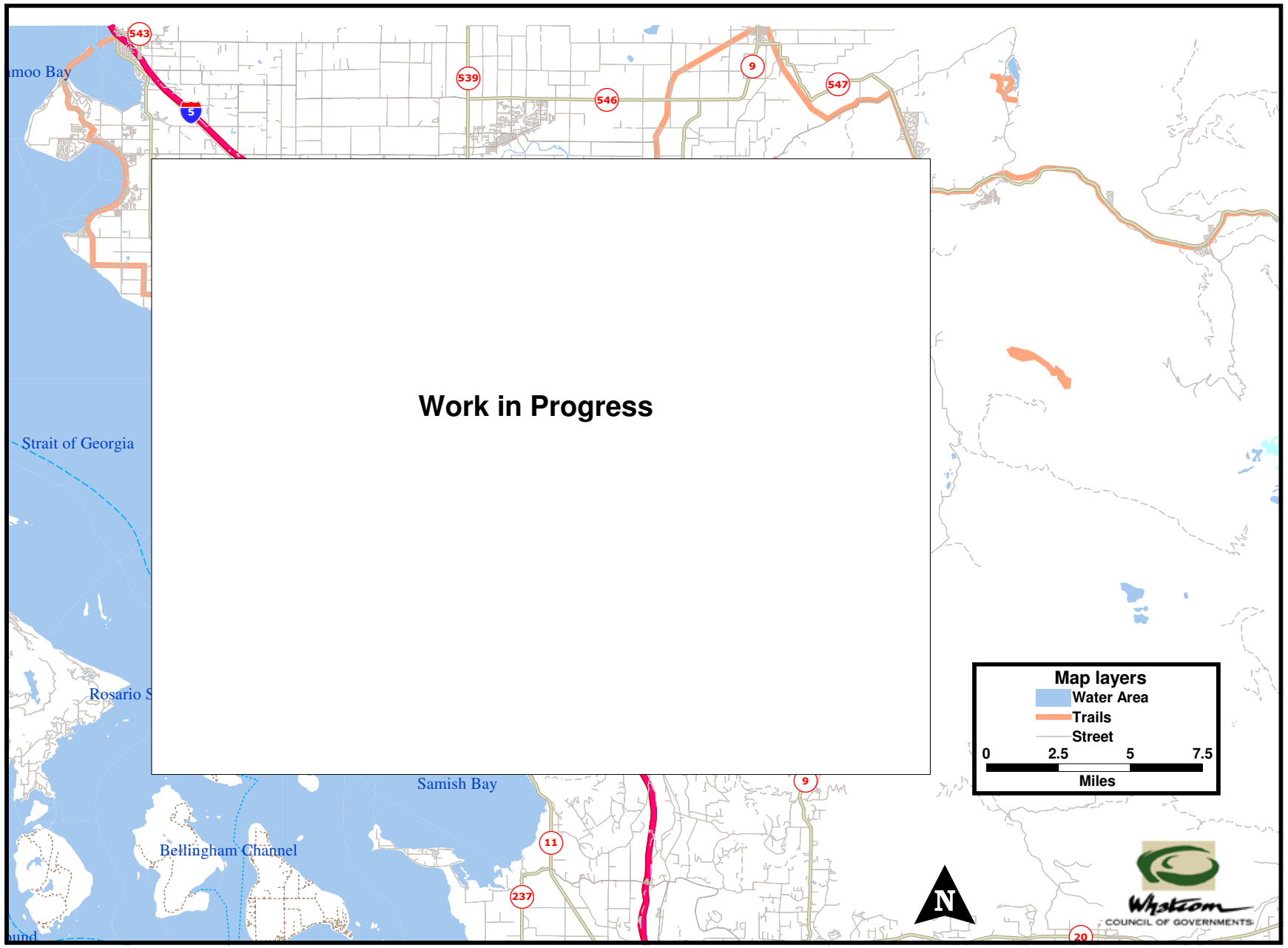


Figure 15: Whatcom County trails



Motorized transportation

Transit

Whatcom Transportation Authority (WTA) is responsible for public transit in Whatcom County. It provides numerous transportation services including fixed route service, specialized transportation, safety net dial-a-ride, vanpool services and a community use van program. Paratransit services provide transportation to eligible riders whose disabilities make them unable to access fixed-route services. These services use smaller vehicles to provide door to door or curb to curb service within the agency service area. In the WTA region, all services are compliant with transit regulations under the Americans with Disabilities Act and serve only customers who qualify under this Act.

In 2004, WTA completed a strategic planning process that expanded their mission beyond serving the needs of the transit dependent. In an effort to recruit more 'choice riders' (people who might otherwise drive), WTA revised its fixed route system to provide more direct and frequent service along corridors with high ridership potential. As of 2012, there are four of these GO Lines with buses running every 15 minutes. In 2005, WTA and Skagit Transit created the Intercounty Connector, which provides service between the two counties. Another important milestone came in 2007, when Western Washington University students voted to charge themselves a fee to pay for a universal bus pass. Because of these innovations and other efforts, use of WTA services has been increasing for the last five years. Between 2005 and 2010, fixed-route ridership increased by 56 percent. Demand for WTA specialized transportation service increased 17 percent over the same period.

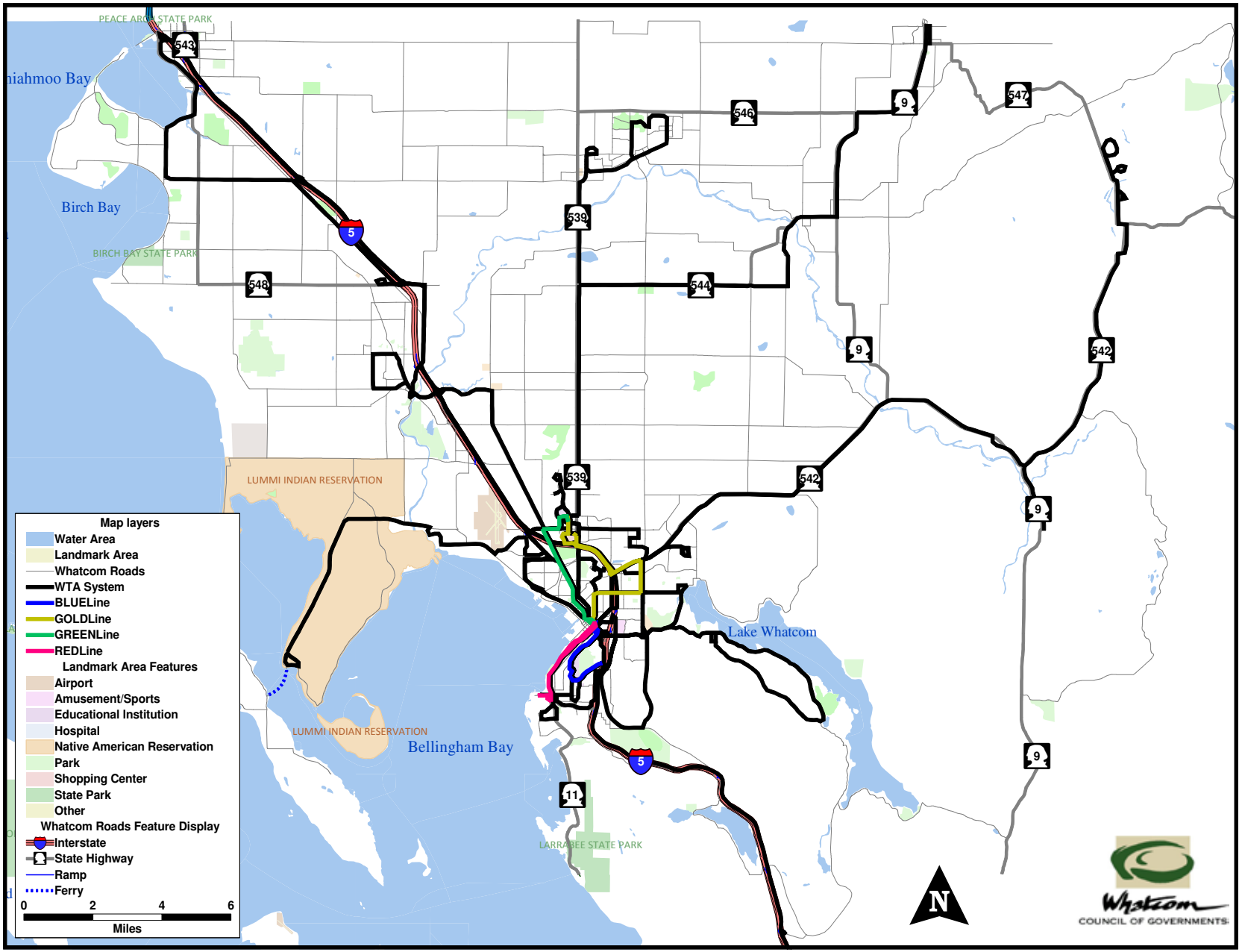
In November 2010, Bellingham voters approved a two-tenths of one percent (0.002) sales tax increase to create a Transportation Benefit District (TBD) and provide dedicated funding for priority transportation needs. Roughly one-third of the annual funding purchases supplemental WTA transit service in Bellingham.

Table 21: Percent change from 2005 to 2010 by service mode

Service Mode	Boardings	Revenue Hours	Boardings per Hour	Revenue Miles	Passenger Miles	Passenger Miles per Hour	Passenger Miles per Boarding
Fixed Route	56%	29%	21%	24%	37%	6%	-13%
Specialized	17%	19%	-2%	19%	9%	-8%	-8%
Safety Net	-59%	-46%	-26%	-36%	-72%	-48%	-31%
Vanpool	68%	114%	-22%	124%	73%	-19%	3%

Source: Whatcom Transportation Authority 2010 Service Performance Report

Figure 16: WTA system



Passenger rail

Over 150 miles of track owned by Burlington Northern Santa Fe Railway (BNSF) stretch between Seattle and Vancouver, British Columbia. This mainline provides valuable passenger transportation opportunities for connecting the larger regions outside of Whatcom County, and provide Whatcom County residents and businesses an alternative to the road network.

Ridership on the Amtrak Cascades service has steadily increased by 9.5 percent per year as funding partners add capacity and improve on-time performance.[5] Two daily round trips operate between Seattle and Vancouver, B.C. and stop at Bellingham. Efforts are underway to grow the service, adding two additional daily round trips between Seattle and Portland by 2017, and there is regional interest in increasing the number of cross-border round trips as well.

Commuter rail has also been discussed as a possibility for connecting smaller communities along the mainline with Sound Transit and the Amtrak Cascades service. The City of Blaine is also pursuing options for a train stop at the border, possibly renovating their historic train station as part of the effort. Efforts to expand passenger rail service, however, are restricted by infrastructure limitations and the schedules of freight movements along the mainline. Regional agencies and community groups continue to work for more frequent rail service to the area.

[5] WA State Rail Program Presentation to IMTC, WA State Department of Transportation, 2012: http://resources.wcog.org/border/02-16-12scpres.pdf

Passenger ferry

There are a limited number of passenger ferry services within Whatcom County, although the services in place provide vital connections to the island communities neighboring Whatcom County. Whatcom County manages the Lummi Island ferry between Gooseberry Point and the island, which carried approximately 200,000 passenger and 110,000 vehicles in 2010, amounting to over 12,400 trips. The ferry used for this service, the Whatcom Chief, is over thirty years old and a replacement must be found, although funds for this have not yet been identified. An agreement was signed between Whatcom County and the Lummi Indian Nation in 2011 to continue to operate the service from Gooseberry Point until 2046.

The Alaska Marine Highway System operates ferries out of the Bellingham Cruise Terminal at the Port of Bellingham's Fairhaven terminal. These ferries constitute part of the Alaska national highway network and carried 12,805 passengers and 5,234 vehicles from Bellingham in 2010. Nearly 11,000 passengers disembarked

in Bellingham during the same year. Ridership has declined over the last decade, although vehicle traffic has remained steady.[6]

In addition to these regularly scheduled services, private companies offer seasonal marine services leaving from Fairhaven and from Drayton Harbor in Blaine to locations in the San Juan Islands, Victoria B.C., and Semiahmoo Point in Blaine. A study completed in 2006 showed high levels of demand for passenger-only ferry service between Bellingham and Friday Harbor on San Juan Island, and a subsequent business case study recommended alternatives for an operating model that addressed how , and by whom such a service might be operated. Funding for such a service, however, has not yet been identified[7].

[6] *Annual Traffic Volume Report*, State of Alaska Department of Transportation and Public Facilities, 2010

[7] *Passenger Only Ferry Study*, Whatcom Council of Governments, 2006: http://resources.wcog.org/projects/ferry_finalreport.pdf

Passenger air

Bellingham International Airport is Whatcom County's largest airport. Services operated out of the airport include Alaska Airlines with direct flights to Honolulu, HI and Las Vegas, NV with fourteen weekly departures; Allegiant Air with thirty-nine flights a week to Las Vegas, NV, Phoenix, AZ, and Palm Springs, San Francisco, Oakland, Los Angeles, and Long Beach, CA and Horizon Air operates thirty-five weekly flights between Bellingham and Seattle.[8]

Forecasts for the Bellingham International Airport show short-term growth exceeding that of the economy and population. This growth is expected to slow down once airline service additions are complete.[9] A smaller airport is also located in Lynden providing facilities for general aviation and light aircraft charter services. A seaplane facility, Floathaven, is located on Lake Whatcom.

Passenger vehicle

Personal automobiles continue to be the transportation mode of choice for the region. In a recent household survey, 81 percent of Whatcom County residents reported making trips by passenger automobile. On average, Whatcom County residents had two or more vehicles per household, and made approximately seven daily vehicle trips.

The majority of auto trips made in the county are for at-home activities (33 percent) and for work (13 percent) with the rest of the trip purposes ranging from school to recreation. There is a direct correlation between automobile ownership and the percentage of trips made by automobile.[10]

[8] Data provided by the Port of Bellingham, 2011

[9] *Bellingham International Airport Forecast Update*, Port of Bellingham, December 2009

[10] *North Sound Travel Survey Final Report*, Whatcom Council of Governments & Skagit Council of Governments, 2008: http://resources.wcog.org/projects/travelsurvey_finalreport.pdf

Both construction of new multimodal links (streets, bike lanes, sidewalks, trails) and efforts to promote alternative methods of travel help reduce the number of car trips. Incentive programs like Whatcom Smart Trips, efficient transit operations, and improvements to pedestrian and bicycling infrastructure will help to minimize automobile-related congestion in the region.

Commercial vehicle

Freight carried by commercial long- and short-haul vehicles in and through Whatcom County is substantial given the location of the international border. Roughly 75 percent of all trade and travel between British Columbia and Washington State passes through Whatcom County. Nearly 3,000 commercial vehicles cross through Whatcom County's four border crossings every day[11], carrying over $30 million in daily trade[12].

Since 34 percent of commercial trucks crossing the border are destined for locations within Whatcom County, and 36 percent of truck trips originate in the region, the highway system in the region has national significance in serving the needs of trade.[13]

The efforts of regional planning forums such as IMTC continue to address the needs of freight and how to expedite commercial movements while maintaining environmental standards and the safety of the communities through which freight passes through.

[11] U.S. Customs & Border Protection & Canada Border Services Agency. Data Compiled in the *2012 IMTC Resource Manual*, Whatcom Council of Governments, 2012: http://resources.wcog.org/border/2012manual.pdf

[12] U.S. Bureau of Transportation Statistics

[13] *Issues with Efficacy of FAST at the Cascade Gateway*, Border Policy Research Institute, 2009: http://www.wwu.edu/bpri/files/2009_Fall_Border_Brief.pdf

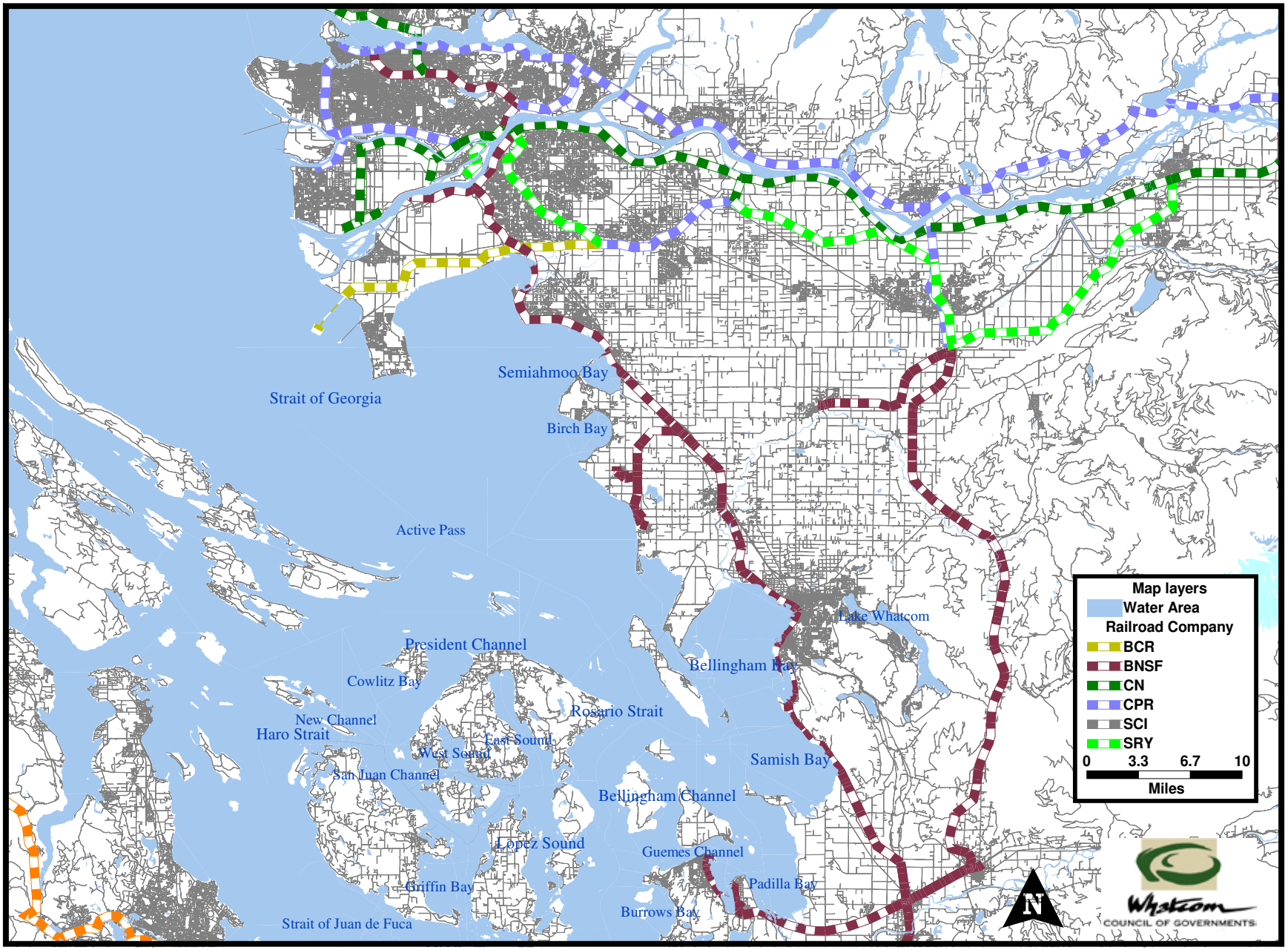
Freight rail

Millions of dollars of commercial freight is transported across Washington State every day. Whatcom County's main rail line , operated by BNSF, serves the bulk of freight rail movement. An additional rail line, also owned by BNSF, stretches 46 miles from Burlington in Skagit County to Sumas in Whatcom, and crosses the border into Canada. This line currently carries freight cars only.

Over 90 percent of the truck trips between the Puget Sound region and the Lower Mainland of British Columbia fall into three commodity groups than can be carried by rail. Since these commodities represent 15-20 percent of the total commodity trips which cross the U.S. – Canada border in Whatcom County, shifting an increased proportion of these commodities to freight rail could have immediate and noticeable impacts on commercial congestion, both at border crossings and on the regional highway system. [14]

[14] *2009 Commercial Vehicle Operations Evaluation Survey*, Whatcom Council of Governments, 2009: http://resources.wcog.org/border/2009CVOFinalReport.pdf

Figure 17: Railroads



Studies of the rail system were conducted in 2002 and again in 2011 to examine the potential growth of both freight and passenger rails and better ways to utilize existing infrastructure. As highways in the region grow more congested, regional agencies have looked to see if a greater proportion of freight movements could be made via this efficient, cost-effective system.

Marine cargo

Marine cargo operations in Whatcom County are minimal. Opportunities exist, however, to expand these services, which have some potential of reducing highway congestion.

Waterfront facilities are available to serve these needs. Landside facilities at the Squalicum harbor currently includes a shipyard, railroad lines, retail stores, and seafood processing plants and cold storage. Deep-water facilities are operated at Cherry Point by Alcoa – Intalco Works , British Petroleum and Conoco-Phillips. An additional facility for marine shipment of bulk commodities has been proposed for Cherry Point at the last remaining deep-water port location available for development in the continental United States that does not require dredge or fill.

Air freight

Bellingham International Airport (BLI) is host to significant freight operations including freight airlines, freight forwarders, and trucking firms involved in air movement of freight. Cargoes consist of air freight and mail transported by dedicated aircraft and in the cargo compartments of passenger aircraft.

Growing demand for passenger operations will bring some additional freight volume, but expanded freight operations will require additional multi-modal system planning.

The state of the system

To accommodate predicted future changes in the demographic make-up of the Whatcom County region, it is important to view regional transportation modes and networks as a complete system. This system approach allows for redundancy and provides opportunities for shifting goods to alternative modes, and offering travel options to people for commuting, shopping and recreation.

Preservation of the existing system is an increasingly important aspect of transportation sustainability, especially in a time of diminished resources. Entities in the Whatcom region responsible for building and maintaining the transportation system are highly aware of the the current and growing need for system preservation.

Given the region's predicted population growth, the state of our current system, and the WCOG strategies identified in Chapter One, this twenty year program and project investment strategy is directed toward building a robust, multi-modal and equitable transportation system for the future.

Programmatic solutions

Numerous efforts are already underway within Whatcom County to bring about the overall strategies of this plan. WCOG has helped coordinate efforts that address future demand through the following programs.

Regional safety initiatives

Strategy 2: Safety

Multiple programs are designed to promote a safe and secure transportation system, meeting federal safety requirements to ensure the risks involved in moving passengers and goods through the region are minimized. The following strategies illustrate how WCOG is working with partner agencies to prioritize safety:

- **Strategic Highway Safety Plan** – The SHSP is the Washington State plan that establishes highway safety goal areas. The major goal of the plan is to eliminate traffic deaths and disabling injuries. In order for Washington State to achieve Target Zero, the State must experience 24 fewer fatalities each year for the next 25 years.
- **Transit safety** – WTA uses its System Safety Plan to guide operations to prevent injuries, accidents, and other losses. Their plan meets all federal and state safety requirements and is in compliance with the WA Transportation Insurance Tool best practices recommendations.
- **Pedestrian safety** – Nationwide, about 70,000 people walking on road shoulders, sidewalks, and crosswalks are injured annually by motor vehicle crashes, and an additional 4,000 pedestrians are killed, making up 12 percent of all roadway fatalities[1]. Pedestrian safety can be increased by addressing pedestrian needs in policies, planning, design and construction of transportation facilities. WCOG works with member agencies to examine means for improving the regional safety record, including improved roadway design features, smart land use decisions to encourage safe crossings, and improved pedestrian and motorist behaviors.

[1] *Traffic Safety Facts: Rural/Urban Comparison,* National Highway Traffic Safety Administration, updated 2008. http://americawalks.org/wp-content/upload/Complete-Streets-Talking-Points_Begich-Amendment.pdf

- **Bicycling safety** – The fatality rate for bicycle crashes nationally has fallen more than 20 percent in the past ten years. However the risks involved in bicycling remain equivalent in safety to driving or riding in a car. By encouraging engineering solutions that increase safety for cyclists, including construction of bike lanes improving education programs for cyclists and drivers, and enforcing traffic rules for both drivers and cyclists all contribute to improving regional bicycling safety.

Regional attention to security

Strategy 2: Safety

Security is a priority for state and federal transportation agencies. Given the region's location along an international border, the nature of the geography (near open water and dense woodlands), and the condensed development of the west coast, regional agencies have also focused on making sure the transportation system is not only safe and efficient, but secure from threat as well.

At the federal level, the U.S. Department of Homeland Security (DHS) has numerous branch agencies operating throughout the county as well as at the border crossing. U.S. Customs & Border Protection serve at Cascade Gateway crossings and work with other enforcement agencies to secure the border and its ports-of-entry; U.S. Border Patrol works to patrol the 100 mile stretch of land south of the border.

WCOG manages the *B.C. – WA Protocol for Binational Interagency Communication about Highway and Border Station Incidents*, a protocol established between six transportation, inspection, and enforcement agencies (CBP, WSDOT, WA State Patrol, Royal Canadian Mounted Police, Canada Border Services Agency, and B.C. Ministry of Transportation) to share information and alerts about emergency highway or border closures.

Other federal agencies such as the Transportation Security Administration provide security at ports, and the Federal Emergency Management Agency provides assistance in case of emergency.

At the state level the WA State Comprehensive Emergency Management Plan (CEMP) is the framework for statewide mitigation, preparedness, response, and recovery activities. It's intent is to provide a structure for standardizing plans statewide and to facilitate interoperability between local, state, and federal governments.

A Whatcom County Comprehensive Emergency Management Plan has been developed to ensure that all jurisdictional members of the Emergency Management Inter-local Agreement have the capability to respond to emergencies and disasters. The Whatcom County Division of Emergency Management is responsible for coordinating such mitigation, preparedness, response, and recovery activities.

Mode-specific security plans also help define security functions within the region. For transit there is a specific System Security Program Plan developed by WTA that is based on a prevention and response-oriented approach to security. For pedestrians and

bicyclists, the design of public spaces, trails, and roadways can help mitigate security risks such as theft, harassment, and assault.

WCOG continues to work with partner agencies to ensure proper attention is given to address security needs.

Intelligent Transportation Systems (ITS)

Strategy 10: ITS

Intelligent Transportation Systems (ITS) are technology solutions to improve the functionality, safety, and cost-effectiveness of transportation systems. Within Whatcom County, several components of the transportation system use ITS solutions every day to improve the safety, functionality, and capacity of existing networks.

WCOG serves as the lead agency for the Whatcom County ITS Committee and maintains the regional ITS architecture. The architecture illustrates what ITS systems are currently in place in Whatcom County; what systems are planned to be deployed in the next five years; and what opportunities exist to share resources and improve coordination between agencies to improve overall system functionality.

Whatcom Smart Trips

Strategy 1: Public information and education

Strategy 8: Transportation Demand Management

Strategy 9: Transportation Multi-modal

Strategy 12: Health

Transportation demand management (TDM) programs manage demand for automobile infrastructure with a focus on peak periods to reduce traffic congestion. Strategies such as shifting travel out of peak periods, encouraging higher occupancy in vehicles, and using other modes of travel have proven track records for reducing congestion in urban communities.

WCOG's Whatcom Smart Trips (www.WhatcomSmartTrips.org) is a nationally-recognized program the approaches TDM from another angle. Rather than focusing on reducing vehicle trips, Whatcom Smart Trips aims to increase other modes by emphasizing the unique benefits associated with these modes, benefits related to individual and community cost-savings, the environment and quality of life.

Another difference between Whatcom Smart Trips and traditional TDM programs is that the latter typically focuses on work trips, whereas the Smart Trips program focuses on all trip purposes – the benefit being that people are more likely to participate when encouraged to change whatever trips are the easiest to modify.

The program was implemented by WCOG and WTA in July 2006. Funding partners include Bellingham, Whatcom County, WSDOT and USDOT. The following educational, assistance, and incentive programs are offered:

- **Smart Trips Diary** – allows community members to record walking, bicycling, ridesharing and transit trips and track pollution prevented (www.WhatcomSmartTrips.org)
- **Smart Trips Incentives** – include discount cards, gift certificates, cash prizes and recognition for Smart Trips participants as they record Smart Trips
- **Emergency Ride Home** – provides limited, free taxi service to bus pass holders and Smart Trips participants who experience an emergency or illness at work
- **Smart Trips Employer Partners** – provides assistance to employers who implement worksite trip reduction programs
- **Targeted Outreach** – provides education to seniors and women (program data indicate good opportunities for increasing bus and bicycle trips in these demographic groups)

- **School Smart Trips** – provides classroom activities for middle school students and their teachers to teach the benefits of using sustainable transportation choices - www.SchoolSmartTrips.org
- **EverybodyBIKE** – provides educational opportunities for children and adults who want to learn how to ride bicycles as transportation (www.everybodyBIKE.com)
- **Smart Trips Public Awareness Campaign** – includes advertising and public presentations to make the community aware of all elements of the Smart Trips program
- **Neighborhood Smart Trips** – provides home-based education and assistance to individuals in targeted Bellingham households

Whatcom Smart Trips has proven that community-wide education and encouragement can significantly reduce vehicle trips and increase walking, cycling, transit trips. The next step for the program is to secure funding to conduct Neighborhood Smart Trips campaigns in the remaining two-thirds of Bellingham. In the

meantime program staff will continue operating the ongoing Smart Trips programs and will publicize these initial program results. Smart Trips programs can be easily replicated in other communities

International Mobility & Trade Corridor Project (IMTC)

Strategy 2:Safety

Strategy 3:Access

Strategy 5:Connectivity

Strategy 6: Freight Mobility

Transportation connections for travel and trade between Whatcom County and neighboring Canada are served by four land border ports-of-entry: Peace Arch/Douglas (Interstate 5), Pacific Highway (WA State Route 543), Lynden/Aldergrove (WA State Route 539), and Sumas/Abbotsford-Huntingdon (WA State Route 9). Collectively, these four ports are known as the Cascade Gateway.

A fifth land-border port-of-entry is located at Point Roberts, serving a local community.

To coordinate operations and improvements throughout the Cascade Gateway, WCOG has served as the lead agency for IMTC since 1997. IMTC is a U.S. – Canadian coalition of government and business entities that identifies and promotes improvements to mobility and security for the Cascade Gateway. The objectives of IMTC are to:

1. Improve planning and data collection efforts.

- Improve travel information and data.
- Promote development and management of the Cascade Gateway as a system.
- Determine the feasibility of rail, transit, and marine options.
- Monitor work of regional and national-level border planning initiatives including the Transportation Border Working Group and the West Coast Corridor Coalition.
- Monitor emerging border-related regulatory and policy changes by the U.S. and Canada (i.e. Western Hemisphere Travel Initiative).

2. Promote infrastructure improvements.

- Improve border crossing approach roads.
- Improve rail crossings and connections.
- Improve corridor connections of trade and travel routes.
- Integrate Intelligent Transportation Systems (ITS).

3. Promote improvements to operations, policy, and staffing at the border.

- Promote cooperation and improvements in accordance with the goals of various federal initiatives, including the Beyond the Border Action Plan.
- Increase resources and staffing levels at border inspection facilities.
- Improve traffic management at all four Cascade Gateway ports-of -entry.
- Ensure ongoing sustainability of the NEXUS and FAST programs.
- Encourage institutional collaboration and integration of information systems to improve risk management and increase cross-border security.
- Promote harmonization and consolidated administration of regional pre-approved travel programs including commercial pre-approved travel.

- Explore options for binational financing structures for future cross-border improvements.
- Pursue shared, U.S.–Canadian border inspection facilities including the creation of accord processing zones.
- Consider off-border inspection functions.
- Promote the adoption of pre-clearance for passenger rail under Canada's 1999 Pre-Clearance Act.

For fifteen years IMTC has coordinated regional, binational planning and partnerships, advancing projects funded by U.S. and Canadian agencies to pursue the goals listed above. Cumulatively these improvements total over $38 million.

Specific project solutions

In addition to ongoing programs to address the strategies defining this region's development, WCOG member agencies have also agreed to support continuing improvements to the transportation networks within and connecting to Whatcom County A twenty-year project array is part of this plan and located in *Appendix H: Fiscally constrained projects*.

This array of projects covers all types of transportation modes and plays out over the twenty year span of this plan. The array contains capital projects, safety and preservation projects, maintenance and operational activities, and other initiatives identified by regional jurisdictions.

Resource agencies were given the opportunity to review the selected projects within the metropolitan planning area. Comments were provided to the respective jurisdictions. WCOG staff also reviewed transportation projects in the metropolitan planning area for impacts to priority habitat and species (PHS). The results were shared with the resource agencies.

In the next plan update, WCOG will add a section on the state of the environment within the planning area. It will highlight the environmental issues of concern that may be affected by transportation infrastructure and activities. We will also discuss strategies for addressing these problems within the context of the regional plan. In addition, planning and environmental linkages will be identified and any gaps will be addressed through consultation with resource agencies.

Selecting projects

WCOG used a two- step process to identify projects for inclusion in this plan. Initially cities and county were each asked to provide a list of projects they considered to be important improvements needing completion within the twenty-year planning period. These projects were then modeled and subsequently analyzed for system benefit. Those projects with the greatest benefit were then evaluated in consultation with the respective city/county, according to a set of guidelines.

The following guidelines were provided to the member agencies for use in preparing their respective capital investment project lists.

- The total cost of projects on each agency's list cannot exceed the amount of resources "reasonably expected to be available" to the respective agency in the twenty year planning period.
- The cost estimate should include environmental mitigation.
- Give priority to projects that are in the adopted regionally significant system.
- Describe projects with enough detail to determine a reasonable project cost in the year of expenditure.
- Cite the state legislative transportation goals that the project satisfies to demonstrate consistency between the WCOG regional plan and Washington State transportation policy goals.
- For projects more than ten years in the future, aggregate cost ranges may be provided.
- Review and consider the project list from the local comprehensive plan transportation element when developing the WCOG capitol project list.

WCOG then reviewed the project lists in light of the guidelines, and with respect to WCOG's adopted regional road system.

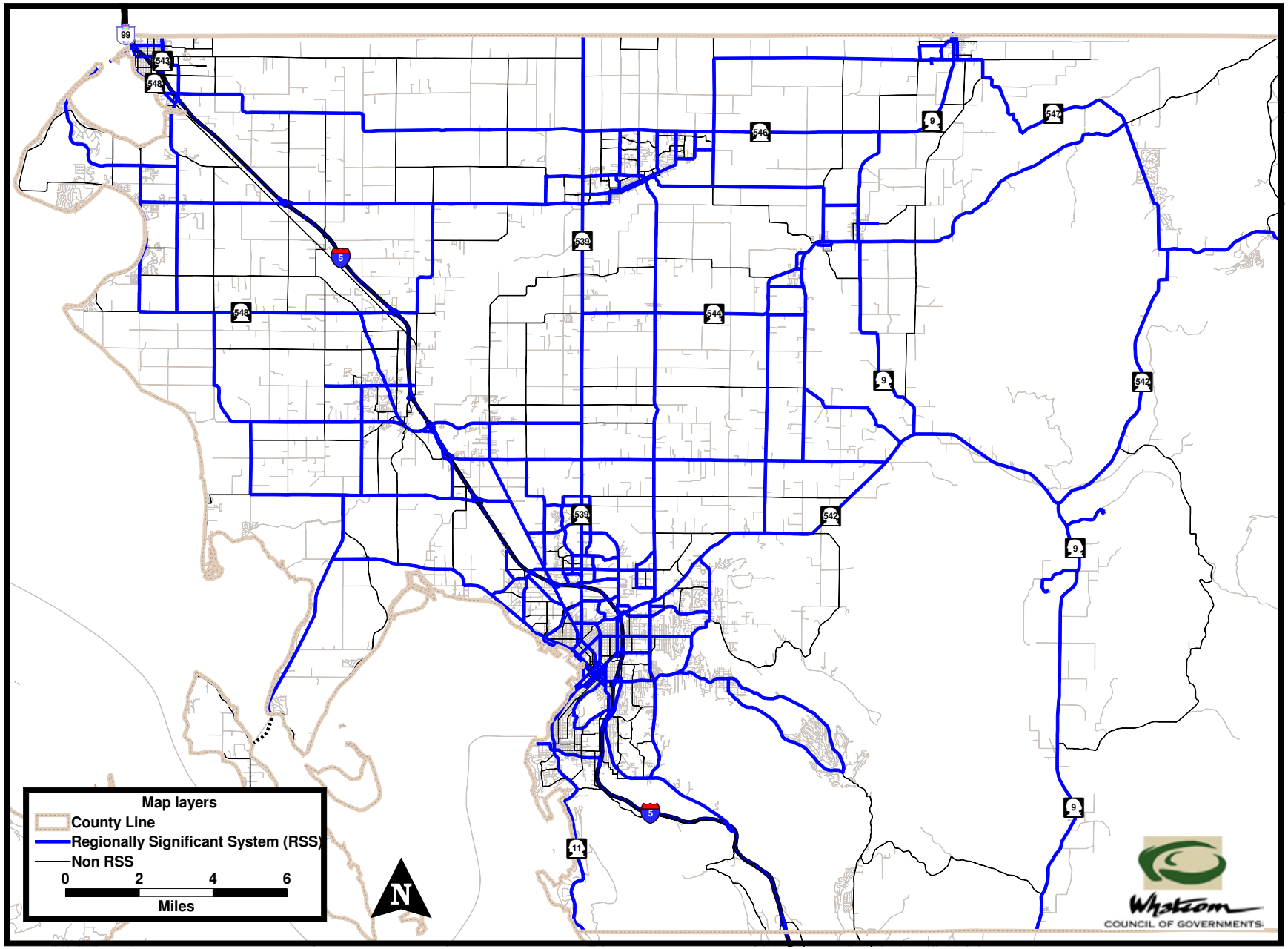
Selecting projects for the regional road system

Projects identified in the plan must also have significant regional benefit. To help identify which projects will have the greatest benefit, a regionally significant road system has been identified to show which facilities will be impacted the most by future development.

Criteria used to determine the regionally significant road system were developed by the TTAC and CTAG in 2010. The criteria are consistent with the state's regional transportation planning program standards. They include:

1. All state routes.
2. Surface routes serving facilities and projects of regional significance and connecting to the regional routes or facilities.
3. Routes serving major activity centers.
4. Public transportation routes connecting cities and major activity centers with other regional routes.
5. Intermodal facilities and the routes connecting them to other regional routes or facilities.
6. Streets and roads classified as arterials under the Federal Highway Administration system of functional classifications.
7. Washington State Freight and Goods Transportation System routes rated T-3 & T-4.
8. Other streets and roads which support sub-regional industries.

Figure 18: Regionally Significant System



The transportation facilities designated as part of the regional transportation system are those that are truly regional in nature. They form the basis for discussion of any transportation issue associated with a regional perspective.

Other factors considered in developing regional priorities

Consideration of roadway levels of service (LOS), allows agencies to focus efforts on areas with the worst congestion. Numerous LOS definitions apply to this region and are listed in *Appendix I: Level of Service*.

Environmental justice

Environmental justice works to assure that the needs of low income, disabled, and minority populations are equally considered when making decisions related to policy, planning, and project development. The key principles are to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low income populations; to ensure the full and fair participation by all potentially affected communities in the transportation-making process; and to prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

WCOG's Employment Access and Coordinated Human-services transportation plan (EACH)[2] is specifically designed to determine which are the important human services transportation projects for Whatcom County and put them in priority order.

[2] *EACH Transportation Plan for Whatcom County*, Whatcom Council of Governments, 2010: http://resources.wcog.org/projects/EACHPlan2010.pdf

Not only is this to help organizations secure more funding to provide transportation for community members who have special needs, but to make sure these populations are fully part of the transportation decision-making process.

Endangered Species Act and stormwater requirements

Another filter in defining which regional projects to pursue is the effect the project has on Whatcom County's environment. State and federal environmental protection policies are in place to assure that any transportation project fulfills required standards to minimize its impact. More details about the environmental review process is described in *Appendix J: Endangered Species Act and stormwater requirements*.

Fiscally constrained projects

Once projects have been selected as priorities, they fall into two categories: those fiscally constrained projects for which funding has been identified over the next twenty years, and those un-programmed projects that are regional priorities addressing critical issues.

A complete list of fiscally constrained projects is available as *Appendix H: Fiscally constrained projects*. Illustrative examples of how projects relate to one or more of this plan's strategies include:

Strategy 1: Public information and education

- Whatcom Smart Trips
- WCOG web site
- WCOG Transportation Town web site
- CTAG
- Public meetings and hearings

Strategy 2: Safety

- Central Avenue bridge construction – seismic retrofit
- Northwest/Bakerview intersection safety improvements
- Rural road safety program
- I-5 Ferndale vicinity – cable median barrier
- SR-539 Access Management and Safety Improvement

Strategy 3: Access

- Mission Road realignment – build to all-weather standards
- Fir Street connector
- Lynden pedestrian trail

Strategy 4: Environmental justice

- SR 543 grade separated pedestrian crossing
- Birch Bay Drive pedestrian facility

Strategy 5: Connectivity

- I-5 Exit 274 interchange/environmental review – to connect Blaine with full intersection
- West Bakerview Road – re-channelization and improved pedestrian connectivity
- Orchard Street Extension – Grade separated multimodal crossing of I-5 to connect north Bellingham to St. Joseph Hospital.

Strategy 6: Freight mobility

- Hughes Avenue reconstruction – for commercial movements
- Thornton Street/Newkirk Road grade separation
- Heavy Haul Road – construct to meet heavy haul standards

Strategy 7: Congestion and mobility

- McLeod/Northwest roundabout – enhanced mobility to interstate
- Preservation program in Everson
- Main Street Lynden construction to full standards
- Portal Way/I-5 northbound ramp control improvements
- Hannegan Road capacity enhancements

Strategy 8: Transportation demand management

- Northwest Avenue bicycle lanes
- Whatcom Smart Trips
- Bellingham pedestrian master plan sidewalk construction

Strategy 9: Transportation Multi-modal

- Bellingham bicycle master plan bicycle facility construction
- Nooksack Avenue sidewalk
- North Shore Road non-motorized enhancements
- Ferry dock improvements
- SR 539/Lynden to SR 546 widening for multiple modes

Strategy 10: Intelligent Transportation Systems

- Birch Bay-Lynden Road/Portal Way intersection signalization – with railroad crossing
- I-5 Bellingham variable message sign

Strategy 11: Land use

- Semiahmoo Spit shoreline stabilization
- BNSF Railroad ROW acquisition in Everson

Strategy 12: Health

- Indian Street bicycle and pedestrian improvements

Strategy 13: Public participation

- Satisfied by processes in Public Participation Plan

Un-programmed projects

Un-programmed projects are those that have been developed by regional transportation committees as priorities that are currently not fiscally constrained.

IMTC develops a construction and planning project priority list annually that serves as the guide for regional cross-border needs. Projects from the list are funded when opportunities arise or regional stakeholders successfully secure funding for the effort.

The Bicycle/Pedestrian Committee of Whatcom County has a list of unfunded bicycle infrastructure improvements that they use to seek grants or other funding as available.

The EACH Plan specifies a list of projects that would benefit special needs populations and improve service and efficiency.

WTA has a specific set of transit-related projects as well which would improve transit service in the region.

The Bellingham Pedestrian Master Plan has over 300 unfunded sidewalk infill, widening, and intersection improvements.

FINANCIAL PLANNING

Lng-range transportation planning includes projecting what funding might be available to support regional transportation investments over the next twenty years. As part of this exercise, the plan is fiscally constrained to ensure planned projects will not exceed forseeable future revenues. WCOG's financial plan is based on historical growth trends of revenue sources and a retrospective analysis of previous long-range plans to fine tune financial assumptions.

The long range planning period for this plan is the twenty year period between 2012 and the current long range horizon year 2032.

Financial assumptions

The year of expenditure growth rates and forecast assumptions are available in *Appendix K: Forecast assumptions*.

This plan also makes the following assumptions:

- Federal funding will continue to play a significant role in the renewal and expansion of highway and transit infrastructure both nationwide and in this region. A U.S. transportation act to replace of the expired SAFETEA-LU act is assumed.
- Because the region's economic vitality and quality of life depend on a functioning transportation network, this region's municipalities will continue to have an interest in maintaining and optimizing the health of the network. Therefore it is assumed that state and local resources will support the transportation system of this region through 2032 with levels approximately the same as in recent years.
- Funding will continue to be available from WTA in the form of revenue bonds, pay as you go funding, and interest earnings. WTA has been able to refinance bonds, cut expenses and improve fare box revenue through increased ridership and will continue to work at innovative financing to maintain its level of service. WTA will also explore untapped resources and new finance strategies. It is therefore assumed that WTA will maintain the same levels of funding as in recent years through 2032.
- The resource forecast assumes capital funding for other transportation providers will continue, and that the region will continue to secure the federal, state, and local agency funding to preserve and maintain the transportation system.

Long-range resource projections

Federal, state and local resource estimates continue to change. Allocations are revised regularly due to a variety of factors including adjustments for actual uses, changes in resource estimates, and the recession. Despite these changes, the resource estimates in this plan serve as a reasonable baseline to depict future trends in transportation finance for the region.

Table 22 shows a history of federal aid apportionments to WCOG.

Table 22: Surface Transportation Program regional funds to WCOG

Transportation Bill	FFY	Urban	Rural only	NHS	Total by Year	Total by Act
ISTEA	92	$212,024	$252,811	$0	$464,835	
	93	$487,922	$406,272	$428,106	$1,322,300	
	94	$898,860	$604,305	$92,408	$1,595,573	
	95	$564,937	$369,816	$88,635	$1,023,388	
	96	$799,892	$512,387	$77,329	$1,389,608	
	97	$874,770	$543,948	$88,165	$1,506,883	$7,302,587
TEA-21	98	$697,214	$423,401	$104,889	$1,225,504	
	99	$1,289,266	$322,463	$133,541	$1,745,270	
	00	$1,358,482	$322,463	$136,402	$1,817,347	
	01	$1,509,823	$322,463	$149,639	$1,981,925	
	02	$1,614,565	$322,463	$159,993	$2,097,021	
	03	$1,256,312	$322,463	$135,217	$1,713,992	$10,581,059
SAFETEA-LU	04	$1,768,199	$284,005	$155,075	$2,207,279	
	05	$1,335,647	$272,621	$125,037	$1,733,305	
	06	$1,316,732	$277,754	$126,043	$1,720,529	
	07	$1,802,169	$290,284	$146,794	$2,239,247	
	08	$1,793,383	$296,299	$153,176	$2,242,858	
	09	$1,096,902	$290,217	$125,014	$1,512,133	$11,655,351
New Act	10	$2,219,243	$300,171	$175,716	$2,695,130	
	11	$2,330,126	$297,189	$213,052	$2,840,367	
	12	$1,096,902	$290,217	$125,014	$1,512,133	
	13	$0	$0	$0	$0	
	14	$0	$0	$0	$0	
	15	$0	$0	$0	$0	$7,047,630
Grand Total of all Acts		$26,323,370	$7,324,012	$2,939,245	$36,586,627	

Transit

WTA has developed a fiscally balanced, long term program for capital and operations based on federal, local, and agency funding levels. The analysis excludes debt service on both the revenue and expenditure side.

WTA estimates include replacement and system espansion needs as well as operational costs for existing and new facilities. These are based on fare revenues and baseline dedicated revenues from state and locally imposed taxes.

For capital costs, federal aid growth rates were determined by using the WSDOT federal funds forecast. State aid was forecasted by the Implicit Price Deflator-Personal Consumption publication.[1]

Table 23 shows a history of U.S. Federal Transit Administration (FTA) grant funds received annually at WTA.

[1] *Transportation Revenue Forecast Council Volume I*, WA State Office of Financial Management, 2011: http://www.ofm.wa.gov/budget/info/Sept11transposummary.pdf

Table 23: History of FTA grant funds received annually at WTA from ISTEA forward

YEAR	TOTAL	5307	5309	5310	5307-ARRA
1992	$0	$0	$0	$0	$0
1993	$280,365		$280,365		
1994	$1,877,220		$1,877,220		
1995	$2,257,415	$67,635	$2,189,780		
1996	$575,222	$575,222			
1997	$483,569	$483,569			
1998	$1,842,177	$1,842,177			
1999	$633,286	$633,286			
2000	$528,309	$312,413	$215,896		
2001	$2,492,948	$1,243,050	$1,249,898		
2002	$1,297,141	$1,297,141			
2003	$574,933	$574,933			
2004	$1,071,385	$1,071,385			
2005	$981,437	$981,437			
2006	$110,262	$110,262			
2007	$2,059,321	$2,059,321			
2008	$575,448	$575,448			
2009	$4,832,386	$4,832,386			
2010	$4,132,937	$0	$1,859,670	$617,463	$1,655,804
Total To-Date	$26,605,761	$16,659,665	$7,672,829	$617,463	$1,655,804

Funding sources

WCOG and its member agencies receive funding from numerous federal, state, and local agencies:

- **U.S. Federal Highway Administration** - FHWA provides key funding for a number of regional projects through several separate programs including but not limited to the National Highway System, Interstate Maintenance, the Surface Transportation Program, and the Coordinated Border Infrastructure program.
- **U.S. Federal Transit Administration** – FTA has several programs which provide funding to regional transportation agencies, including but not limited to the Rural Transit Assistance Program, the Metropolitan and Statewide Planning program, and the Transit Coorperative Research program.
- **WA State Department of Transportation** – WSDOT has numerous sources of revenue which go toward paying for maintenance and operations of their transportation network. Funding for the agency primarily comes from the motor vehicle fuel tax.
- **The Transportation Improvement Board** – TIB has several programs which fund specific projects throughout the state, including but not limited to the Urban Corridor Program, the Small City Arterial Program, and the Road Transfer Program.
- **The Freight Mobility Strategic Investment Board** – FMSIB was established in 1998 to identify and prioritize freight-related projects to alleviate congestion and chokepoints. Funds are requested from the state legislature to complete these projects, and are often combined with local or other sources of funding partnerships.

- **Local funds** – Local funds are generally obtained from local gas increments, real estate excise taxes, property taxes, local improvement fees, impact and SEPA mitigation fees, and sales taxes.

Resource forecast

Forecasts of likely resources available to during the long range planning period are based on the above-mentioned assumptions in concert with assumptions on future federal transportation legislation.

Expenditures

In general, transportation funding sources are in significant decline. It is therefore important to consider how federal funding is pre-designated for defined project categories and how regions must work to identify the best balance.

The three basic project categories are maintenance, preservation, and improvements.

Maintenance

Maintaining the existing regional transportation system is a primary objective. WSDOT and local jurisdictions monitor the condition and operation of existing system components and repair as needed. This plan supports a high priority for routine, regularly scheduled maintenance work as identified by local jurisdictions.

Preservation

The need to preserve the existing system and protect investments that have already been made is also a regional priority. Preservation activities (such as repaving roads, protecting against rock falls, rehabilitating bridges) are identified through a local needs analysis and the Pavement Management System and Bridge Management System. This plan supports giving preservation projects prime consideration.

Table 24: Projected resources for the Whatcom region 2012-2032

Source	Forecast	Subtotal	Percent of Total
Local Jurisdictions			
Property Taxes	$432,007,318		
Special Assess.	$56,546,953		
Gen. Fund Approp.	$127,526,213		
Local Road User	$4,940,955		
Other Local	$762,242,759		
State Fuel Tax	$141,867,809		
Other State Funds	$87,125,500		
Federal Revenues	$83,423,113		
Bond Proceeds	$41,682,742		
Ferry Tolls	$32,735,134		
Subtotal		**$1,770,098,496**	**76.0%**
WSDOT			
Revenue	$526,754,514		
Subtotal		**$526,754,514**	**22.6%**
Transit			
Federal Capitol	$26,388,418		
State Capital	$6,616,030		
Subtotal		**$33,004,448**	**1.4%**
Total		**$2,329,857,457**	

Improvements

In addition to preserving and maintaining existing system components, this plan includes a recommended set of capital and other improvement projects that improve safety, access, connectivity, mobility, transportation demand management, transportation alternatives and contribute to healthy communities. These improvements act together to meet anticipated increases in travel demand.

The program of improvements specified include projects for regional facilities. Those fully funded and with some increment of federal funding, or with implications for the federal highway system, are included in the first four years of the TIP.

Improvement projects are typically very expensive and thus, completing even a small number of projects reduces a region's ability to pay for preservation and maintenance on originally anticipated schedules. Projects that preserve the existing system typically reduce a region's future costs (avoiding the costs of deferred maintenance). At the time this plan is being completed, revenues are in decline and VMT is increasing. Against this backdrop, completing maintenance on schedule becomes more important than usual.

Table 25: Projected expenditures for the Whatcom region 2012-2032

Category	Expenditures	Subtotal	Percent of Total
Local Jurisdictions			
Construction	$566,194,374		
Preservation	$63,835,704		
Maintenance	$607,485,991		
Admin. &	$189,162,513		
Plant Maint. &	$2,040,633		
Debt Service	$55,323,116		
Other	$190,491,051		
Traffic Policing	$89,877,323		
Subtotal		**$1,764,410,705**	**75.9%**
WSDOT			
Construction	$211,754,514		
Preservation	$145,000,000		
Maintenance	$170,000,000		
Subtotal		**$526,754,514**	**22.7%**
Transit			
Federal Capitol	$26,388,418		
State Capital	$6,616,030		
Subtotal		**$33,004,448**	**1.4%**
Total		**$2,324,169,667**	

Balance sheet

The following table is the long range balance sheet showing the region's anticipated financial condition during the 2012-2032 planning period.

Resource forecasts exceed projected expenditures by $5,687,790, showing that expenditures derived from this plan are estimated to be within the fiscally constrained forecasts.

Anticipated resources for the approved 2012-2017 TIP have been considered in developing the long range projects. The total cost of projects programmed in the first four years of the WCOG TIP do not exceed anticipated resources and are thus fiscally constrained.

Table 26: Long range balance sheet for the Whatcom region

Category	Resources	Expenditures	Balance
Local Jurisdictions	$1,770,098,496	$1,764,410,705	$5,687,790
WSDOT	$526,754,514	$526,754,514	$0
Transit	$33,004,448	$33,004,448	$0
Balance			**$5,687,790**

IMPLEMENTING THE STRATEGIES

Implementing the strategies of this plan requires coordination with regional partners, neighboring jurisdictions, and the Skagit County MPO to ensure actions benefit the region as a whole. Therefore WCOG will continue to pursue the programs and projects listed here in collaboration with member agencies, and provide outreach to the public in all aspects of the planning process.

WCOG will continue to operate the programs and projects that implement the strategies identified in this plan. Efforts are coordinated with regional partners, neighboring jurisdictions, and Skagit County's MPO to ensure actions benefit the region as a whole.

Coordination

WCOG member agencies have established relationships with federal, state, and local agencies to address environmental, resource conservation, and other issues related to transportation network improvements. WCOG will continue to work with these agencies in coordinating these efforts as they relate to this plan.

Within the larger region, WCOG also participates with several broader coordinating groups including:

North Sound Connecting Communities – as described earlier, the "Farmhouse Gang" focuses on developing better ways to move people through the five-county region using all available modes with a focus on alternatives to single-occupancy automobiles.

International Mobility & Trade Corridor Project – as described earlier, this binational planning forum coordinates improvements to mobility and security for the Cascade Gateway border crossings. Over fifty different public and private organizations participate in the forum.

MPO/RTPO/WSDOT Coordinating Committee – this committee meets quarterly to discuss transportation issues of regional, state and national significance.

West Coast Corridor Coalition – This coalition was formed in 2001 by policy leaders in Alaska, Washington, Oregon, and California to address the challenge of goods movement along the west coast. Objectives include encouraging system-wide approaches rather than limiting efforts to a project-level focus; sharing best practices for optimizing capacity and performance of the corridor; developing a common voice on the national role played by West Coast states in moving exports and imports; and advocating for financing options to fund transportation system improvements that serve the interests of the coalition.

Natural resource agency consultation

WCOG works with regional environmental resource agencies to review capital project improvements, such as new or re-aligned roads, new bridges, and major capacity-adding projects for potential environmental impacts.

Resource agencies were given an opportunity to review the entire plan. The results of their review were incorporated into *Appendix L: Resource agency review*.

Outreach to the public

All aspects of WCOG's planning activities include opportunities for public participation. Beginning with plan development and ending with public hearings associated with the adoption of plans and Transportation Improvement Programs, WCOG attempts to gather input and ideas from members of the community.

For this plan, WCOG collected input through surveys (the Public Participation Survey and Household Travel Survey)[1], websites (the award-winning www.TransportationTown.com), and through workshops, including one with a specific focus on complete streets. CTAG has also been actively involved in all of WCOG's regional transportation planning and has contributed to the development of this plan.

WCOG also remains involved in numerous regional advisory groups and boards, providing access to a broad range of community interests. The Bellingham-Whatcom Chamber of Commerce, Northwest Washington Economic Region, are examples of these. WCOG's formalized methods for interacting with the public are defined in detail in the 2009 *Public Participation Plan*[2].

[1] *North Sound Travel Survey Final Report*, Whatcom Council of Governments & Skagit Council of Governments, 2008: http://resources.wcog.org/projects/travelsurvey_finalreport.pdf

[2] *Public Participation Plan*, Whatcom Council of Governments, 2009: http://resources.wcog.org/wcog/participationplan.pdf

Amending strategies as needs emerge

After the plan is adopted, changes in the region may occur that necessitate unscheduled updates. Examples of such events include substantial changes in land use regulations, large scale development (such as a bulk cargo-handling facility), continued rapid growth in airport operations, or a new marine facility. Any of these developments may substantially modify traffic flows enough to require revisiting plan strategies, programs, and projects.

A focus on the outcomes

The overarching strategies that define this plan provide a framework to address the critical needs of the region in a way that serves the interests of all community members while meeting federal and State planning requirements. Through targeted programs and specific capital and other projects, WCOG hopes to see a cohesive, multi-modal transportation system evolve to meet the growing needs of Whatcom County. Even in a time of uncertainty about the future scope of federal funding, the strategies that drive this plan forward remain steadfast, and the collective efforts of all participating agencies will see this region meet the challenges of 2032 in a financially, environmentally, and publicly sustainable manner.

Photography Credits:

Peter James Photography Studio, Pages 54 and 61; Bellingham/Whatcom Visitors & Convention Bureau, Pages 56 and 62; Whatcom Council of Governments, all other photographs.

APPENDIX A:
Glossary of Transportation Terms

AADT: Average Annual Daily Traffic

Access Rights: The element identifies who has acquired legal access rights over a road segment.

Accessibility: Easily approached, as in a barrier-free environment, or easily attained, as in availability of services.

ADA Americans with Disabilities Act: 1990 Federal Civil Rights legislation which prohibits discrimination and ensures equal opportunity and access for persons with disabilities. The Federal Transit Administration works to ensure nondiscriminatory transportation in support of the ADA.

ADT: Average Daily Traffic

Affordable Housing: Housing that is affordable, according to the US Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that does not exceed 50 percent of the median gross household for a local jurisdiction. Also called "low income housing".

AIP Airport Improvement Program: Provides funding from the Airport and Airway Trust Fund for airport development, airport planning, noise compatibility planning, and to carry out noise compatibility programs.

Airport: 1) An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any; 2) Facility used primarily by conventional, fixed-wing aircraft; 3) A facility, either on land or water, where aircraft can take off and land. Usually consists of hard-surfaced landing strips, a control tower, hangars and accommodations for passengers and cargo; 4) A landing area regularly used by aircraft for receiving discharging passengers or cargo.

All-Cargo Carrier: An air carrier certificated in accordance with Federal Aviation Regulations (FAR) Part 121 to provide scheduled air freight, express, and mail transportation over specified routes, as well as to conduct nonscheduled operations that may include passengers.

Alternative Transportation: Any mode of travel other than a single-occupant motorized vehicle. Methods of travel include modes such as walking, bicycling, bus-riding, rail, carpool, vanpool, ferry and similar such modes.

Amtrak: Operated by the National Railroad Passenger Corporation of Washington, D.C. This rail system is a government-owned corporation that was organized in 1971 to provide intercity passenger train service in the United States.

Arterial Highway: (See also Freeway, Minor Arterial, Principal Arterial) serve major traffic movements or major traffic corridors. While they may provide access to abutting land, their primary function is to serve traffic moving through the area.

Arterial, Major: A major thoroughfare, used primarily for through traffic rather than for access to adjacent land, that is characterized by high vehicular capacity and continuity of movement.

Arterial, Minor: A roadway that carries a mixture of local and through traffic.

At Grade Crossing: A crossing of highways, railroad tracks, other guideways, and/or pedestrian walkways at the same level or grade.

ATIS Advanced Traveler Information System: The application of advanced technology to provide real time travel information to travelers.

ATMS Advanced Traffic Management System: The application of advanced telecommunications technology to the surveillance and management of traffic flow, traffic data, and other traffic system information to improve efficiency.

Automobile: A wheeled motor vehicle used for transporting passengers, which also carries its own engine or motor.

AVCS Automatic Vehicle Control Systems: The application of advanced technology to traffic control, including management, data acquisition, message systems, radio communications and other systems to improve efficiency.

Balloon Freight: Lightweight freight

Barge: A non-motorized water vessel, usually flat-bottomed and towed or pushed by other craft, used for transporting freight.

Bay/Inlet: A water area that is an opening of the sea/ocean into the land, or of an estuary, lake or river into its shore.

Benchmark: Key performance indicators for which quantifiable or directional targets may be set.

Berth: A specific segment of wharf where a ship ties up alongside at a pier, quay, wharf, or other structure that provides a breasting surface for the vessel. Typically, this structure is a stationary extension of an improved shore and intended to facilitate the transfer of cargo or passengers.

BIA: Bureau of Indian Affairs

Bicycle: A vehicle having two tandem wheels, propelled by human power, upon which any person or persons may ride.

Bicycle Lane (Bike Lane): A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

Bicycle Path (Bike Path): A bikeway physically separated from motorized vehicular traffic by an open space or barrier either within the highway right-of-way or within and independent right-of-way.

Bicycle Route (Bike Route): A segment of a system of bikeways designated by the jurisdiction having authority, with appropriate directional information markers, with or without a specific bicycle route number.

BIFA Border Information Flow Architecture: A tool based on existing U.S. and Canadian National Intelligent Transportation Systems (ITS) Architectures, developed by the U.S. Federal Highway Administration (FHWA) and Transport Canada to ensure that technologies deployed at border crossings interact efficiently with one another.

Bill of Lading: A document issued by a common carrier to a shipper that serves as: 1) A receipt for the goods delivered to the carrier for shipment; 2) A definition of the contract of carriage of the goods; 3) A Document of Title to the goods described therein;

Bikeway: Any road, path, or way which in some manner is specifically designated as being open to bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

BMS Bridge Management System: A State level program required by ISTEA. Compiles, analyzes and summarizes information on bridge conditions for effective management and maintenance and as input to the transportation process.

BNSF Burlington Northern Santa Fe Railroad: In 1995, the former Burlington Northern Railway and Santa Fe Pacific Corporation merged, forming one of the largest railway systems in the United States.

Break-Bulk: Packages that are handled individually, palletized, or unitized for purposes of transportation as opposed to bulk and containerized freight.

Breakbulk Cargo: Packaged products that can be utilized into larger parcels and assembled together, for example, on pallet boards bound by wire, or gathered up in rope cargo slings as a means of lifting on and off a vessel.

BTS Bureau of Transportation Statistics: As part of the USDOT, the BTS compiles, analyzes, and makes accessible information on the nation's transportation systems; collects information on intermodal transportation and other areas as needed; and improves the quality and effectiveness of DOT's statistical programs through research, development of guidelines, and promotion of improvements in data acquisition and use.

Bulk Cargo: Cargo not packaged or broken into smaller units. Bulk cargo is either dry (grain) or liquid (petroleum).

Bulk Terminal: A facility used primarily for the handling and storage of commodities such as petroleum products, grain or chemicals, which has a total bulk storage capacity of 50,000 barrels or more.

Bus: Includes intercity buses, mass transit systems, and shuttle buses that are available to the general public. Also includes Dial-A-Bus and Senior Citizen buses.

Bus Lane: A lane restricted to buses, generally used to speed up public transport that would be otherwise held up by traffic congestion. Local traffic laws may allow car pools, motorcycles and bicycles access to the lane.

Busway: Exclusive freeway lane for buses and carpools.

CA Certifying Authority: Agency having authority to review engineering plans for that agency and others. Authority is granted by the state.

CAA Clean Air Act: Federal legislation that establishes standards for air quality in the United States.

CAO Critical Areas Ordinance: Rules established to protect critical areas.

Capital Costs: Costs of long term physical assets, such as equipment, rights of way, stations, buildings and vehicles, traditionally identified with public transportation investments.

Carbon Footprint: A measure of the amount of carbon dioxide (CO2) emitted through the combustion of fossil fuels. In the case of an organization, business, or enterprise, the measure is based on routine operations. For an individual or household, it is a measure related to day-to-day living. Often expressed as tons of carbon dioxide or tons of carbon emitted, usually on a yearly basis.

Cargo Vessel: 1) Any vessel other than a passenger vessel; 2) any ferry being operated under authority of a change of character certificate issued by a Coast Guard Officer-in Charge, Marine Inspection.

Carpool: An arrangement in which two to six people share the use and or costs, of traveling in a privately owned automobile between fixed points on a regular basis. See also ridesharing and vanpool.

CBD Central Business District: The downtown retail trade and commerce area of a city or an area of very high valuation, traffic flow, and concentration of retail business offices, theaters, hotels and services.

CBSA Canada Border Services Agency: The Canadian Agency responsible for monitoring 119 land border crossings and 9 international airports.

Census: The complete enumeration of a population or groups at a point in time with respect to well-defined characteristics: for example, population, production, traffic on particular roads.

Census Division: A geographic area consisting of several States defined by the US Department of Commerce, Bureau of the Census. The states are grouped into nine divisions and four regions.

Certification: Formal process by which the Whatcom Council of Governments recognizes the consistency of local transportation-related planning provisions with the Metropolitan Transportation Plan and conformity with state planning mandates.

CFP Capital Facilities Plan: A required element of the Comprehensive Plan designed to form a better match between development and provision of services. It must include an inventory of existing facilities, forecast of future needs and a six-year financing plan.

CFR Code of Federal Regulations: A compilation of the general and permanent rules of the executive departments and agencies of the federal Government as published in the Federal Register. The code is divided into 50 titles that represent broad area subject to Federal regulation.

CFS Container Freight Station: Port facility for loading and unloading containerized cargo to and from ships, also called container terminal.

Channel Bottom: Project depth or grade elevation.

Channel Width: The upstream channel width (bank to bank dimensions of the defined channel, not the flood plain).

Charter Bus: A bus transporting a group of persons who pursuant to a common purpose, and under a single contract at a fixed price, have acquired the exclusive use of a bus to travel together under an itinerary.

Charter Transportation of Passengers: Transportation, using a vehicle or vessel, of a group of persons who pursuant to a common purpose, under a single contract, at a fixed charge for the vehicle, have acquired the exclusive use of the vehicle to travel together under an itinerary either specified in advance or modified after having left the place of origin.

Climate Change: Refers to the variation in the earth's global climate (or in regional climates) over time. It describes changes in the variability or average state of the atmosphere.

CO Carbon Monoxide: A colorless, odorless, highly toxic gas that is a normal by-product of incomplete fossil fuel combustion. It is one of the major air pollutants, which can be harmful in small amounts if breathed over a certain period of time.

CO_2 Carbon Dioxide: A colorless, odorless non-poisonous gas that is a normal part of the ambient air. It is a product of fossil fuel combustion.

Coastal Zone: All United States waters subject to the tide, waters of the Great Lakes and Lake Champlain, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the National Contingency Plan, and the land surface or land substrate, ground waters, and ambient air proximal to those waters. The term "coastal zone" delineates an area of federal responsibility for response action. Precise boundaries are determined by agreements between the EPA and the USCG, and are identified in Federal Regional Contingency Plans and Area Contingency Plans.

Collectors: In rural areas, routes serving intra-county, rather than statewide travel. In urban areas, streets providing direct access to neighborhoods as well as direct access to arterials.

Combination Vessels - A type of ship that accommodates both container and break-bulk cargo. It can be either self-sustaining or non-self-sustaining.

Commercial Airport: A public airport which is determined to enplane annually 2,500 or more passengers and receive scheduled passenger service of aircraft.

Common Carrier: A business who, through a contract of carriage, undertakes to perform or procure the performance of carriage by rail, road, sea, air, inland waterway, or by a combination of modes.

Commute: Regular travel between home and a fixed location (e.g., work, school).

Commuter: A person who regularly travels between home and work or school.

Commuter Bus Service: Fixed route bus service, characterized by service predominantly in one direction during peak periods, limiting stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation.

Commuter Rail: A passenger rail transport service between a city center, and outer suburbs and commuter towns or other locations that draw large numbers of commuters.

Complete Streets: 1) Streets that are designed and operated to ensure safe travel for all users – pedestrians, cyclists, transit-riders, and motorists. Typically, complete streets include sidewalks, crosswalks, bike lanes, and other features and amenities. 2) The National Complete Streets Coalition seeks to fundamentally transform the look, feel and function of the roads and streets in our community by changing the way most roads are planned, designed, and constructed.

Comprehensive Plan: A land use document that identifies and guides growth and development for a local jurisdiction.

Compressed Work Week: An alternative work schedule, in accordance with employer policy that regularly allows a full time employee to eliminate at least one work day every two weeks by working longer hours during the remaining days, resulting in fewer commute trips by the employee.

Concurrency: A state planning requirement to ensure that needed services and facilities are in place by the time development is completed and to be occupied or that funding has been committed to provide such services within six years.

Congestion: A condition characterized by unstable traffic flows that prohibits the movement on a transportation facility at optimal legal speeds. Recurrent congestion is caused by constant excess volume compared with capacity. Nonrecurring congestion is caused by actions such as special events and/or traffic incidents.

Consignee: The individual or company, to whom a seller or shipper sends merchandise and who, upon presentation of necessary documents, is recognized as the merchandise owner for the purpose of declaring and paying customs duties.

Consignor: A term used to describe any person who consigns goods to himself or to another party in a bill of lading equivalent document. A consignor might be the owner of the goods, or a freight forwarder who consigns goods on behalf of his principle.

Consistency: The degree of compatibility or agreement among planning provisions. The Growth Management Act addresses consistency in three ways: (1) internal consistency of comprehensive plans, (2) consistency of zoning and regulations with the comprehensive plan, and (3) consistency with other jurisdictions.

Consolidated Shipment: A method of shipping whereby an agent (freight forwarder or consolidator) combines individual consignments from various shippers into one shipment made to a destination agent, for the benefit of preferential rates.

Consolidator - An agent who brings together a number of shipments for one destination to qualify for preferential rates.

Constant Dollars: A series of figures is expressed in constant dollars when the effect of change in the purchasing power of the dollar has been removed. Usually the data are expressed in terms of dollars of a selected year or the average of a set of years.

Containerized Cargo: Cargo shipped in containers.

Controlled Access Rights-of-Way: (See also Right of Way) Lanes restricted for at least a portion of the day for use by transit vehicles and other HOV's. Use of controlled access lanes may also be permitted for vehicles preparing to turn. The restriction must be sufficiently enforced so that 95 percent of the vehicles using the lanes during the restricted period are authorized to use them.

CRAB County Road Administrative Board (Washington State): Provides accountability through standards of good practice, fair administration of funding programs, and technical and professional assistance to the 39 Washington State County Road Departments.

Critical Areas: As defined by each jurisdiction, including at least the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous.

CTAG: Citizens Transportation Advisory Group

CTR Commute Trip Reduction: Washington State Legislation requiring major employers in the nine most populated counties to take measures to reduce the number of single occupancy vehicles (SOV) trips.

Current Dollars: The dollar value of a good or service in terms of prices current at the time the good or service is sold. This contrasts with the value of the good or service measured in constant dollars.

Custom House: The government office where duties and/or tolls are placed on imports or exports and are paid on vehicles or vessels entered or cleared.

Customs: An authority or agency in a country responsible for collecting and safeguarding customs duties and for controlling the flow of goods in and out of a country.

Customs Broker: A person licensed by the Treasury Department to transact business at a customhouse on behalf of importers and exporters.

Customs Duty: A kind of indirect tax which is realized on goods of international trade. Duties levied by the government in relation to imported items are referred to as *import duty*; duties realized on export consignments are called *export duty*.

Dedicated Funds: Any funds raised specifically for transit purposes and which are dedicated at their source (e.g. sales tax, gasoline tax, and property tax), rather than through an allocation from the pool of general funds.

Deficiency: A condition that does not meet adopted policy criteria.

Demand Response (Dial-a-Ride): Non-fixed-route service utilizing vans or buses with passenger boarding and alighting at pre-arranged times at any location within the system service area.

Demurrage - An ancillary cost that represents liquidated damages for delays. It occurs when the shipping vessel is prevented from loading or discharging cargo within the stipulated lay time.

Dial-A-Ride: Another name for "Demand Response."

Disabled Person: A person with a disability is an individual with a physical or mental impairment that substantially limits one or more of the major life activities such as caring for oneself, performing manual tasks, walking, seeing hearing, speaking, breathing, learning and working.

DNS Determination of Non Significance: A finding of no significant environmental impact.

Dock: (See also Marina, Pier, Wharf) For ships, a cargo handling area parallel to the shoreline; for land transportation, a loading or unloading platform at an industrial location or carrier terminal.

Dockage: (See also Wharfage) Charge assessed against a vessel for berthing at a wharf, pier, bulkhead structure, or bank or for mooring to a vessel so berthed.

DOE: Department of Ecology, also abbreviated as Ecology.

DOH: Department of Health

Dredged Shipping Lane: A shipping lane that has been dug out to provide an adequate depth of water for navigation.

Dredging: To clean, deepen or widen harbors and waterways.

Dry Bulk Cargo: Cargo which may be loose, granular, free-flowing or solid, such as grain, coal, and ore, and is shipped in bulk rather than in package form. Dry bulk cargo is usually handled by specialized mechanical handling equipment at specially designed dry bulk terminals.

Dry-Bulk Container: A container constructed to carry grain, powder and other free-flowing solids in bulk. Used in conjunction with a tilt chassis or platform.

Drydock: An artificial basin fitted with gate or caisson into which a vessel may be floated and from which the water may be pumped out to expose the bottom of the vessel.

DVD Daily Vehicle Delay: The sum of hourly delay values (for 24 hours) for all vehicles traveling on a typical day for both directions in one mile of roadway.

EIS: Environmental Impact Statement

Emissions Standards: Standards for the levels of pollutants emitted from automobiles and trucks.

Employment Center: Locations having a concentration of jobs or employment. Centers, which vary in size and density, serve sub-regional or local markets.

Environmental Justice: The fair distribution of costs and benefits, based on a concern for social equity. Environmental justice is concerned with the right of all people to enjoy a safe, clean, and healthy environment, and with fairness across income, ethnic, and racial groups in the sitting and operation of infrastructure, facilities, or other large land uses, such as power plants or landfills. Presidential Executive Order 12898 (1994) directs federal agencies — and those receiving federal funds — to make environmental justice part of their missions by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations.

Energy Efficiency: In reference to transportation, the inverse of energy intensiveness: the ration of outputs from a process to the energy inputs; for example, miles traveled per gall of fuel (mpg).

EPA Environmental Protection Agency: Established in 1970, the mission of the EPA is to protect human health and the environment by leading the nation's environmental science, research, education and assessment efforts.

ESA Environmentally Sensitive Area: An area that is vulnerable to negative environmental impacts, such as a flood plain or a wetland, may also be an EPA designated plant, fish, and animal habitat.

Executive Board (WCOG): The managerial and administrative body of the Whatcom Council of Governments. Members of the Executive Board are appointed by Full Council Members to represent the member governments.

FAA Federal Aviation Administration: A program of the DOT, the FAA is responsible for civil aviation safety.

Fare: The required payment for a ride on a public transportation vehicle. It may be paid by any acceptable means, for example, cash, token, ticket, transfer, fare-card, voucher, or pass.

FASP Federal Aid Safety Program: STP discretionary funds for highway and street improvement projects that reduce or eliminate hazards at specific locations.

FBR Federal Bridge Replacement Program: Funds for the replacement or rehabilitation of deficient bridges due to structural problems, physical deterioration or functional obsolescence.

Federal-Aid Highways: Those highways eligible for assistance under Title 23 U.S.C. except those functionally classified as local or rural minor collectors.

Federal Functional Classification: The process by which public streets and highways are grouped into classes according to the character of service they are intended to provide. The classifications are: principal and minor arterials, major and minor collectors, and local streets or road.

FFY Federal Fiscal Year: October 1 to September 30.

FGTS Freight and Goods Transportation System: A statewide network and classification system of state highways, county roads, and city streets that carry freight. Routes are classified by tonnages of freight carried per year.

FHWA Federal Highway Administration: A component of the Department of Transportation administering the Highway Transportation Programs of the Department of Transportation under pertinent legislation and the provisions of law.

Fixed Route: Transit service provided on a repetitive fixed schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations.

Forecast Projection of population or employment for a given future year.

Foreign Trade: The exchange of waterborne commodity movements (imports and exports) between the United States and its territory, and foreign countries.

Foreign Trade Zone: An area, operated by a port authority, where foreign merchandise may be stored or manipulated pending sale or reshipment without limitation as to time and without customs tariffs.

Fossil Fuel: Any naturally occurring organic fuel, such as petroleum, coal, and natural gas.

Free Port: A restricted area at a seaport for the handling of duty-exempted import goods.

Freight: Any commodity or good in the process of being transported.

Freight Container: A reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted from or to container ships, trucks and railcars with its contents intact.

FTA Federal Transit Administration: The FTA was established as a component of the DOT in 1968. The missions of the Administration are 1) to assist in the development of improved mass transportation facilities and methods, 2) to encourage the planning and establishment of area wide urban mass transportation systems 3) to provide assistance to State and local governments and their instrumentalities in financing such systems, 4) to provide financial assistance to State and local governments to help implement national goals relating to mobility.

FVRD Fraser Valley Regional District: A division of British Columbia's government which oversees the planning, strategies and policies of the communities within its district boundaries.

FY: Fiscal Year

General Aviation: All aircraft which are not commercial or military aircraft.

General Cargo: Those products or commodities such as timber, structural steel, rolled newsprint, concrete forms, agricultural equipment that are not conductive to packaging or unitization.

GIS Geographical Information Systems: A system of hardware, software, and date for collecting, storing, analyzing, and disseminating information about areas of the Earth.

GMA Growth Management Act: Adopted by Congress in 1990, the GMA sought to create a method for comprehensive land use planning involving citizens, communities, counties, cities, and the private sector that would prevent uncoordinated and unplanned growth.

Goal: Within the planning process, a goal identifies a desired end state.

Grade Separated: The use of tunnels, bridges and other structures to separate levels on which roadways, railroad tracks, guideways and walkways intersect.

Greenbelts/Greenways: An open space, natural area that is protected from development and construction, includes agricultural lands, parks, wetlands, wildlife corridors and other similar uses.

Greenhouse Gas: Components of the atmosphere which contribute to global warming, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Human activities have added to the levels of most of these naturally occurring gases.

Gross Tonnage: One method of expressing an amount of freight that includes the container, truck or vessel.

GVRD Greater Vancouver Regional District: A division of British Columbia's government which oversees the planning, strategies and policies of the communities within its district boundaries.

HB: House Bill

HCT High Capacity Transit: A public transit system, such as rail, able to accommodate many passengers.

HEP: Hazard Elimination Program

Hours of Delay: The aggregate time lost by all travelers in the region on all facilities due to congestion, as measured by the time to reach destinations at posted speed limits versus traveling at a slower congested speed.

Household Vehicle: A motorized vehicle that is owned, leased, rented or company owned and available to be used regularly by household members.

HOV High Occupancy Vehicle: Passenger vehicles carrying two or more persons. Examples of high occupancy vehicles are a bus, vanpool, and carpool.

HOV Lane: Exclusive road or traffic lane limited to buses, vanpools, carpools, and emergency vehicles.

HPMS Highway Performance Monitoring System: The system used by the FHWA to provide information on the extent and physical condition of the nation's highway system, its use, performance, and needs. The system includes an inventory of the nation's highways including traffic volumes.

HUTF: Highway Users Tax Fund

IM Intestate Maintenance: STP funding allocations directed to maintain the existing interstate system. Funding is provided for resurfacing, restoring, rehabilitating and reconstructing interstate highways.

Impact Fees: Costs imposed on new development to fund public facility improvements required by new development and ease fiscal burdens of providing services on localities.

Impervious Surface: Surfaces such as rooftops, sidewalks, roads, and parking lots — covered by impenetrable materials, including asphalt, concrete, brick, and stone. These materials seal surfaces, repel water and prevent precipitation and runoff from infiltrating into soils.

IMS Intermodal Management System: A systematic process of identifying key linkages between one or more modes of transportation, identifying where the performance or use of one mode will affect another, defining strategies to enhance the overall performance of the transportation system.

IMTC: International Mobility and Trade Corridor Project

Inclusionary Zoning: Zoning that requires developers to provide a portion of housing units in a specific project or area to meet the needs of low and moderate income people.

In-fill: The practice of encouraging or requiring the development of land that lies within a city, urban growth area (UGA), or developed area outside resource lands, where services are available rather than passing over such parcels in favor of land farther out or farther from available services.

Infrastructure: 1) In transit systems, all the fixed components of the transit system, such as rights-of-way, tracks, signal equipment, stations, park and ride lots, bus stops and maintenance facilities. 2) In transportation planning, all the relevant elements of the environment in which a transportation system operates.

Intercity Rail: Rail transportation between cities, generally over long distances and at relatively high speeds.

Intermodal Terminal: A location where links between different transportation modes and networks connect, using more than one mode of transportation in moving persons and goods.

Intermodal Transportation: Use of more than one type of transportation; e.g., transporting consumer goods to an intermodal facility for transfer to truck then on container ship. For freight movement, generally refers to a trip including transfer between marine and ground.

Intermodalism: Typically used in three contexts: 1) most narrowly, it refers to containerization, piggyback service, or other technologies that provide a seamless movement of goods and people by more than one mode of transport. 2) more broadly, intermodalism refers to the provision of connections between different modes, such as adequate highways to ports or bus feeder services as adequate highways to ports or bus feeder services to rail transit. 3) In its broadest interpretation, intermodalism refers to a holistic view of transportation in which modes work together or within their own niches to provide the user the least costly or most timely service.

International Airport: 1) Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic. 2) An airport of entry which has been designated by the Secretary of Treasury or Commissioner of Customs as an international airport for customs service. 3) A landing rights airport at which specific permission to land must be obtained from customs authorities in advance of contemplated use. 4) Airport designated under the Convention on International Civil Aviation Organization as an airport for use by international commercial air transport and/or international general aviation.

Interstate: Movement of people or goods across State lines.

Interstate Highway (Freeway or Expressway): Limited access divided highway of at least four lanes designated by the Federal Highway Administration as part of the Interstate System. A divided arterial highway for through traffic with full or partial control of access and grade separations at major intersections.

Intrastate: Travel within the same state.

ISTEA Intermodal Surface Transportation Efficiency Act of 1991: The 1991 act that gave significant authority to MPOs by mandating a collaborative planning approach to highway and transit funding, and requiring inclusion of consideration for multiple modes.

ITS Intelligent Transportation Systems: A category of transportation-related technologies that include most any system that relies on the integration and application of real-time data. Generally refers to the application of advanced electronics and computer technology to enable safer and more efficient vehicular traffic flow.

IVHS: Intelligent Vehicle Highway System

Jurisdiction: Includes counties and cities, the term may also include federal and state agencies and federally recognized tribes.

LCDC: Land Conservation and Development Commission

LCL: Less than container load.

LID: Local Improvement District

Light Rail: An electric powered rail transit system that can operate on a variety of rights of way, ranging from mixed traffic on street to fully grade separated. Generally characterized by narrow station spacing, slower average operating speeds and shorter train units than heavy rail.

LOS Level of Service Standard: A mechanism used to determine if a given facility or service is operating efficiently. Innovations in level-of-service for transportation now take into account overall people-moving performance, rather than focusing on traditional assessments of vehicular volume and capacity.

Low Income Housing: Housing that is affordable, according to the US Department of Housing and Urban Development, for either home ownership or rental, and that is occupied, reserved, or marketed for occupancy by households with a gross household income that does not exceed 50 percent of the median gross household for a local jurisdiction. Also called "affordable housing".

LTL Less than Truckload: A truck shipment wherein cargo in the trailer or van consists of more than one shipment.

MAB: Metropolitan Area Boundary

Manifest: A list of the freight or people on an individual conveyance, highway, rail, air or marine being transported by a carrier.

Marina: A facility for accommodating boats and providing a range of other services such as cleaning and incidental boat repair.

Marine Cargo Handling: Processes directly related to moving cargo to or from a vessel at dock, pier, terminal, staging area, or in-transit area until loaded or unloaded. Loading may include the transfer of cargo between ship and barges, trucks, trains, pipelines, or wharfs, and may include operation and maintenance of piers, docks, and associated buildings and facilities.

Marine Terminal: A designated area of a port, which may include wharves, warehouses, storage spaces, cold storage plants, grain elevators, cargo loading, unloading structures, landings, and receiving stations. Used for the transmission, care, and convenience of cargo and/or passengers in the interchange of same between land and water carriers or between two water carriers.

Mass Transit: Another name for public transportation.

Mobility: The ability of any individual to move about geographically.

Mode: A form of transport, for either people or goods or both. General categories include ground, air, marine, bus and bicycle.

Mode Split: A term that describes the relative number of people using carious forms, or modes, of transportation. Frequently used to describe the percentage of people using private automobiles as opposed to the percentage using transit. Or, in the case of freight, the percentage using marine versus the percentage of highway use.

Motorcycle: A two or three wheeled motor vehicle designed to transport one or two people, including motor-scooters, mini-bikes and mopeds.

MPA Metropolitan Planning Area: The geographic area in which the metropolitan transportation planning process required by 23 U.S.C. 134 and section 8 of the Federal Transit Act (49 U.S.C. app. 1607) must be carried out.

MPO Metropolitan Planning Organization: A federally-mandated and federally-funded transportation policy-making organization in the United States that is made up of representatives from local government and governmental transportation authorities.

MTP Metropolitan Transportation Plan: Plan Required of MPOs.

Multimodal Concurrency: Addressing transportation system performance by taking into account land development and transportation solutions that provide alternatives to driving alone. Moves beyond the assessment of vehicle travel to focus more on the people-moving capacity of the system.

Multimodal Transportation: Also referred to as combined transport, is the transportation of goods under a single contract but performed with at least two different means of transport.

Multiplier: Multipliers account for the direct and indirect economic effects of employees earnings, purchases of goods and services, tax payments, and payments of principal and interest for a particular business sector of the economy. The impact of these effects on overall employment in the regional economy are referred to as the 'multiplier' of a particular employment sector.

NAAQS National Ambient Air Quality Standards: Maximum allowable levels of air pollution emissions determined by the EPA.

NAFTA: North American Free Trade Agreement

Natural Resource Lands: Natural Resource Lands include agricultural, forestry, and mineral resource lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products.

NCHRP: National Cooperative Highway Research Program

NEPA Nation Environmental Policy Act: The 1969 act that required agencies to integrate environmental values into the decision making process.

Neo-bulk Cargo: Shipments consisting entirely of units of a single commodity, such as cars, lumber, or scrap metal.

NHI: National Highway Institute

NHS National Highway System: The National Highway System was created by Congress in 1995. It includes approximately 160,000 miles of US roadway that have been deemed important to "the nation's economy, defense and mobility".

NHTSA National Highway Traffic Safety Administration: The Administration was established by the Highway Safety Act of 1970 (23 U.S.C. 401 note). The Administration was established to carry out a congressional mandate to reduce the mounting number of deaths, injuries, and economic losses resulting from motor vehicle crashes on the Nation's highways.

Noncompliance: Failure to comply with a standard or regulation issued under 46 U.S.C. Chapter 43, or with a section of the statutes.

Non-Motorist: Any person who is not an occupant of a motor vehicle in transport and includes the following: 1) Pedestrians, 2) Pedalcyclists, 3) Occupants of parked motor vehicles, 4) Others such as joggers, skateboard riders, people riding on animals, and persons riding in animal-drawn conveyances.

O-D Origin-Destination Study: A study of where person or vehicle trips begin and end. May also include trip purposes and frequency.

OFM Office of Financial Management: State agency responsible for preparing population forecasts used by counties and their cities in development of local comprehensive plans.

Open Policy: A cargo insurance policy that is an open contract; e.g., it provides protection for all shipments in transit within a specified geographic trade area for a limited period of time. It is referred to as "open" because it does not require reporting of individual shipments. Summary or grouped reporting requirements vary with different policies.

Open to Public Travel Road: A road must be available, except during scheduled periods, extreme weather or other emergency conditions, and open to the general public for use by four-wheel, standard passenger cars without restrictive gates, prohibitive signs, or regulation other than restrictions based on size, weight, or class of registration. Toll plazas of public toll facilities are not considered restrictive gates.

Operator: An agency responsible for providing a service or operating a facility (e.g. Whatcom Transportation Authority is a transit operator).

OUM: WSDOT Office of Urban Mobility

Ozone: An air pollutant that is a toxic, colorless gas which is the product of the reaction of hydrocarbons (HC) and oxides of nitrogen (NOx) in the presence of sunlight in the atmosphere. Automobile emissions are the primary source of ozone.

Paratransit: Transit service that is scheduled or dispatched upon demand, providing "point-to-point" travel. Normally used in specialized applications with user eligibility limitations (e.g., elderly and/or handicapped) or where demand is not sufficient to support fixed-route service.

Park and Ride: A facility that allows commuters to leave their personal vehicles in a parking lot and transfer to a bus, rail system, or carpool for the rest of their trip.

Particulate Matter: A pollutant consisting of liquid and solid particles in the air, such as soot, dust, and smoke. Particulate matter pollution includes inhalable coarse particles of 10 micrometers or less in diameter (PM10), and fine particles of 2.5 micrometers or less in diameter (PM2.5). These particles may pose serious health problems, such as heart and lung ailments, as well as environmental consequences, such as reduced visibility. Automobiles, particularly those fueled with diesel, are a significant source of particulate matter.

PE Preliminary Engineering: Analysis and design work to produce construction plans, specifications and cost estimates. PE brings plans to 30 percent complete. The next step, Final Design, brings plans to 100 percent completion.

Peak Period: The period of the day during which the maximum amount of travel occurs. It may be specified as the morning (AM) or afternoon or evening (PM) peak. Generally from 6AM-9AM, 4PM-7PM.

Pedestrian: Any person not in or upon a motor vehicle or other vehicle.

Pedestrian Oriented Development: The development and siting of housing, commercial space, services, and job opportunities in a manner that accommodates walking. Such development is intended to create more vibrant urban areas and to reduce dependency on automobile travel.

Pedestrian Walk (or Walkway): A continuous way designated for pedestrians and separated from the through lanes for motor vehicles by space or barrier.

Performance Indicator: The set of evidence that shows progress toward, movement away from, or static state in policy implementation or policy achievement. A quantitative measure of how well an activity, task or function is being performed. In transportation systems, it is usually computed by relating a measure of service output/use to a measure of service input/cost.

Performance Monitoring: A process of comparing actual performance against policies set by the planning process. It includes conducting the data collection and calculation procedures, and reporting the results on a specified regular and ongoing basis.

Person Trip: A trip made by a person from one location to another, whether as a driver, passenger or pedestrian.

Petroleum Refinery: An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

Pipeline: A closed conduit, with pumps, valves and control devices, for conveying fluids, gases, or finely divided solids.

PMS Pavement Management System: A state-level program required by ISTEA. Compiles, analyzes and summarizes information on pavement conditions for effective management and maintenance and as input to the transportation planning process.

PMT Person Miles of Travel: A measure of person travel. When one person travels one mile, the result is one person mile of travel. Where two or more persons travel together in the same vehicle, each person makes the same number of person miles as the vehicle miles. Therefore, four persons traveling five miles in the same vehicle results in 20 person miles.

Port: A harbor area in which are located marine terminal facilities for transferring cargo between ships and land transportation.

Port Authority: An entity of state or local government or private sector that owns, operates, or otherwise provides wharf, dock and other marine terminal investments at ports.

Port of Entry: A port at which foreign goods are admitted into the receiving country.

Port of Loading: A port where cargo is loaded aboard the vessel, lashed, and stowed

Port Tariff: A set of rules and regulations governing a port along with the published fees and charges for using a port's facilities.

Pricing: A strategy for charging users of transportation systems. May be used to manage demand for the facility, cover costs, and/or achieve other policy objectives.

Principle Arterial: Major streets or highways, many with multi-lane or freeway design, serving high-volume traffic corridor movements that connect major generators of travel.

Private Utilities: Water and/or sewer service owned and operated by an entity other than a political subdivision of the federal, state or tribal governments.

PTBA Public Transportation Benefit Area: A municipal corporation of the State of Washington which may be created by the legislative authority of a county to provide public transportation services to residents of the area. The governing body of a PTBA is referred to as a "public transportation benefit area authority.

PTMS: Public Transportation Facilities and Equipment Management System

Public Authority: A Federal, State, county, town or township, Indian tribe, municipal or other local government or instrumentality thereof, with authority to finance, build, operate, or maintain highway facilities, either as toll or toll- free highway facilities.

Public Entity: (See also Private Entity) 1) Any state or local government; 2) Any department, agency, special purpose district, or other instrumentality of one or more state or local governments; and 3) The National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Public Transit: Passenger transportation services, usually local in scope, that is available to any person who pays a prescribed fare. It operates on established schedules along designated routes or lines with specific stops and is designed to move relatively large numbers of people at one time.

Public Transit Agencies: A public entity responsible for administering and managing transit activities and services. Public transit agencies can directly operate transit service or contract out for all or part of the total transit service provided.

Public Transportation: Transportation by bus, rail, or other conveyance, either publicly or privately owned, which provides to the public general or special service on a regular and continuing basis. Also known as "mass transportation," "mass transit" and "transit."

Public Utilities: Water and/or sewer services owned and operated by a political subdivision of federal, state or tribal governments (includes water and sewer districts and public utility districts).

Publicly Owned Airport: An airport which is publicly owned and under control of a public agency.

RAP Rural Arterial Program: A road and bridge reconstruction funding program of CRAB that counties compete for every two years within their respective regions.

Ramp Metering: Traffic signal control on an entry ramp to a freeway for regulating vehicle access.

RCW Revised Code of Washington: The codified version of current Washington State law.

RDP: Revenue Development Plans

REET Real Estate Excise Tax: Local option tax traditionally used in part for transportation improvements.

Refined Petroleum Pipelines: Establishments primarily engaged in the pipeline transportation of refined products of petroleum, such as gasoline and fuel oil.

Resource Based Industry: A business or industry that has a direct relationship to natural resources such as agriculture, minerals, forestry and fishing. This type of industry is generally located in close proximity to the resource or resource land.

Resurfacing: The addition of a layer or layers of paving material to provide additional structural integrity, improved serviceability, and rideability.

RID Rural Improvement District: Local tax district formed to provide local improvements in rural areas.

Ridership: The number of rides taken by people using a public transportation system in a given time period.

Ridematching: A process by which people who are interested in carpooling or vanpooling are linked with others based on the origin and destination of their commutes.

Ridesharing: A form of transportation in which more than one person shares the use of the vehicle, such as a van, car, bus or train, to make a trip. Also known as "carpooling" or "vanpooling."

ROW Right of Way: The land (usually a strip) acquired for or devoted to highway transportation purposes.

RSPA Research and Special Programs Administration: Established in 1977 under the DOT, the RSPA is responsible for hazardous materials transportation and pipeline safety, transportation emergency preparedness, safety training, multimodal transportation research and development activities, and collection and dissemination of air carrier economic data.

RTP Regional Transportation Plan: The intermodal transportation plan developed by the RTPO for the region.

RTPO Regional Transportation Planning Organization: An organization created by the Growth Management Act to coordinate regional transportation efforts and to foster cooperation among state and local jurisdictions.

Rural Area: Outside the urban growth area, rural lands contain a mix of low-density residential development, agriculture, forests, open space and natural areas, as well as recreation uses. Counties and adjacent small towns provide a limited number of public services to rural residents.

SAFETEA-LU Safe, Accountable, Flexible, Efficient Transportation Equity Act- A Legacy of Users: The federal surface transportation program for highways, highway safety and transit. The core provisions of the program address safety, equity, innovative finance, congestion relief, mobility, efficiency, environmental stewardship, and environmental streamlining**.**

SB: Senate Bill

SEPA State Environmental Policy Act: The purpose of the Washington State Environmental Policy Act is to: (1) To declare a state policy which will encourage productive and enjoyable harmony between man and his environment; (2) to promote efforts which will prevent or eliminate damage to the environment and biosphere; (3) and stimulate the health and welfare of man; and (4) to enrich the understanding of the ecological systems and natural resources important to the state and nation.

SFY State Fiscal Year: July 1 – June 30.

Shared Roadway: Any roadway upon which a bicycle lane is not designated and which may be legally used by bicycles regardless of whether such facility is specifically designated as a bikeway.

Shipment: Freight tendered to a carrier by one consignor at one place at one time for delivery to one consignee at one place on one bill of lading.

Shipper - Term used to describe an exporter (usually the seller).

Short-Shipped - Cargo manifested but not loaded

Short-Term/Long Term Boundaries: Short Term boundaries are used as a tool for facilitating provision of urban levels of services and preventing sprawl. The Long Term boundary includes the short term boundary and areas that have unresolved issues within the identified 20 year Urban Growth Boundary.

Small Urban Area: Places of 5,000 to 49,999 urban populations (except in the case of Maine and New Hampshire) outside of urbanized areas. As a minimum the small urban area includes any place containing an urban population of 5,000 or more as designated by the U.S. Bureau of the Census.

SOV Single-Occupancy Vehicle: A motor vehicle occupied by the driver alone.

Specific Public Transportation: Transportation by bus, rail, or any other conveyance (other than aircraft) provided by a private entity to the general public, with general or special service (including charter service) on a regular and continuing basis.

State Transportation Agency: The State highway department, transportation department, or other State transportation agency to which Federal-aid highway funds are apportioned.

Stewardship: Taking responsibility for actions affecting the natural or built environment. Stewardship demonstrates acceptance of this responsibility through the continuous improvement of environmental performance by individuals, communities, the private sector, and governmental agencies.

STIP State Transportation Improvement Program: A document containing federally funded and regionally significant transportation projects, identifying the projects with the greatest priority.

Stormwater Management System: An infrastructure system that collects runoff from storms and redirects it from streets and other surfaces into facilities that store and release it — usually back into natural waterways

STP Surface Transportation Program: A function of SATETEA-LU providing funding for highway based projects and maintenance. Consists of many subsections.

STP-E Surface Transportation Program Enhancements: Program of funds allocated for projects that are ancillary to typical road projects. May include pedestrian or bicycle facilities, beautification, signage and other features.

STP-R Surface Transportation Program Regional: Program of funds allocated to RTPOs with region benefit.

Surface Rights: Fee ownership in surface areas of land, also used to describe a lessee's right to use as much of the surface of the land as may be reasonably necessary for the conduct of operations under the lease.

Sustainability: Commonly defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." Encompasses environmental, economic, social, and institutional factors.

System Management: Increasing travel flow on existing facilities through improvements such as ramp metering, signal synchronization, and removal of on-street parking. Improvements typically have a low capital cost, require little major construction, and can be implemented in a relatively short time frame.

TAZ Traffic Analysis Zone: Geographical area defined for transportation modeling purposes.

TCM: Transportation Control Measures

TDM Travel Demand Management: Programs, regulations, and land uses designed to minimize the use of SOV.

TEA-21 Transportation Equity Act for the 21st Century: Assured funding for surface transportation through 2003, extended the Disadvantaged Business Enterprise program, strengthened safety programs throughout the DOT, continued the proven and effective program structure established for highways and transit under ISTEA legislation, and invested in research and its application to maximize the performance of the transportation system.

Terminal: Any location where freight either originates, terminates, or is handled in the transportation process; or commercial motor carriers maintain operating facilities.

TEU Trailer Equivalent Unit: Twenty foot equivalent units.

TIA: Transportation Improvement Account

TIB: Transportation Improvement Board

TIP Transportation Improvement Program: The multiyear program of transportation projects for highways, transit, and other modes to be implemented over several years. This program is required as a condition for a locality to receive federal transit and highway grants.

TMA Transportation Management Area: An urbanized area with a population over 200,000 (or other area when TMA designation is requested by the Governor and the MPO) and officially designated by the FHWA and the FTA. TMAs are required to implement programs to reduce congestion. The Bellingham-Ferndale MPA is not a TMA.

Traffic Signal Synchronization: A process by which a number of traffic signals are synchronized to create efficient progression.

Transit-Dependent: Individual(s) dependent on public transit to meet personal mobility needs (e.g., unable to drive, not a car owner, not licensed to drive).

Transit-Oriented Development: The development of housing, commercial space, services, and job opportunities in close proximity to public transportation. Such development is intended to reduce dependency on automobiles, as well as to improve mobility and access between residences, jobs, and services.

Transmission Pipeline: Pipelines (mains) installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers, or to one or more large-volume customers, or a pipeline installed to interconnect sources of supply. In typical cases, transmission lines differ from gas mains in that they operate at higher pressures, are longer, and the distance between connections is greater.

Transport Canada: The department within the government of Canada which is responsible for developing regulations, policies and services of transportation in Canada.

Transportation Demand: The quantity of transportation desired by users.

Transportation Demand Management: A concept designed to reduce or eliminate vehicle trips, including a variety of programs and strategies, such as carpool/vanpool, flextime, working from home, and ride matching.

Transportation Sector: The transportation sector consists of private and public vehicles that move people and commodities. Included are automobiles, trucks, buses, motorcycles, railroads and railways (including streetcars), aircraft, ships, barges, and natural gas pipelines.

TRI Travel Rate Index: A comparison of the time needed to get from one point to another with and without congestion. If the TRI equals 1.0, then the vehicle is traveling at the posted speed limit and not experiencing delay. If the TRI equals 2.0, then congestion is making the trip twice as long.

TTAC Transportation Technical Advisory Committee: A committee composed of local planners and engineers, who meet monthly to discuss regional transportation planning and project funding issues, and make recommendations to the Whatcom Policy Boards.

UAB: Urban Arterial Board

UGA Urban Growth Area: An area designated within which urban growth will be encouraged and outside of which growth can occur only if it is not urban in nature.

UPWP: Unified Planning Work Program: Whatcom Council of Governments annual transportation work plan.

Urban Area: Any area that includes a municipality or other built up place which is appropriate, in the judgment of the Secretary of Transportation, for a public transportation system to serve commuters or others in the locality taking into consideration the local partners and trends of urban growth.

Urban Highway: Any highway, road, or street within the boundaries of an urban area. An urban area is an area including and adjacent to a municipality or urban place with 5,000 or more population. The boundaries of urban areas are fixed by the states, subject to the approval of the Federal Highway Administration, for purposes of the Federal-Aid highway program.

Urban Level of Service: The minimum level of urban facilities and services, including sanitary sewer, water service, police protection, fire protection and emergency medical services, parks and recreation programs, solid waste management, electric service, land use controls, communication facilities and public schools, to support urban levels of development. A full range of services would add urban public transit, natural gas, storm drainage facilities, street lighting, libraries, local parks, local recreation facilities and services, and health services.

Urbanized Area: A census designated area with a specific population per area.

U.S.C. United State Code: Contains a consolidation and codification of all general and permanent laws of the U.S.

USCBP United States Customs and Border Protection: One of the Department of Homeland Security's largest components, with a priority mission of keeping terrorists and their weapons out of the U.S. It also has a responsibility for securing and facilitating trade and travel while enforcing hundreds of U.S. regulations, including immigration and drug laws.

USCG United States Coast Guard: Established in 1915 the USCG became a component of the Department of Homeland Security in 2003. The Coast Guard is a branch of the Armed Forces of the United States at all times. Responsibilities include: search and rescue, maritime law enforcement, marine inspection, marine licensing, Great Lakes pilotage, marine environmental response, port safety and security, waterways management, aids to navigation, bridge administration, ice operations, deep water ports, boating safety, Coast Guard auxiliary, military readiness, reserve training and Marine Safety Council.

USCIS United States Citizen & Immigration Services: The USCIS is responsible for the administration of immigration and naturalization adjudication functions and establishing immigration services policies and priorities.

USDOT United States Department of Transportation: Establishes the nation's overall transportation policy. Under its umbrella are ten administration which jurisdiction include highway planning, development and construction; urban mass transit; railroads; aviation; and the safety of waterways, ports, highways, and oil and gas pipelines. The DOT was established in 1966.

Vanpool: An organized ridesharing arrangement in which 7 – 15 people travel together on a regular basis in a van. The van may be publicly owned, employer owned, individually owned, leased, or owned by a third party. Expenses are shared and there is usually a regular volunteer driver. See also ridesharing.

VMT Vehicle Miles Traveled: One vehicle traveling the distance of one mile. Total vehicle miles, thus, is the total mileage traveled by all vehicles.

Water Transportation: Includes establishments engaged in freight or passenger transportation on the open seas or inland waters, and establishments that provide incidental services such as lighterage, towing, and canal operation. Also includes excursion, sightseeing, water taxis, and cargo handling

Water Transportation of Freight (Not Elsewhere Classified): Establishments primarily engaged in transporting freight on all inland waterways, including the intracoastal waterways on the Atlantic and Gulf coasts.

Water Transportation of Passengers (Not Elsewhere Classified): Establishments primarily engaged in furnishing water transportation of passengers, not elsewhere classified, such as airboats (swamp buggy rides), excursion boat operations, and sightseeing boats.

Watershed: An area of land surface defined by a topographic divide that collects precipitation into a stream or river. Sometimes referred to as a drainage basin.

Waterway: River, canal, lake or other stretch of water that by natural or man-made features is suitable for navigation.

WCOG Whatcom Council of Governments: WCOG was named in 1981, by the Washington State Governor, as the region's MPO and in 1990 as the RTPO under the GMA.

Wharf: A landing place where vessels may tie up for loading and unloading of cargo.

Whatcom Smart Trips: Whatcom Smart Trips is an ongoing partnership between local government, public agencies, employers, and schools to promote transportation by walking, bicycling, sharing rides, and riding the bus.

WIST Whatcom International Shipping Terminal: Port of Bellingham marine facility for berthing and loading/unloading large vessels.

WSDOT: Washington State Department of Transportation.

WTA Whatcom Transportation Authority: The public transportation provider for Whatcom County.

APPENDIX B:
Public Participation Plan

Adopted October 14, 2009

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I. Introduction

Transportation is an integral part of a wide range of regional activities and institutions. Transportation makes it possible for us to get where we want to go as well as to enjoy products and services from all over the world. Transportation is an essential element supporting our regional commerce, social support system, and quality of life. In the Whatcom County region, the transportation system includes an international airport, seaport, train service, transit services, sidewalks, bike lanes and paths, local and state roadways used by transit buses, private motor vehicles, freight haulers and other commercial vehicles.

The Whatcom Council of Governments (WCOG) is designated by the Governor as the region's Metropolitan Planning Organization (MPO) planning agency under federal rules and as the region's Regional Transportation Planning Organization (RTPO) charged with coordinating transportation planning for the Whatcom County region under the Washington State Growth Management Act. WCOG is responsible for developing plans and programs that distribute federal transportation funds to transportation projects in Whatcom County. WCOG is controlled by three distinct Boards; a WCOG Full Council, an Executive Board and the Whatcom Transportation Policy Board (WTPB). The WTPB is the true decision making entity for all transportation related issues. All three are comprised of local and state elected officials.

The Surface Transportation Program (STP) provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the National Highway System (NHS), bridge projects on any public road, transit capital projects,

and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors. Funds are allocated to the MPOs/RTPOs and county lead agencies for regional prioritization and selection.

Allocating transportation dollars for specific projects or programs is a substantial responsibility. WCOG staff must consider all federal transportation requirements. The WCOG MPO/ RTPO Transportation Technical Advisory Committee (TTAC) ultimately makes funding recommendations to the WTPB.

The advice and input of a wide range of stakeholders is critical to making successful transportation decisions. Stakeholders include the general public, business leaders and business groups, environmental and civic organizations, and advocacy groups that represent the needs of the underserved/under-represented (including low income, minority, elderly, and disabled populations). Each of these stakeholders has a different perspective, and a different set of transportation needs that WCOG considers during the transportation planning process. Public involvement is required by federal law to guide metropolitan transportation planning.

II. Purpose of the Public Participation Plan

Public participation is essential to the development of successful regional transportation solutions and to minimizing adverse project impacts.

WCOG crafted this Public Participation Plan with the intent of providing guidelines for establishing and maintaining optimum public involvement, including assessment tools for evaluating the effectiveness of the program. Exemplary public involvement begins early in the planning process and continues throughout each of the planning stages, helping to minimize project impacts while developing the best solutions to regional transportation issues.

This Public Participation Plan was developed in consultation with member organizations, federal, state, and local governments and a citizen advisory committee. WCOG has provided copies of the plan to all participating committee groups and to public libraries.

III. About the Whatcom Council of Governments

WCOG was formed in 1966, along with other Councils of Government in the State, under Washington Administrative Code. This action was preceded by federal enabling legislation leading to the establishment of Councils of Government in states with the intent of creating coordinating bodies to facilitate cross-jurisdictional issues.

WCOG was named in 1981, by the Washington State Governor, as the region's Metropolitan Planning Organization (MPO) and in 1990 as the Regional Transportation Planning Organization (RTPO) under the Washington State Growth Management Act (GMA). WCOG is charged with meeting transportation planning requirements specified in the GMA and by the U.S Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Planning requirements include creating a Regional Transportation Plan, Transportation Improvement Program and the Public Participation Plan.

IV. Transportation Committees

In making transportation decisions, WCOG considers, among other tools, recommendations from the advisory committees named and described below. The membership of these committees provides input from interested persons, transit users, bicycle and pedestrian interests, business persons, persons representing special interest groups, and local technical experts including municipal engineers and planners. These advisory committees represent a fundamental

means for the community to get involved in transportation project planning. The following section describes the standing advisory committees to the Regional Transportation Planning Organization (RTPO), their composition, and their role in the RTPO decision making.

Whatcom Transportation Policy Board

The Whatcom Transportation Policy Board (WTPB) is comprised of elected representatives from local governments and other taxing authorities (Whatcom Transportation Authority, Port of Bellingham) Tribal Council Members and the Washington State Department of Transportation. The WTPB consolidated the functions and duties of the previously separate MPO and RTPO Policy Boards. Its primary purpose is to achieve intergovernmental coordination in developing policies and programs of mutual benefit to its member jurisdictions concerning transportation and to identify project funding priorities. It is responsible for developing policy guidance for the region through the Whatcom Transportation Plan.

Transportation Technical Advisory Committee

The Transportation Technical Advisory Committee (TTAC) is comprised of technically qualified representatives from Whatcom County, municipalities, tribes, Washington Department of Transportation (WSDOT), Port of Bellingham and the Whatcom Transportation Authority. TTAC meets monthly to discuss regional transportation planning and project funding issues, and make recommendations to the Whatcom Transportation Policy Board (WTPB).

Community Transportation Advisory Group

The Community Transportation Advisory Group (CTAG) is a citizen-based committee that meets monthly and advises the WTPB on the community's concerns to help reach a collaborative vision for Whatcom County's transportation system.

CTAG evolved from the Whatcom Transportation Summit held May 18, 2001, when over 150 community members and leaders gathered to lay the groundwork for a more coordinated, comprehensive, and community-based transportation policy. Summit participants agreed that more work was needed to translate community concerns into ongoing input for transportation planners and policy makers.

From that effort, a final report, *It Matters How We Get There*, was developed and the Community Transportation Advisory Group was established in 2003. CTAG membership makes up part of the WTA Citizen Advisory committee. Member input and initiative provides a mechanism for considering transportation improvement planning from varied regional needs and perspectives.

International Mobility and Trade Corridor Project

The International Mobility and Trade Corridor Project (IMTC) is a U.S. - Canadian coalition of business and government entities that identifies and promotes improvements to mobility and security for the four border crossings that connect Whatcom County, Washington State and the Lower Mainland of British Columbia. Together, these four crossings are called the Cascade Gateway.

The goals of the IMTC project are to:

- Facilitate a forum for ongoing communication between agencies that affect
- regional, cross-border transportation, safety, and security.
- Coordinate planning of the Cascade Gateway as a transportation and inspection
- system rather than as individual border crossings.

- Improve and distribute traffic data and information.
- Identify and pursue improvements to infrastructure, operations, and
- information technology.

Since 1997, IMTC has served as a model of regional coordination on border issues and has helped secure over $38 million (USD) from U.S. and Canadian partners to pursue the goals listed above.

V. Transportation Plans and Programs

WCOG develops and updates several programs and plans associated with transportation alternatives and activities. In exercising its authority to guide the expenditure of federal and state transportation funds, it is critical for its public involvement process to provide complete information, timely public notice, and continuing involvement of the public in developing plans and programs. Below is a listing of the primary planning documents and programs developed by the WCOG with community input.

Whatcom Transportation Plan

The Whatcom Transportation Plan is a future vision of the community's transportation needs. The regional transportation plan is updated every five years to reflect changing public interest. The Regional Transportation Plan is fiscally constrained and includes transportation projects for upgrading the transportation infrastructure within the next twenty years.

Transportation Improvement Program

WCOG, as the designated Metropolitan Planning Organization (MPO) and Regional Transportation Planning Organization (RTPO) for Whatcom County, is required to prepare a Transportation Improvement Program (TIP) every year in conjunction with the WCOG members and the Washington State Department of Transportation. The TIP provides a comprehensive six-year listing of transportation improvements within the county that are on the regional transportation network as defined by the Whatcom Transportation Plan, and/or include projects with federal transportation funding. Projects listed in the first four years of the TIP must be fully funded.

Employment Access and Coordinated Human-Services Transportation Plan

In 2006 the WCOG RTPO convened a group of representatives of agencies and organizations serving special needs populations to formulate a plan for coordinated

transportation. This was a state-initiated activity as required by federal Human Services Act rules. The Employment Access and Coordinated Human-services Transportation (EACH) Plan sets forth action strategies to improve service and efficiency so that public investments in transportation work better for the whole population. WCOG, the Community Transportation Advisory Group (CTAG), and the Whatcom Transportation Authority (WTA) carry out the plan's recommendations.

Whatcom Smart Trips

Whatcom Smart Trips is an ongoing partnership between local government, employers, and schools to promote transportation by walking, bicycling, sharing rides, and riding the bus. Whatcom Smart Trips provides education, assistance and incentive programs to people who live or work in Whatcom County, successfully encouraging reduction in single-occupant motor-vehicle trips.

VI. Federal Requirements for the Public Participation Plan

Title 23: Highways

§450.316 Interested parties, participation, and consultation.

(a) The MPO shall develop and use a documented participation plan that defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process.

(1) The participation plan shall be developed by the MPO in consultation with all interested parties and shall, at a minimum, describe explicit procedures, strategies, and desired outcomes for:

(i) Providing adequate public notice of public participation activities and time for public review and comment at key decision points, including but not limited to a reasonable opportunity to comment on the proposed metropolitan transportation plan and the TIP;

(ii) Providing timely notice and reasonable access to information about transportation issues and processes;

(iii) Employing visualization techniques to describe metropolitan transportation plans and TIPs;

(iv) Making public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web;

(v) Holding any public meetings at convenient and accessible locations and times;

(vi) Demonstrating explicit consideration and response to public input received during the development of the metropolitan transportation plan and the TIP;

(vii) Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services;

(viii) Providing an additional opportunity for public comment, if the final metropolitan transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts;

(ix) Coordinating with the statewide transportation planning public involvement and consultation processes under subpart B of this part; and

(x) Periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process.

(2) When significant written and oral comments are received on the draft metropolitan transportation plan and TIP (including the financial plans) as a result of the participation process in this section or the interagency consultation process required under the EPA transportation conformity regulations (40 CFR part 93), a summary, analysis, and report on the disposition of comments shall be made as part of the final metropolitan transportation plan and TIP.

(3) A minimum public comment period of 45 calendar days shall be provided before the initial or revised participation plan is adopted by the MPO. Copies of the approved participation plan shall be provided to the FHWA and the FTA for informational purposes and shall be posted on the World Wide Web, to the maximum extent practicable.

(b) In developing metropolitan transportation plans and TIPs, the MPO should consult with agencies and officials responsible for other planning activities within the MPA that are affected by transportation (including State and local planned growth, economic development, environmental protection, airport operations, or freight movements) or coordinate its planning process (to the maximum extent practicable) with such planning activities. In addition, metropolitan transportation plans and TIPs shall be developed with due consideration of other related planning activities within the metropolitan area, and the process shall provide for the design and delivery of transportation services within the area that are provided by:

(1) Recipients of assistance under title 49 U.S.C. Chapter 53;

(2) Governmental agencies and non-profit organizations (including representatives of the agencies and organizations) that receive Federal assistance from a source other than the U.S. Department of Transportation to provide non-emergency transportation services; and

(3) Recipients of assistance under 23 U.S.C. 204.

(c) When the MPA includes Indian Tribal lands, the MPO shall appropriately involve the Indian Tribal government(s) in the development of the metropolitan transportation plan and the TIP.

(d) When the MPA includes Federal public lands, the MPO shall appropriately involve the Federal land management agencies in the development of the metropolitan transportation plan and the TIP.

(e) MPOs shall, to the extent practicable, develop a documented process(es) that outlines roles, responsibilities, and key decision points for consulting with other governments and agencies, as defined in paragraphs (b), (c), and (d) of this section, which may be included in the agreement(s) developed under §450.314.

In response to these requirements, WCOG has established the following public participation strategies to undertake as part of every planning activity it oversees.

VII. Public Participation Strategies

Objective 1: Inform the Public

Policy: It is the policy of WCOG to inform the public, to the maximum extent possible with available resources, of opportunities to participate in the transportation decision making process.

Techniques:

- E-mail meeting agendas to WCOG members, committee members, and parties that express interest.
- Post meeting agendas and summaries on the WCOG website.
- Use news media to inform the public by providing process and product information to the local newspapers, as appropriate.

Objective 2: Educate the Public

Policy: It is WCOG's policy to educate residents regarding their role in the transportation planning process.

Techniques:

Encourage people to visit Transportation Town (www.TransportationTown.com). This is an interactive transportation educational tool specifically designed to help inform Whatcom County residents about transportation options, regional plans and planning agencies, and how to get more involved in the region's transportation future.

- Provide a summary of all the plans that Whatcom County, Whatcom County cities, and WCOG are responsible for creating and updating. Create a simplified timeline showing when each plan is open to receive public comment. Post this information on the WCOG website.
- Create a slideshow using maps, illustrations and photos to explain what the region's transportation system currently looks like and how it is designed to work. Use maps, illustrations and photos of other communities that have implemented the improvements being proposed by Whatcom County and the cities within the county and regional plans so that community members can more easily visualize what local plans are proposing be implemented here. Include cost estimates for improvement projects so that citizens understand the cost of what is being proposed. Include maps, illustrations and photos that show alternatives to the actions being proposed in the plans, so that community members understand that there are different possibilities for improving the overall system.
- Provide an online survey that solicits feedback from people who have viewed the slideshow.
- Set up educational displays at public locations such as community centers, including those in traditionally underserved areas.

Objective 3: Involve the Public

Policy: It is the policy of WCOG to involve the public early and often in the transportation planning process.

Techniques:

- Actively promote public participation attendance at the Transportation Technical Advisory Committee, Community Transportation Advisory Group, and Whatcom Transportation Policy Board meetings.
- Actively promote WCOG websites, including features which allow direct contact with staff for questions or comments.
- Use public opinion surveys to give the community an opportunity to provide input on the types of projects that needs funding.
- Solicit feedback on draft documents via the internet, through standing committees, and through public availability (libraries, etc.)

Objective 4: Reach Out to Communities

Policy: WCOG will reach out to geographic, organizational, and demographic communities within the WCOG region enabling the broadest and most representative participation possible in developing transportation plans and services.

Techniques:

- Use census data, surveys and GIS tools among other resources to identify traditionally underserved communities.
- Use tools such as informational flyers and surveys when appropriate to distribute information about the regional transportation plan to areas serving traditionally under-represented communities (i.e. senior centers, medical centers and human services providers).
- Distribute copies of planning documents to public libraries in Whatcom County.

- Actively maintain a list of potentially interested groups and individuals and alert them of opportunities for participation/ input.
- Coordinate with local governments regarding community contacts.
- The current agenda shall include the time, date, and location of the meeting, and a notice that WCOG is required to respond to all requests and provide special accommodations for persons with disabilities when the request is received at least ten days prior to a WCOG meeting. WCOG will meet requests for special accommodations received less than ten days before a WCOG meeting when practical.

Objective 5: Improve Public Involvement

Policy: It is the policy of WCOG to continually identify and implement ways to improve its public involvement processes.

Techniques:

- Research and utilize opportunities to use media and venues that will reach greater numbers and more diverse populations.
- Conduct assessments of the effectiveness of public involvement techniques and discuss assessment results with transportation staff.
- Continue WCOG regional coordination of public involvement activities, particularly when projects may directly involve residents.

VIII. Procedures

WCOG will use standardized procedures to ensure public access to regional planning information and activities. Not all procedures may be appropriate for each instance. However, the following procedures will establish a minimum guideline, giving consideration to all segments of society.

While not all activities involving WCOG will require using these procedures, they should be applied liberally, rather than conservatively. Whenever there is any doubt as to the policy's applicability, it should be followed.

Meetings

In the past, WCOG has established special committees to ensure coordination of the regional transportation planning and programming process. Existing regular standing committees include the Whatcom Transportation Policy Board (WTPB), Transportation Technical Advisory Committee (TTAC), and Community Transportation Advisory Group (CTAG). The meetings of these committees are always open to the public. WTPB meets at a minimum four times a year. TTAC and CTAG committees are scheduled to meet monthly for discussion and development of the regional transportation planning and programming of transportation projects. They make recommendations to the WTPB. Recognizing the need to involve the public when decisions are made by WTPB, WCOG will carry out the following procedures:

(1) Regularly Scheduled WCOG Meetings

a) WCOG shall provide notification to the Bellingham Herald of all public meetings at least seven days in advance and at least fourteen days in advance for public hearings. Notification shall consist of, at a minimum, sending a copy of the agenda including time, date, and location of the meeting. The media notification shall include a request that

meetings be added to community calendars. WCOG will maintain a website that includes current meeting schedules, approved minutes, meeting agendas, and special meeting notices.

b) The current agenda shall include the time, date, and location of the meeting, and a notice that WCOG is required to respond to all requests and provide special accommodations for persons with disabilities when the request is received at least ten days prior to a WCOG meeting. WCOG will meet requests for special accommodations received less than ten days before a WCOG meeting when practical.

c) A 15-minute opportunity for public comment will be provided as an agenda item at all regular WCOG meetings to provide an opportunity for public comment if members of the public are present.

d) The WCOG Chairperson will, at the outset of the public comment period, establish the guidelines by which the public comment will be conducted (ie subject, comment time limits, etc.)

e) All WCOG meetings will be conducted in facilities readily accessible to persons with disabilities, as defined by the Americans with Disabilities Act, as amended, and Washington State regulations.

(2) Public Hearings

a) WCOG shall hold public hearings where verbatim transcripts of the public comment are required due to a WCOG action, and at the discretion of the WCOG Chair.

b) WCOG shall publish legal notices in the Bellingham Herald and a notice on its website of all public hearings at least fourteen days in advance of each hearing. Notices shall consist of, at a minimum, time, date, action being taken, location of the meeting and a notice that WCOG is required to respond to all requests and provide special accommodations for persons with disabilities when the request is received up to ten days prior to a WCOG meeting. Accommodations will be provided when practical**.** The media notification shall include a request that meetings be added to community calendars.

c) A statement will be placed on each agenda that written comments will be accepted instead of oral testimony. Reasonable submission deadlines may be established so that comments may be forwarded to appropriate policy board members.

d) The WCOG Chairperson will establish the guidelines by which the public hearing will be conducted (ie subject, comment time limits, etc.) at the outset of the hearing.

e) All WCOG hearings will be conducted in facilities readily accessible to persons with disabilities, as defined by the Americans with Disabilities Act and Washington State regulations.

(3) Workshops and Special Meetings

Occasionally special circumstances arise and workshops and/or special WCOG meetings may be held. It is WCOG's intention to provide guidance by which the notification of the workshops and special meeting will be conducted to maximize public participation in the events.

a) WCOG workshops and special meetings (except declared emergencies) shall follow the same notification and participation procedures identified in (1)(a) through (1)(e) above. Public notice for emergency meetings will be attempted by sending a notice to the Bellingham Herald and via e-mail lists.

b) Efforts must be made to notify known interested parties of hearings, workshops, and meetings relevant to their interests.

c) In the event that a special meeting of the WCOG must be conducted, 24 hours notice will be supplied to all media. Efforts will be made to contact affected parties and any other interested parties 24 hours before the special meeting.

d) Mailing lists of interested persons should be developed and maintained from sign-up lists at hearings, communications, and workshops dealing with related issues.

e) Every attempt will be made to secure accommodations for, and meet the needs of, special needs and disabled persons when requested.

Plan Development

(1) During any given year WCOG undertakes different planning activities in support of the regional transportation plan. WCOG recognizes that public input is a critical element of a successful planning effort. The extent of public participation may vary between different planning activities.

(2) WCOG will include a public participation element in every planning activity work plan. The public participation element will identify the extent and type of public participation programs that will be implemented in each activity.

Public Information

(1) WCOG shall maintain an up-to-date mailing list of all local and regional media.

(2) WCOG will establish and maintain a mailing list of interested individuals and organizations.

a) The mailing list will include under-represented groups and other interested citizens.

b) WCOG will maintain an agency mailing list that includes: transit, traffic, rideshare groups, safety and enforcement agencies, port authorities, appropriate private transportation providers, city and local officials and any other agency interested in the transportation planning process.

(3) WCOG transportation planning documents will be available to the public for reference at WCOG. Adopted documents will be submitted to local libraries within the region to allow public access to the information.

(4) Draft documents will be made available to the public for a reasonable period before adoption, but no less than fourteen (14) days.

Public Input

(1) A summary, analysis and report of written and oral comments received from the public regarding draft transportation plans or Transportation Improvement Programs (TIP) will be included as part of final transportation plan or TIP documents.

Public Review of the Public Participation Plan

(1) WCOG will provide a minimum public comment period of 45 days before the public participation plan is initially adopted or revised.

(2) WCOG will establish an ongoing review of the public involvement process.

APPENDIX C:
Title VI Plan

Amended September 14, 2011

Approved by the WA State Department of Transportation February 18, 2003

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Policy Statement

The Whatcom Council of Governments (WCOG) assures that no person shall, on the grounds of race, color, national origin, or sex as provided by Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1987 (P.L. 100.259), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. WCOG further assures that every effort will be made to ensure nondiscrimination in all of its programs and activities, whether or not those programs and activities are federally funded.

In the event WCOG distributes federal aid funds to another entity or contractor, WCOG will include Title VI language in all written agreements and will monitor for compliance.

WCOG's Executive Director is responsible for initiating and monitoring Title VI activities, preparing required reports, and other WCOG responsibilities as required by 23 CFR 200 and 49 CFR 21.

_____

James G. Miller Date

Executive Director

Authorities

Title VI of the 1964 Civil Rights Act provides that no person in the United States shall, on the grounds of race, color, national origin, or sex, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance (please refer to 23 CFR 200.9 and 49 CFR 21).

The Civil Rights Restoration Act of 1987 broadened the scope of Title VI coverage by expanding the definition of the term "programs or activities" to include all programs or activities of Federal Aid recipients, subrecipients, and contractors, whether or not such programs and activities are federally assisted (Public Law 100-259 [S. 557] March 22, 1988).

Additional Authorities and Citations Include:

Title VI of the Civil Rights Act of 1964; 42 USC 2000d to 2000d-4; 42 USC 4601 to 4655; 23 USC 109(h); 23 USC 324; DOT Order 1050.2; EO 12250; EO 12898; and 28 CFR 50.

Organization and Staffing - General

The Executive Director of WCOG is responsible for ensuring the implementation of WCOG Title VI program. The Title VI Coordinator (hereafter referred to as Coordinator), on behalf of the Executive Director, is responsible for oversight of the Title VI program. The day-to-day administration of the program lies with the Title VI Coordinator under the direct supervision of the Executive Director.

Title VI Coordinator Responsibilities

The Title VI Coordinator with assistance from program liaisons is assigned the responsibility for implementing, monitoring, and ensuring WCOG's compliance with Title VI regulations. Title VI responsibilities are as follows:

1. Process the disposition of Title VI complaints received by WCOG.
2. Collect statistical data (race, color, sex, and national origin) of participants in, and beneficiaries of WCOG programs, i.e. citizens and affected communities.
3. Review Environmental Impact Statements prepared by WCOG for Title VI and Environmental Justice compliance.
4. Conduct Title VI review of program areas (planning, education and training, environmental affairs and contracting).
5. Conduct Title VI review of consultant contractors and recipients of federal funds directly distributed by WCOG.
6. Review internal policies and, where applicable, include Title VI and related requirements.
7. Make available training for WCOG employees on Title VI and related statutes for WCOG programs.
8. Prepare a yearly report of Title VI accomplishments for the past year.
9. Prepare Title VI information for dissemination to the general public and, where necessary and appropriate, in languages other than English.
10. Conduct approval reviews of WCOG programs and applicants for compliance with Title VI requirements, i.e. persons seeking contracts with WCOG.
11. Identify, investigate, and eliminate discrimination when found to exist in connection with WCOG programs.
12. Establish procedures for promptly resolving deficiency status and reducing to writing the remedial action agreed to be necessary, all within a period not to exceed 90 days.

Program Administration - General

The WCOG Executive Director will be responsible for ensuring the implementation of the WCOG Title VI program. The Coordinator will assist in the overall administration of the Title VI program, plan and assurances. WCOG Program Liaisons will assist the Coordinator in the day-to-day administration of the program.

A. Complaints

If any individual believes they or any other program beneficiaries have been the object of an unequal treatment or discrimination as to the receipts of benefits and/or services, or on the grounds of race, color, national origin or sex, they may exercise their right to file a complaint with WCOG. Every effort will be made to resolve complaints informally at the agency, subrecipient, and contractor's level.

B. Data Collection

Statistical data on race, color, national origin and sex of participants in, and beneficiaries of WCOG programs, e.g., citizens, and affected communities, will be gathered and maintained by the Coordinator for use in evaluating program compliance and improving affected populations' participation. Each of the Title VI program areas will maintain data, which will be incorporated into the Title VI Annual Update. Data gathering procedures will be reviewed regularly to ensure sufficiency of the data in meeting the requirements of the Title VI program administration.

C. Title VI Reviews

Title VI Program reviews will be performed by the Coordinator to assess administrative procedures, staffing, and resources available for Title VI compliance.

D. Annual Reviews

All programs will be reviewed annually to assure effectiveness in their compliance of Title VI provisions. This is in addition to the day-to-day monitoring. The Title VI Coordinator and program representatives will coordinate efforts to ensure equal participation in all their programs and activities at all levels.

E. Operational Guidelines

All operational guidelines to contractors, subrecipients, and program areas will be reviewed annually to ensure inclusion of Title VI language, provisions, and related requirements, where applicable.

F. Training Program

Assist the Washington State Department of Transportation (WSDOT) in the distribution of information on available training programs regarding Title VI and related statutes to WCOG employees. Training is available to all WCOG employees as related to their job descriptions.

G. Annual Reports

An annual summary and Plan Update will be submitted to WSDOT in February for the previous year. The Annual Report will review Title VI accomplishments achieved during the previous year. The Coordinator will be responsible for coordination and preparation of the report.

H. Public Dissemination

WCOG will disseminate Title VI Program information to WCOG employees, subrecipients, and contractors, as well as the general public as necessary for WCOG programs. Public Dissemination will include the electronic posting of public statements on the agency's web site, inclusion of Title VI language in contracts, annually publishing the Title VI Policy Statement in newspapers having a general circulation in the community and in minority publications where appropriate (see Addendum 3).

I. Post Grant Reviews

Post-grant Title VI Compliance reviews of consultants with WCOG will be conducted. The reviews will determine the contractor's compliance with Title VI contractual provisions. Post-grant reviews are to be conducted on those subrecipients that have already received WCOG federal funds.

J. Remedial Action

WCOG will actively pursue the prevention of any Title VI deficiencies or violations and will take the necessary steps to ensure compliance with program administrative requirements. If irregularities occur in the administration of the federal-aid highway program's operation, corrective action will be taken to resolve Title VI issues. When conducting Title VI reviews on subrecipients, WCOG will reduce to writing remedial action agreed to be necessary, all within a period not to exceed 90 days.

WCOG will seek the cooperation of the subrecipient in correcting any deficiencies found during the review. WCOG will also provide the technical assistance and guidance needed to aid the subrecipient to comply voluntarily. Subrecipients placed in a deficiency status will be given a reasonable time, not to exceed 90 days after receipt of the deficiency letter, to voluntarily correct deficiencies.

If a subrecipient fails or refuses to voluntarily comply with requirements within the time frame allotted, the Coordinator will submit to the Executive Director two copies of the case file and a recommendation that the subrecipient be found in noncompliance.

A follow-up review will be conducted within 180 days of the initial review to ensure that the subrecipient has complied with the Title VI Program requirements in correcting deficiencies previously identified. If the subrecipient refuses to comply, WCOG may, with WSDOT and FHWA's concurrence, initiate sanctions per 49 CFR 21.

WSDOT will be notified of any complaint filed involving Title VI issues, as well as its resolution.

K. WCOG will develop an internal procedure to assist in day-to-day administration of the Title VI Program. This procedure will be updated regularly to incorporate changes and additional responsibilities.

L. WCOG will make every effort to provide services to Limited English Proficient (LEP) people, either through translation or interpreter, available prior to scheduled meetings, such as public hearings or project meetings.

When a need has been identified by WCOG or WCOG receives a request, WCOG shall make every effort to provide services requested in a timely manner. WCOG will pay for the translation of vital documents and interpreter services.

M. A Four Factor Analysis process will be conducted at least every 3 years to determine what languages need assistance and what activities can be done to provide reasonable access. The resulting tables and maps identifying the areas with higher proportions of LEP persons are attached to this plan as Addendum 6.

Planning

A. Whatcom Council of Governments

WCOG has the responsibility to develop long- and short-range transportation plans for Whatcom County. WCOG is located in Bellingham, Washington.

B. Authorities

The Metropolitan Planning Organization Regulations

23 CFR 450

RCW 47.80 Regional Transportation Planning Organization (RTPO)

C. Planning Process

A comprehensive transportation planning process is used which incorporates input from the public into the various Metropolitan Planning Organization (MPO) activities. The process further entails the monitoring and collection of varied data pertaining to transportation issues. WCOG coordinates urban transportation planning and public involvement, and as well as provides technical support to jurisdictions and agencies when needed.

D. Title VI Responsibilities

Ensure that all aspects of the planning process complies with Title VI.

Ensure the opportunity for participation of a cross section of various social, economic, and ethnic interest groups in the planning process by disseminating program information to minority media and ethnic organizations, and conducting workshops related to projects in predominantly minority communities.

Gather and organize the data necessary to develop the Annual Title VI Update Report. Review the WCOG work program, FHWA/FTA Joint Planning Regulations, and other directives to ensure compliance with Title VI program requirements.

Ensure equal participation opportunity on Citizens Advisory Committee on Transportation (CACT), provide information pertaining to selection criteria for CACT members, and furnish to WSDOT information on membership make-up (race, gender, and position within the organization) for review.

WCOG coordinates urban transportation planning and public involvement, and provides technical support to jurisdictions and agencies when needed.

Education and Training

A. Staff Development

WSDOT will provide training opportunities to WCOG staff and subrecipients, including training provided by the National Highway Institute (NHI).

B. Operational Guidelines

Training is available to all WCOG employees per the WCOG Personnel Manual.

C. Title VI Responsibilities

Assist WSDOT in the distribution of information on training programs regarding Title VI and related statutes.

Ensure equal access to, and participation in, applicable NHI courses for qualified WCOG employees.

Consultant Contracts Coordination

A. Consultant Contracts

The WCOG Planning Director is responsible leading the process for consultant selection, negotiation, and the administration of consultant contracts.

B. Authorities

WCOG's "Procurement Policy"

48 CFR 31

23 CFR 172

RCW 39.29

RCW 39.80

C. Consultant Selection Process

The WCOG operates under its internal contract procedures and all relevant federal and state laws. Selection of consultants is generally made by a Consultant Selection Committee, which is established for each major project. The committee is typically composed of WCOG staff members, technical staff from local areas, and staff from affected agencies.

D. Title VI Responsibilities

Ensure DBE opportunities exist.

Ensure that all federally funded consultant contracts administered by the WCOG have the appropriate Title VI provisions included.

Review directives and procedures to ensure Title VI compliance.

Maintain necessary data and documentation required for completion of the WCOG's Title VI Update Annual Report.

ADDENDUM 1 - WCOG Title VI Assurances

The Whatcom Council of Governments (hereinafter referred to as the "Recipient"), HEREBY AGREES THAT as a condition to receiving any federal financial assistance from the U.S. Department of Transportation, it will comply with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d—42 USC 2000d—4 (hereinafter referred to as the "Act"), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964 (hereinafter referred to as the "Regulations"), and other pertinent directives, to the end that in accordance with the Act, Regulations, and other pertinent directives, no person in the United States shall, on the grounds of race, color, sex, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives federal financial assistance from the Department of Transportation, including the Federal Highway Administration, and HEREBY GIVES ASSURANCE THAT it will promptly take any measures necessary to effectuate this agreement. This Assurance is required by Subsection 21.7(a)(1) of the Regulations.

More specifically and without limiting the above general assurance, the Recipient hereby gives the following specific assurances to its Federal Aid Highway Program.

1. That the Recipient agrees that each "program" and each "facility", as defined in Subsections 21.23(e) and 21.23(b) of the Regulations, will be (with regard to a "program") conducted or will be (with regard to a "facility") operated in compliance with all requirements imposed by, or pursuant to, the Regulations.
2. That the Recipient shall insert the following notification in all solicitations for bids for work or material subject to the Regulations made in connection with the Federal Aid Highway Program, and in adapted form in all proposals for negotiated agreements:
3. "The Whatcom Council of Governments, in accordance with Title VI of the Civil Rights Act of 1964 and 78 Stat. 252, 42 USC 2000d—42 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, part 21: Nondiscrimination in Federally Assisted Programs of the Department of Transportation Issued Pursuant to Such Act, hereby notifies all bidders that it will affirmatively ensure that any contract entered pursuant to this advertisement will afford minority business enterprises full opportunity to submit bids in response to this invitation, and will not discriminate on the grounds of race, color, sex,

or national origin in consideration for an award."

4. That the Recipient shall insert the clauses of Appendix 1 of this Assurance in every contract subject to the Act and the Regulations.
5. That where the Recipient receives federal financial assistance to construct a facility, or part of a facility, the Assurance shall extend to the entire facility and facilities operated in connection therewith.
6. That this Assurance obligates the Recipient for the period during which federal financial assistance is extended to the program, or is in the form of personal property, or real property or interest therein or structures or improvements thereon, in which case the Assurance obligates the Recipient or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which the federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits; or (b) the period during which the Recipient retains ownership or possession of the property.
7. The Recipient shall provide for such methods of administration for the program, as are found by the State Secretary of Transportation or the official to whom s/he delegates specific authority, to give reasonable guarantee that it, other recipients, subgrantees, contractors, subcontractors, transferees, successors in interest, and other participants of federal financial assistance under such program will comply with all requirements imposed or pursuant to the Act, the Regulations, and this Assurance.
8. The Recipient agrees that the United States has a right to seek judicial endorsement with regard to any matter arising under the Act, the Regulations, and this Assurance.
9. THIS ASSURANCE is given in consideration of, and for the purpose of obtaining, any and all federal grants, loans, contracts, property, discounts, or other federal financial assistance extended after the date hereof to the Recipient by the Department of Transportation under the Federal Aid Highway Program and is binding on it, other recipients, subgrantees, contractors, subcontractors, transferees, successors in interest, and other participants in the Federal Aid Highway Program. The person or persons whose signatures appear below are authorized to sign this Assurance on behalf of the Recipient.

_____

James G. Miller Date

Executive Director

Appendix 1 (of ADDENDUM 1)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor"), agree as follows:

1. Compliance With Regulations

The Contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter referred to as DOT), Title 49, Code of Federal Regulations, part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination

The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

The Contractor shall not participate either directly or indirectly in discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Subcontracts, Including Procurement of Materials and Equipment

In all solicitations either by competitive bidding or negotiations made by the Contractor for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this contract and the Regulations relative to nondiscrimination on the ground of race, color, sex, or national origin.

4. Information and Reports

The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Whatcom Council of Governments or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Whatcom Council of Governments, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance

In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, the Whatcom Council of Governments shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

Withholding of payments to the Contractor under the contract until the Contractor complies; and/or

Cancellation, termination, or suspension of the contract, in whole or in part.

6. Incorporation of Provisions

The Contractor shall include the provisions of paragraphs (1) through (5) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontractor or procurement as the Whatcom Council of Governments or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance.

Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the Whatcom Council of Governments enter into such litigation to protect the interests of the state and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

ADDENDUM 2 - Nondiscrimination Complaint Procedures for Federally Assisted Programs or Activities

These procedures cover all complaints filed under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Civil Rights Restoration Act of 1987, and the Americans with Disabilities Act of 1990, relating to any program or activity administered by WCOG as to subrecipients, consultants, and contractors. Intimidation or retaliation of any kind is prohibited by law. The procedures do not deny the right of the complainant

to file formal complaints with other state or federal agencies, or to seek private counsel for complaints alleging discrimination. Every effort will be made to obtain early resolution of complaints at the lowest level possible. The option of informal mediation meeting(s) between the affected parties and the Title VI Coordinator may be utilized for resolution.

Procedure

1. Any individual, group of individuals, or entity that believes they have been subjected to discrimination prohibited by Title VI nondiscrimination provisions may file a written complaint with WCOG's Title VI Coordinator. A formal complaint must be filed within 180 calendar days of the alleged occurrence.
2. Upon receipt of the complaint, the Title VI Coordinator will determine its jurisdiction, acceptability, and need for additional information, as well as investigate the merit of the complaint. In cases where the complaint is against one of WCOG's subrecipients of federal funds, WCOG will assume jurisdiction and will investigate and adjudicate the case.
3. Once WCOG decides to accept the complaint for investigation, the complainant and the respondent will be notified in writing of such determination within five calendar days. The complaint will receive a case number and will then be logged in the WCOG's records identifying its basis and the race, color, national origin, and gender of the complainant.
4. In cases where WCOG assumes the investigation of the complaint, WCOG will provide the respondent with the opportunity to respond to the allegations in writing. The respondent will have 15 calendar days to furnish WCOG his/her response to the allegations.
5. Within 60 calendar days of receipt of the complaint, WCOG's Investigator* will prepare an investigative report for the Executive Director's review. The report shall include a narrative description of the incident, identification of persons interviewed, findings, and recommendations for disposition.
6. *This can be one of WCOG's Title VI Liaisons, WCOG's Title VI Coordinator the Title VI Specialist for a subrecipient of federal funds, or the WSDOT Title VI Liaison in the Western Region.
7. The investigative report and its findings will be sent to WCOG's Legal Counsel for review.
8. Any comment(s) or recommendation(s) from WCOG's Legal Counsel will be reviewed by WCOG's Investigator. The Investigator will discuss the report and recommendations with the Executive Director. The report will be modified as needed and made final for its release.
9. Once WCOG's investigative report becomes final, the parties will be properly notified of the outcome and appeal rights.
10. WCOG's investigative report and a copy of the complaint will be forwarded to WSDOT's Office of Opportunity within 60 calendar days of the receipt of the complaint. The Office of Equal Opportunity will share the report with FHWA, Washington Division Office, as part of its Annual Title VI Update and Accomplishment Report.
11. If the complainant is not satisfied with the results of the investigation, s/he shall be advised of their rights to appeal WCOG's determination to the WSDOT Office of Equal Opportunity. If a complainant is still not satisfied, the next

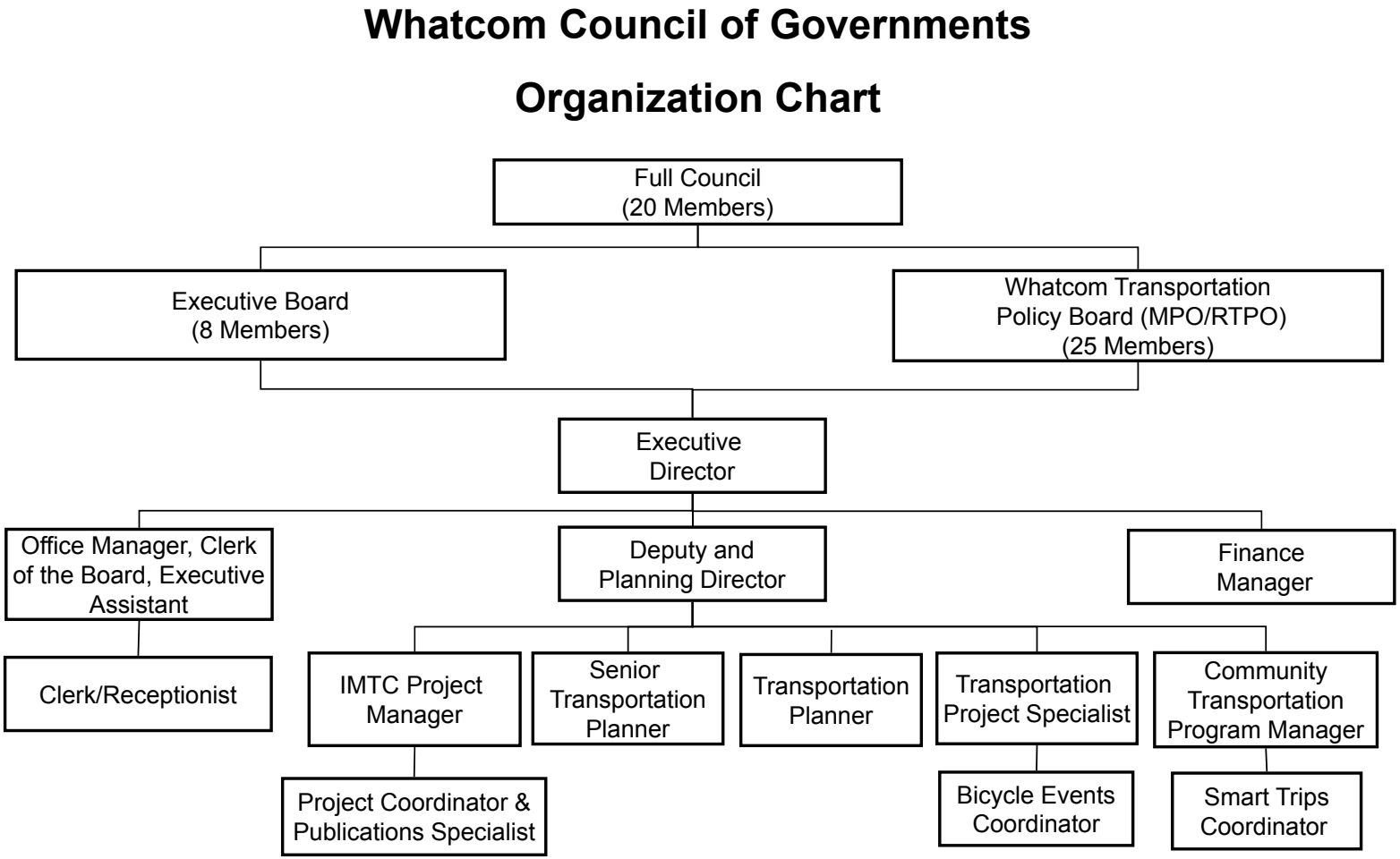
right of appeal is to FHWA, Washington Division Office; United States Department of Transportation (USDOT); or the United States Department of Justice (USDOJ). Appeals must be filed within 180 days after WCOG's final resolution. Unless new facts not previously considered come to light, reconsideration of WCOG's determination will not be available.

12. WCOG will serve as an appeal forum to a complainant that is not satisfied with the outcome of an investigation conducted by one of its subrecipients. WCOG will analyze the facts of the case and will issue its conclusion to the appellant within 60 days of the receipt of the appeal.

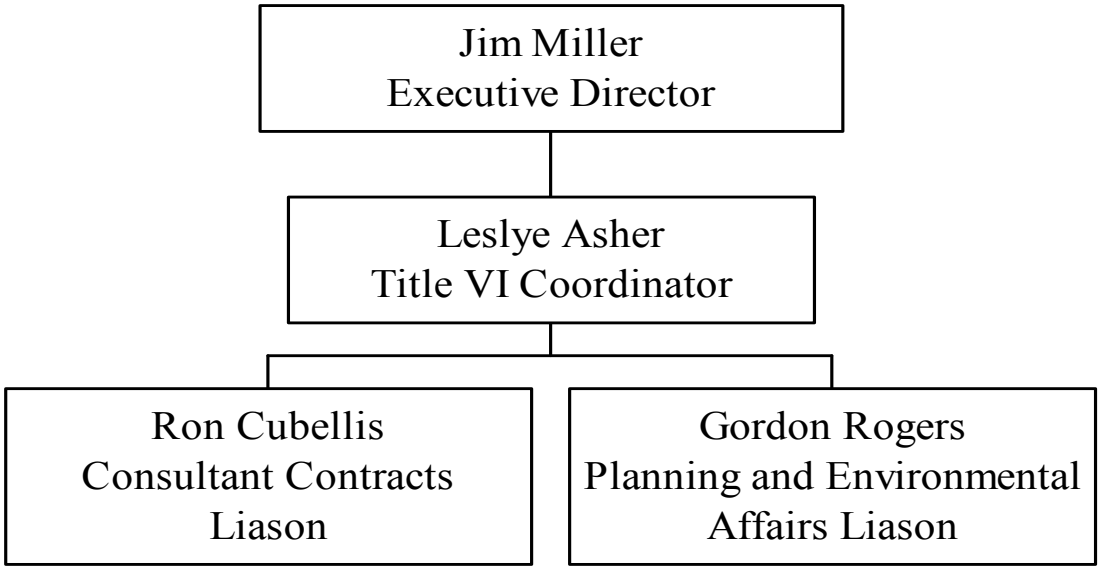
ADDENDUM 3 - WCOG Title VI Notice to Public

WCOG hereby gives public notice that it is the policy of the agency to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which WCOG receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with WCOG. Any such complaint must be in writing and filed with the WCOG Title VI Coordinator within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. Title VI Discrimination Complaint Forms may be obtained from the WCOG at no cost by calling (360) 676-6974.

ADDENDUM 4 - Whatcom Council of Governments Organization Chart



ADDENDUM 5 - Whatcom Council of Governments Title VI Organization Chart



APPENDIX D:
Whatcom Regional ITS Architecture

WHATCOM REGIONAL ITS ARCHITECTURE - 2012

Introduction

The Whatcom Regional ITS Architecture

This Whatcom Regional ITS Architecture is produced and maintained by the Whatcom Council of Governments. The purpose of the architecture is to compile definitions of existing transportation technology systems within Whatcom County, describe future projects, and identify opportunities to integrate systems for improved cost-effectiveness and overall benefit.

This Version of the Architecture

This spreadsheet is the user version of the Whatcom Regional ITS Architecture. It is based on the U.S. Natiional Architecture 7.0 standards and comes from a more detailed architecture developed in the Turbo Architecture software format that meets all basic requirements of the U.S. Federal Highway Administration and the U.S. Federal Transit Administration. To view a copy of the Turbo Architecture-based reference document, contact Whatcom Council of Governments at the number below.

This architecture describes ITS systems in place or planned within Whatcom County. Specific projects are identified in the Transportation Improvement Program (TIP), also available through the number below or on the Whatcom Council of Governments website, www.wcog.org.

Geographic Scope

This architecture is for the MPO and RTPO boundaries of Whatcom County, Washington State. However projects are also included that span the border into Canada.

Timeframe

This architecture covers projects for the next five years. The architecture will be updated on an as-needed basis and approved by the Whatcom Transportation Policy Board annually.

For More Information

Melissa Miller
Whatcom Council of Governments
314 E. Champion Street
Bellingham, WA 98225
(360) 676-6974
melissa@wcog.org

Usage Plan

This version of the architecture

This spreadsheet version of the architecture is based on a reference document developed using Turbo Architecture software compliant with the U.S. National Architecture Version 7.0. This reference document is available through WCOG.

This is a user-friendly version of the architecture that can be exchanged between ITS stakeholders in the region, and that captures the main systems and components installed/being installed in the region.

Using the spreadsheet architecture

The spreadsheet architecture has been designed to comply with the Transportation Improvement Projects list (TIP) for the region, the 2012 Whatcom Transportation Plan, and should be consistent with other planning documents in Whatcom County.

Each stakeholder agency is asked to use the document to define existing ITS technology systems in the region, and identify gaps in the system that their agency may want to address in the future. It is also used to define the relationships between agencies that share information, and provide an opportunity to highlight where more data-sharing may improve the cost-effectiveness of ITS investments and lead to greater community benefit.

Because the document is in a simple spreadsheet format, it is designed to be modified by each agency as needed. The document may be circulated among participating agencies and individuals and be used when discussing resources, standards, agreements, and the operational needs for any ITS project.

Maintenance Plan

This working version of the architecture is approved as part of the 2012 Whatcom Transportation Plan. The architecture time frame is five years. It will be updated annually with a rolling five-year outlook.

Updates to the architecture

Changes that may occur to the architecture include the addition of stakeholders, incorporating specific project architectures, changes in regional needs, updating of a system's details, and changes to the U.S. National Architecture. These changes will be captured through the architecture's update process.

Update process

The update process will have three components.

1. On-going updates. Each stakeholder may update the spreadsheet architecture as needed throughout the year, and send their revised version to the Whatcom Council of Governments (WCOG) for inclusion in the master version. The spreadsheet architecture is designed to be a living document that users can modify as needed.

2. Annual updates. In the fall of each year, WCOG will convene the Whatcom ITS Subgroup (consisting of all agencies with ITS elements currently operational in the region). They will review the current spreadsheet architecture and make necessary additions, deletions, and updates.

3. Updates with the Whatcom Transportation Plan. The Whatcom Transportation Plan is on a five year update schedule. Every five years the most current version of the spreadsheet architecture will be included in the plan for comment and approval by the Whatcom Transportation Policy Board.

Version control

WCOG is responsible for keeping the most current version of the spreadsheet architecture. Stakeholders who modify their versions will need to send a copy of their changed spreadsheet to WCOG to make sure it is included in the official version.

STAKEHOLDERS

B.C. Ministry of Transportation (BCMOT)
Canada Border Services Agency (CBSA)
City of Bellingham *
City of Blaine
City of Everson
City of Ferndale
City of Lynden
City of Nooksack
City of Sumas
Lummi Nation
Port of Bellingham
Probe Information Providers
U.S. Border Patrol
U.S. Bureau of Transportation Statistics (BTS)
U.S. Customs & Border Protection (CBP)
U.S. Federal Highway Administration (FHWA)
WA State Department of Transportation (WSDOT) *
WA State Patrol (WSP)
Whatcom Council of Governments (WCOG) *
Whatcom County
Whatcom Transportation Authority (WTA) *

* These stakeholders participate in the Whatcom ITS Subgroup

ITS SYSTEMS

System Name	Owner	Status	Categories (See Services tab)	Shared With	Agreements	Standards	Functional Reqs.	For More Info
I-5 Monitoring	WSDOT	Existing & Planned	ATMS03, ATMS07, MC03			WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
I-5/Bellingham Traffic Signals	WSDOT	Existing	ATMS03, ATMS07	Bellingham	WSDOT/Bellingham interlocal agreement	WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
Bellingham Street Controls	Bellingham	Existing	ATMS03, ATMS07			WSDOT		Clark Williams cwilliams@cob.org 360-778-7810
Bellingham Traffic Management Center	Bellingham	Existing	APTS09, ATIS06, ATMS01, ATMS03, ATMS07, ATMS13			WSDOT		Clark Williams cwilliams@cob.org 360-778-7810
Cascade Gateway Border Data Warehouse	WCOG	Existing	AD2	BCMOT, BTS, CBP, CBSA, WSDOT	WSDOT/WCOG data ag. planned; BCMOT/WCOG data ag. planned; WSDOT/WCOG funding ag.; Transport Canada/WCOG funding ag.	ATIS General Use Standards Group	Available	Melissa Miller melissa@wcog.org 360-676-6974
Ferndale Street Controls	Ferndale	Existing	ATMS03, ATMS07	Bellingham	Ferndale/Bellingham interlocal agreement			Clark Williams cwilliams@cob.org 360-778-7810
Lynden Street Controls	Lynden	Existing	ATMS03, ATMS07	Bellingham	Lynden/Bellingham interlocal agreement	WSDOT		Clark Williams cwilliams@cob.org 360-778-7810
Northbound Border Traveler Information	WSDOT	Existing	ATIS01, ATIS02, ATMS06	WCOG		WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
Southbound Border Traveler Information	BCMOT	Existing	ATIS01, ATIS02, ATMS06	WCOG				Abid Sivic abid.sivic@gov.bc.ca 604-660-8064
SR 539 ITS System	WSDOT	Existing & Planned	ATMS03, ATMS07			WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
SR 543 ITS System	WSDOT	Existing & Planned	ATMS03, ATMS07			WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
SR 9 ITS System	WSDOT	Existing & Planned	ATMS03, ATMS07			WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
Sumas Border VMS Sign	WSDOT	Planned	ATMS03, ATMS06, ATMS07	Sumas		WSDOT		Rod Fadden rfadden@cityofsumas.com 360-988-5711
Whatcom County Road Weather Stations	Whatcom County	Planned	MC03					Mike Donahue mdonahue@co.whatcom.wa.us
Whatcom County Street Controls	Whatcom County	Existing	ATMS03, ATMS07	Bellingham	Whatcom Co./Bellingham interlocal agreement	WSDOT		Clark Williams cwilliams@cob.org 360-778-7810
WSDOT Traffic Management Center	WSDOT	Existing	ATIS02, ATIS06, ATMS01, ATMS03, ATMS06, ATMS07, ATMS13	WSP	WSDOT/WSP Joint Agreement	WSDOT		Paul Neel neelp@wsdot.wa.gov 360-788-2517
WTA Transit Management ITS System	WTA	Existing & Planned	APTS01, APTS02, APTS03, APTS04, APTS05, APTS06, APTS07, APTS08, APTS09, APTS10, APTS11					Josh Nylander joshn@ridewta.com 360-752-4595
WTA Transit Signal Priority	Bellingham	Existing	APTS09	WTA	City of Bellingham/Whatcom Transportaton Authority Signal Pre-emptoion Interlocal Agreement	WSDOT		Josh Nylander joshn@ridewta.com 360-752-4595

SYSTEM DETAILS

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

System Name	Current Description	Future Description
Bellingham Street Controls	Bellingham's traffic signals are controlled by the Bellingham Traffic Management Center. They have recently established Transit Signal Prioritization within city limits. There are also cameras as part of this system.	Bellingham's traffic signals are in the process of being upgraded to allow for control through the TMC. Future improvements may also include adding loop detector stations to provide real-time traffic information.
Ferndale Street Controls	Ferndale's traffic signals are controlled by the Bellingham Traffic Management Center.	
Lynden Street Controls	Lynden's traffic signals are controlled by the Bellingham Traffic Management Center.	
Whatcom County Street Controls	Whatcom County's traffic signals are controlled by the Bellingham Traffic Management Center.	
Whatcom County Road Weather Stations		Whatcom County intends to install automated road weather information systems on select roadways that would dynamically report conditions.

SYSTEM DETAILS

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

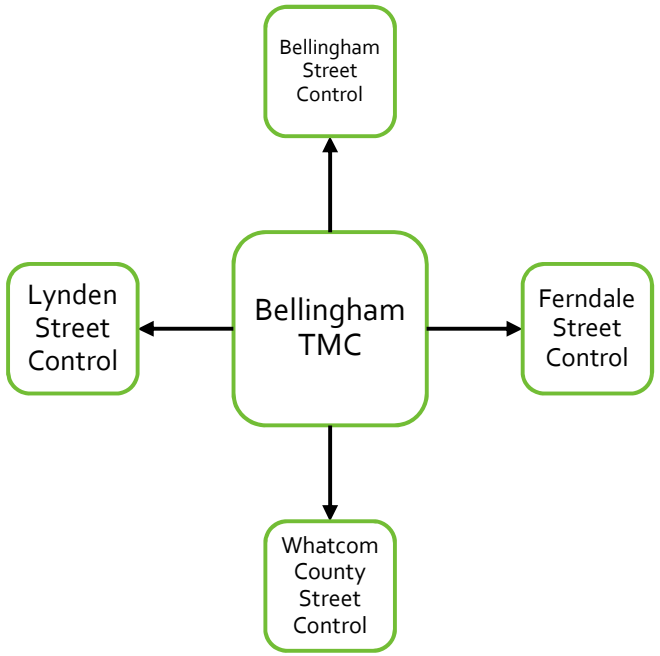
System Name	Current Description	Future Description
SR 539 ITS System	SR 539 currently has connected traffic signals, CCTV, and conduit.	Future improvements to the corridor include additional cameras and conduit, road weather information systems, and additional loop detectors for the border crossing.
SR 543 ITS System	SR 543 currently has connected traffic signals, CCTV, conduit, road weather information systems, and loop detectors.	
SR 9 ITS System	SR 9 currently has CCTV, conduit, cameras, loop detectors, and licence plate readers.	Future improvements to the corridor include additional cameras and conduit, and additional loop detectors for the border crossing.
I-5 Monitoring	The I-5 corridor through Whatcom County currently includes CCTV, loop detectors, and conduit.	Planned enhancements include full freeway ITS in both directions (fiber, detection, vms, cameras, integrated signals, and ramp meters).

SYSTEM DETAILS

System Name	Current Description	Future Description
Bellingham Traffic Management Center (TMC)	The TMC controls traffic signals for Bellingham and other jurisdictions in Whatcom County. It also shares control of the cameras and signals at the I-5/SR 539 intersection.	Future projects for the TMC may include upgrading traffic signals for direct control, sharing additional camera controls with WSDOT, and sharing road weather information systems with Whatcom County.

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

Bellingham Traffic Management Center



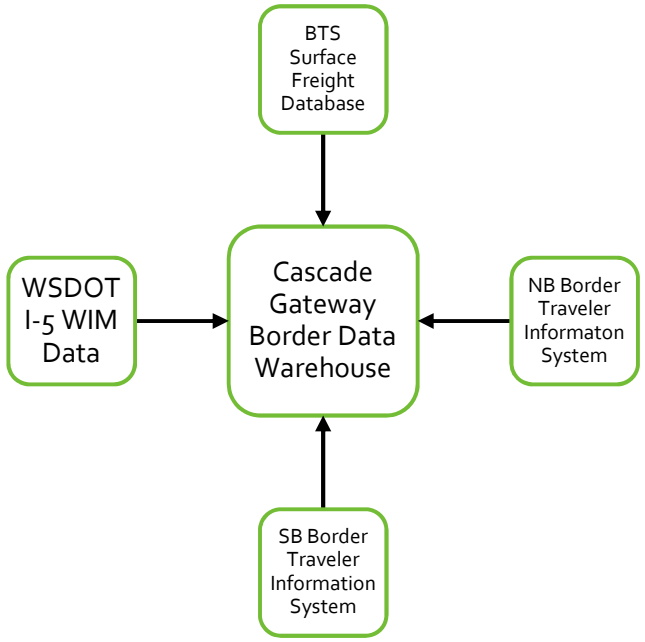
SYSTEM DETAILS

System Name	Current Description	Future Description

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

Cascade Gateway Border Data Warehouse	This online data archive stores data from WSDOT's Northbound Border Travaler Information System and BCMOT's Southbound Border Traveler Information System. It also shares data from the BTS Transborder Surface Freight Database.	The system will be expanded to include data archived from the weigh-in-motion detector on I-5, and possibly also GPS fleet data from a third party.

Cascade Gateway Border Data Warehouse

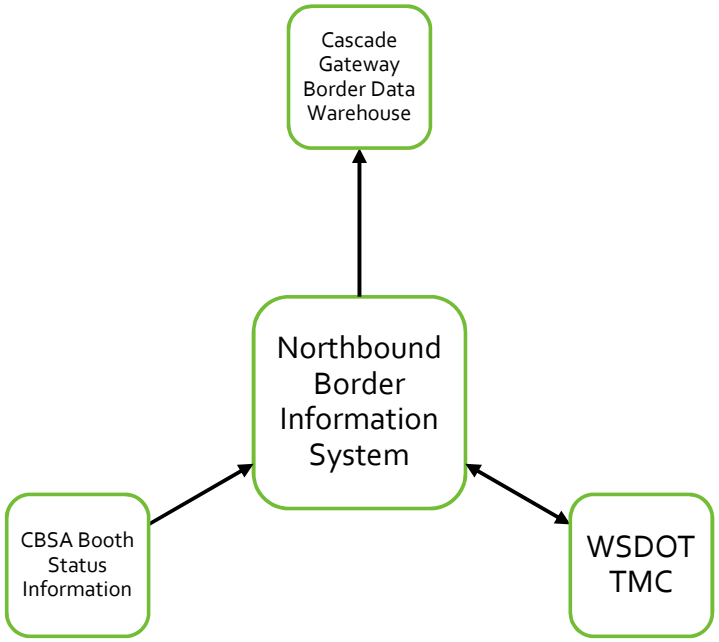


SYSTEM DETAILS

System Name	Current Description	Future Description
Northbound Border Traveler Information System	This system provides real-time border delay information for all four Cascade Gateway ports-of-entry. Information is updated every five minutes and is displayed on two VMS signs, on the WSDOT website, through the WSDOT Twitter account, and via HAR.	The system hopes to inlcude real-time booth status information from CBSA to improve accuracy and allow for dynamic lane management at certain ports-of-entry. It is also going to add additional data stations, fiber, RWIS, CCTV, and VMS signs at select border locations.

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

Northbound Border Traveler Information System

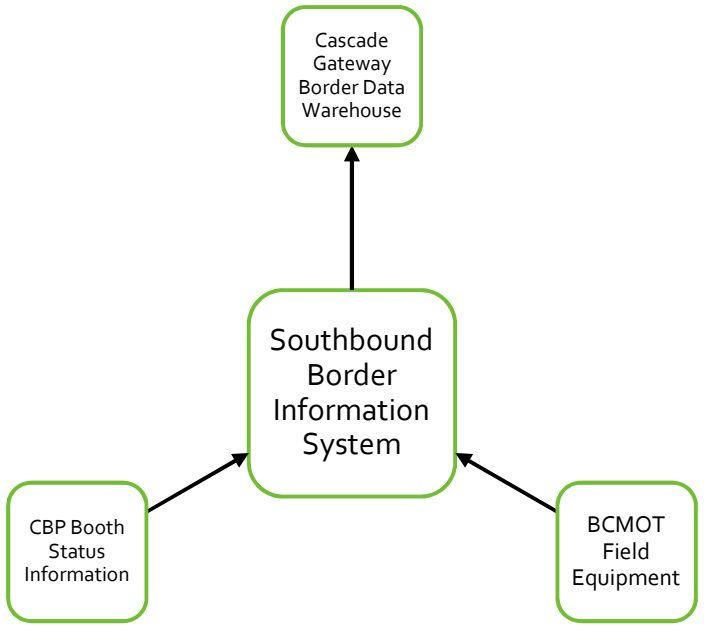


SYSTEM DETAILS

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

System Name	Current Description	Future Description
Southbound Border Traveler Information System	This system provides real-time border delay information for all four Cascade Gateway ports-of-entry. Information is updated every five minutes and is displayed on multiple VMS signs throughout the Lower Mainland, on the BCMOT website, and via HAR.	The system hopes to inlcude real-time booth status information from CBP to improve accuracy and allow for dynamic lane management at certain ports-of-entry. It will also be developing a smart phone app and tie into a regional traveler information system.

Southbound Border Traveler Information System

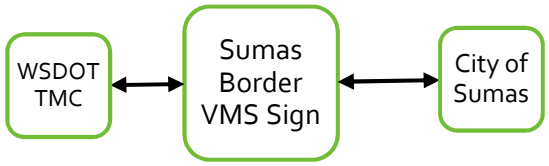


SYSTEM DETAILS

System Name	Current Description	Future Description
Sumas Border VMS Sign		This project provides a VMS sign in Sumas that will alert commercial vehicles crossing the border to re-route and avoid lengthy passenger vehicle queues that may block their passage. The sign will be owned by WSDOT but jointly operated.

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

Sumas Border VMS Sign

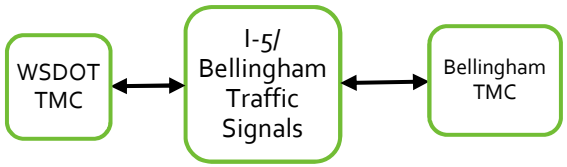


SYSTEM DETAILS

System Name	Current Description	Future Description
I-5/Bellingham Traffic Signals	Although the traffic signals at ramps on I-5 through Bellingham are owned by WSDOT, the system is controlled through the Bellingham TMC. WSDOT's TMC shares access to control the signals.	

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

I-5/Bellingham Traffic Signals



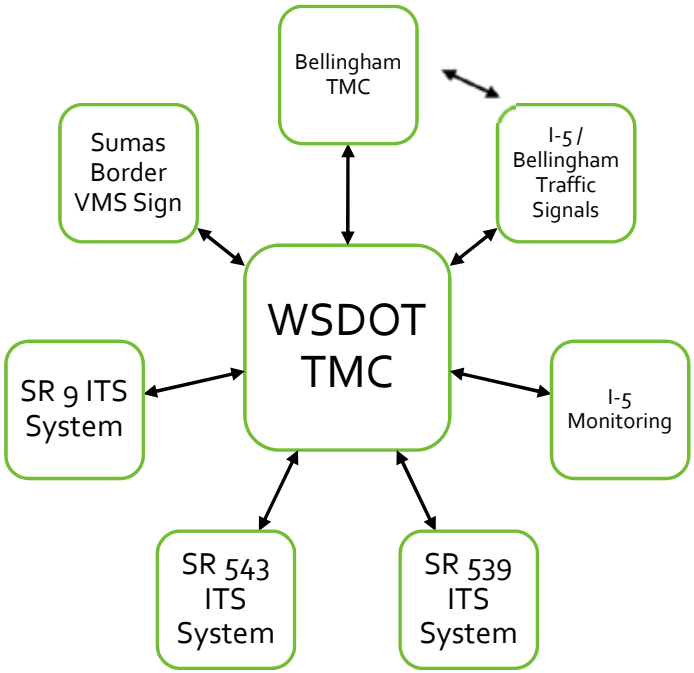
SYSTEM DETAILS

System Name	Current Description	Future Description

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

WSDOT Traffic Management Center	WSDOT has a Bellingham Traffic Management Center and a larger Seattle-region center which takes over for the Bellingham TMC after hours. The center coordinates all state route ITS systems and the Northern Border Traveler Information System.	

WSDOT Traffic Management Center

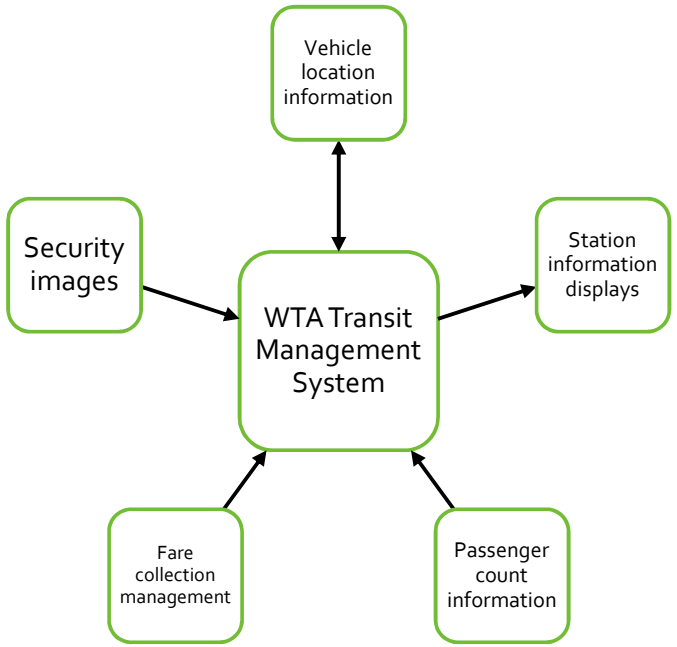


SYSTEM DETAILS

Note: Individual project descriptions are specified in the Transportation Improvement Program (TIP)

System Name	Current Description	Future Description
WTA Transit Management ITS System	WTA currently has automated vehicle location available for its paratransit fleet; on-board security systems for most buses; a transit trip planning tool; and security at transit stations.	Future enhancements to the transit management system may allow for automated vehicle location for fixed route; electronic fare payment; real-time transit traveler information; automated fleet management; and passenger counting.

WTA Transit Management ITS System



Service Packages

Service Package	Service Package Name	Service Package Description
AD1	ITS Data Mart	This service package provides a focused archive that houses data collected and owned by a single agency, district, private sector provider, research institution, or other organization. This focused archive typically includes data covering a single transportation mode and one jurisdiction that is collected from an operational data store and archived for future use. It provides the basic data quality, data privacy, and meta data management common to all ITS archives and provides general query and report access to archive data users.
AD2	ITS Data Warehouse	This service package includes all the data collection and management capabilities provided by the ITS Data Mart, and adds the functionality and interface definitions that allow collection of data from multiple agencies and data sources spanning across modal and jurisdictional boundaries. It performs the additional transformations and provides the additional meta data management features that are necessary so that all this data can be managed in a single repository with consistent formats. The potential for large volumes of varied data suggests additional on-line analysis and data mining features that are also included in this service package in addition to the basic query and reporting user access features offered by the ITS Data Mart.
AD3	ITS Virtual Data Warehouse	This service package provides the same broad access to multimodal, multidimensional data from varied data sources as in the ITS Data Warehouse service package, but provides this access using enhanced interoperability between physically distributed ITS archives that are each locally managed. Requests for data that are satisfied by access to a single repository in the ITS Data Warehouse service package are parsed by the local archive and dynamically translated to requests to remote archives which relay the data necessary to satisfy the request.
APTS01	Transit Vehicle Tracking	This service package monitors current transit vehicle location using an Automated Vehicle Location System. The location data may be used to determine real time schedule adherence and update the transit system's schedule in real-time. Vehicle position may be determined either by the vehicle (e.g., through GPS) and relayed to the infrastructure or may be determined directly by the communications infrastructure. A two-way wireless communication link with the Transit Management Subsystem is used for relaying vehicle position and control measures. Fixed route transit systems may also employ beacons along the route to enable position determination and facilitate communications with each vehicle at fixed intervals. The Transit Management Subsystem processes this information, updates the transit schedule and makes real-time schedule information available to the Information Service Provider.
APTS02	Transit Fixed-Route Operations	This service package performs automated dispatch and system monitoring for fixed-route and flexible-route transit services. This service performs scheduling activities including the creation of schedules, blocks and runs, as well as operator assignment. This service determines the transit vehicle trip performance against the schedule using AVL data and provides information displays at the Transit Management Subsystem. Static and real time transit data is exchanged with Information Service Providers where it is integrated with that from other transportation modes (e.g. rail, ferry, air) to provide the public with integrated and personalized dynamic schedules.

Service Packages

Service Package	Service Package Name	Service Package Description
APTS03	Demand Response Transit Operations	This service package performs automated dispatch and system monitoring for demand responsive transit services. This service performs scheduling activities as well as operator assignment. In addition, this service package performs similar functions to support dynamic features of flexible-route transit services. This package monitors the current status of the transit fleet and supports allocation of these fleet resources to service incoming requests for transit service while also considering traffic conditions. The Transit Management Subsystem provides the necessary data processing and information display to assist the transit operator in making optimal use of the transit fleet. This service includes the capability for a traveler request for personalized transit services to be made through the Information Service Provider (ISP) Subsystem. The ISP may either be operated by a transit management center or be independently owned and operated by a separate service provider. In the first scenario, the traveler makes a direct request to a specific paratransit service. In the second scenario, a third party service provider determines that the paratransit service is a viable means of satisfying a traveler request and makes a reservation for the traveler.
APTS04	Transit Fare Collection Management	This service package manages transit fare collection on-board transit vehicles and at transit stops using electronic means. It allows transit users to use a traveler card or other electronic payment device. Readers located either in the infrastructure or on-board the transit vehicles enable electronic fare payment. Data is processed, stored, and displayed on the transit vehicle and communicated as needed to the Transit Management Subsystem. Two other service packages, ATMS10: Electronic Toll Collection and ATMS16: Parking Facility Management, also provide electronic payment services. These three service packages in combination provide an integrated electronic payment system for transportation services.

Service Packages

Service Package	Service Package Name	Service Package Description
APTS05	Transit Security	This service package provides for the physical security of transit passengers and transit vehicle operators. On-board equipment is deployed to perform surveillance and sensor monitoring in order to warn of potentially hazardous situations. The surveillance equipment includes video (e.g., CCTV cameras), audio systems and/or event recorder systems. The sensor equipment includes threat sensors (e.g., chemical agent, toxic industrial chemical, biological, explosives, and radiological sensors) and object detection sensors (e.g., metal detectors). Transit user or transit vehicle operator activated alarms are provided on-board. Public areas (e.g., transit stops, park and ride lots, stations) are also monitored with similar surveillance and sensor equipment and provided with transit user activated alarms. In addition this service package provides surveillance and sensor monitoring of non-public areas of transit facilities (e.g., transit yards) and transit infrastructure such as bridges, tunnels, and transit railways or bus rapid transit (BRT) guideways. The surveillance equipment includes video and/or audio systems. The sensor equipment includes threat sensors and object detection sensors as described above as well as, intrusion or motion detection sensors and infrastructure integrity monitoring (e.g., rail track continuity checking or bridge structural integrity monitoring). The surveillance and sensor information is transmitted to the Emergency Management Subsystem, as are transit user activated alarms in public secure areas. On-board alarms, activated by transit users or transit vehicle operators are transmitted to both the Emergency Management Subsystem and the Transit Management Subsystem, indicating two possible approaches to implementing this service package. In addition the service package supports remote transit vehicle disabling by the Transit Management Subsystem and transit vehicle operator authentication.
APTS06	Transit Fleet Management	This service package supports automatic transit maintenance scheduling and monitoring. On-board condition sensors monitor system status and transmit critical status information to the Transit Management Subsystem. Hardware and software in the Transit Management Subsystem processes this data and schedules preventative and corrective maintenance. The service package also supports the day to day management of the transit fleet inventory, including the assignment of specific transit vehicles to blocks.
APTS07	Multi-modal Coordination	This service package establishes two way communications between multiple transit and traffic agencies to improve service coordination. Multimodal coordination between transit agencies can increase traveler convenience at transit transfer points and clusters (a collection of stops, stations, or terminals where transfers can be made conveniently) and also improve operating efficiency. Transit transfer information is shared between Multimodal Transportation Service Providers and Transit Agencies.

Service Packages

Service Package	Service Package Name	Service Package Description
APTS08	Transit Traveler Information	This service package provides transit users at transit stops and on-board transit vehicles with ready access to transit information. The information services include transit stop annunciation, imminent arrival signs, and real-time transit schedule displays that are of general interest to transit users. Systems that provide custom transit trip itineraries and other tailored transit information services are also represented by this service package.
APTS09	Transit Signal Priority	This service package determines the need for transit priority on routes and at certain intersections and requests transit vehicle priority at these locations. The signal priority may result from limited local coordination between the transit vehicle and the individual intersection for signal priority or may result from coordination between transit management and traffic management centers. Coordination between traffic and transit management is intended to improve on-time performance of the transit system to the extent that this can be accommodated without degrading overall performance of the traffic network.
APTS10	Transit Passenger Counting	This service package counts the number of passengers entering and exiting a transit vehicle using sensors mounted on the vehicle and communicates the collected passenger data back to the management center. The collected data can be used to calculate reliable ridership figures and measure passenger load information at particular stops.
APTS11	Multimodal Connection Protection	This service package supports the coordination of multimodal services to optimize the travel time of travelers as they move from mode to mode (or to different routes within a single mode). A near term function supported by this service package would be for a single transit agency to coordinate crossing routes so that passengers on one route would have the opportunity to transfer with minimum wait time to another route within the same transit system. The next level of complexity of this service package would be for this coordination to occur across transit agencies, or between transit agencies and other modes of transportation. The most advanced functions of this service package would be to track the route of an individual traveler and ensure that connections are properly scheduled on an individual basis. This final capability represents a long-term functionality, which could be managed either through an Information Serviced Provider or through a Transit Management subsystem.
ATIS01	Broadcast Traveler Information	This service package collects traffic conditions, advisories, general public transportation, toll and parking information, incident information, roadway maintenance and construction information, air quality and weather information, and broadcasts the information to travelers using technologies such as FM subcarrier, satellite radio, cellular data broadcasts, and Internet web casts. The information may be provided directly to travelers or provided to merchants and other traveler service providers so that they can better inform their customers of travel conditions. Different from the service package ATMS06 - Traffic Information Dissemination, which provides localized HAR and DMS information capabilities, ATIS01 provides a wide area digital broadcast service. Successful deployment of this service package relies on availability of real-time traveler information from roadway instrumentation, probe vehicles or other sources.

Service Packages

Service Package	Service Package Name	Service Package Description
ATIS02	Interactive Traveler Information	This service package provides tailored information in response to a traveler request. Both real-time interactive request/response systems and information systems that "push" a tailored stream of information to the traveler based on a submitted profile are supported. The traveler can obtain current information regarding traffic conditions, roadway maintenance and construction, transit services, ride share/ride match, parking management, detours and pricing information. Although the Internet is the predominate network used for traveler information dissemination, a range of two-way wide-area wireless and fixed-point to fixed-point communications systems may be used to support the required data communications between the traveler and Information Service Provider. A variety of interactive devices may be used by the traveler to access information prior to a trip or en route including phone via a 511-like portal and web pages via kiosk, personal digital assistant, personal computer, and a variety of in-vehicle devices. This service package also allows value-added resellers to collect transportation information that can be aggregated and be available to their personal devices or remote traveler systems to better inform their customers of transportation conditions. Successful deployment of this service package relies on availability of real-time transportation data from roadway instrumentation, transit, probe vehicles or other means. A traveler may also input personal preferences and identification information via a “traveler card” that can convey information to the system about the traveler as well as receive updates from the system so the card can be updated over time.
ATIS03	Autonomous Route Guidance	This service package relies on in-vehicle sensory, location determination, computational, map database, and interactive driver interface equipment to enable route planning and detailed route guidance based on static, stored information. No communication with the infrastructure is assumed or required. Identical capabilities are available to the traveler outside the vehicle by integrating a similar suite of equipment into portable devices.
ATIS04	Dynamic Route Guidance	This service package offers advanced route planning and guidance that is responsive to current conditions. The package combines the autonomous route guidance user equipment with a digital receiver capable of receiving real-time traffic, transit, and road condition information, which is considered by the user equipment in provision of route guidance.
ATIS05	ISP Based Trip Planning and Route Guidance	This service package offers the user trip planning and en-route guidance services. It generates a trip plan, including a multimodal route and associated service information (e.g., parking information), based on traveler preferences and constraints. Routes may be based on static information or reflect real time network conditions. Unlike ATIS3 and ATIS4, where the user equipment determines the route, the route determination functions are performed in the Information Service Provider Subsystem in this service package. The trip plan may be confirmed by the traveler and advanced payment and reservations for transit and alternate mode (e.g., airline, rail, and ferry) trip segments, and ancillary services (e.g., parking reservations) are accepted and processed. The confirmed trip plan may include specific routing information that can be supplied to the traveler as general directions or as turn-by-turn route guidance depending on the level of user equipment.

Service Packages

Service Package	Service Package Name	Service Package Description
ATIS06	Transportation Operations Data Sharing	This service package makes real-time transportation operations data available to transportation system operators. The Information Service Provider collects, processes, and stores current information on traffic and travel conditions and other information about the current state of the transportation network and makes this information available to transportation system operators, facilitating the exchange of qualified, real-time information between agencies. Using the provided information, transportation system operators can manage their individual systems based on an overall view of the regional transportation system. The regional transportation operations data resource represented by the Information Service Provider may be implemented as a web application that provides a web-based access to system operators, an enterprise database that provides a network interface to remote center applications, or any implementation that supports regional sharing of real-time transportation operations data.
ATIS07	Travel Services Information and Reservation	This service package provides travel information and reservation services to the user. These additional traveler services may be provided using the same basic user equipment used for Interactive Traveler Information. This service package provides multiple ways for accessing information either while en route in a vehicle using wide-area wireless communications or pre-trip via fixed-point to fixed-point connections.
ATIS08	Dynamic Ridesharing	This service package provides dynamic ridesharing/ride matching services to travelers. This service could allow near real time ridesharing reservations to be made through the same basic user equipment used for Interactive Traveler Information. This ridesharing/ride matching capability also includes arranging connections to transit or other multimodal services.
ATIS09	In Vehicle Signing	This service package augments regulatory, warning, and informational signs and signals by providing information directly to drivers through in-vehicle devices. The information provided would include static sign information (e.g., stop, curve warning, guide signs, service signs, and directional signs) and dynamic information (e.g., current signal states including highway intersection and highway-rail intersection status and local conditions warnings identified by local environmental sensors). It includes short range communications between field equipment and the vehicle and connections to the Traffic Management Subsystem for monitoring and control. This service package also includes the capability for maintenance and construction, transit, and emergency vehicles to transmit sign information to vehicles in the vicinity so that in vehicle signing can be used without fixed infrastructure in work zones, around incidents, and in areas where transit operations impacts traffic.
ATIS10	Short Range Communications Traveler Information	This service package provides location-specific or situation-relevant information to travelers in vehicles using Dedicated Short Range Communications (DSRC) infrastructure supporting mobility applications for connected vehicles. DSRC is used to deliver real-time traveler information including travel times, incident information, road conditions, and emergency traveler information to vehicles as they pass DSRC roadside equipment along their route. This service package provides public information that is available to all equipped vehicles in the vicinity of the roadside equipment.

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS01	Network Surveillance	This service package includes traffic detectors, other surveillance equipment, the supporting field equipment, and fixed-point to fixed-point communications to transmit the collected data back to the Traffic Management Subsystem. The derived data can be used locally such as when traffic detectors are connected directly to a signal control system or remotely (e.g., when a CCTV system sends data back to the Traffic Management Subsystem). The data generated by this service package enables traffic managers to monitor traffic and road conditions, identify and verify incidents, detect faults in indicator operations, and collect census data for traffic strategy development and long range planning. The collected data can also be analyzed and made available to users and the Information Service Provider Subsystem.
ATMS02	Traffic Probe Surveillance	This service package provides an alternative approach for surveillance of the roadway network. Two general implementation paths are supported by this service package: 1) wide-area wireless communications between the vehicle and center is used to communicate vehicle operational information and status directly to the center, and 2) dedicated short range communications between passing vehicles and the roadside is used to provide equivalent information to the center. The first approach leverages wide area communications equipment that may already be in the vehicle to support personal safety and advanced traveler information services. The second approach utilizes vehicle equipment that supports toll collection, in-vehicle signing, and other short range communications applications identified within the architecture. The service package enables transportation operators and traveler information providers to monitor road conditions, identify incidents, analyze and reduce the collected data, and make it available to users and private information providers. It requires one of the communications options identified above, on-board equipment, data reduction software, and fixed-point to fixed-point links between centers to share the collected information. Both “Opt out” and “Opt in” strategies are available to ensure the user has the ability to turn off the probe functions to ensure individual privacy. Due to the large volume of data collected by probes, data reduction techniques are required, such as the ability to identify and filter out-of-bounds or extreme data reports.
ATMS03	Traffic Signal Control	This service package provides the central control and monitoring equipment, communication links, and the signal control equipment that support traffic control at signalized intersections. A range of traffic signal control systems are represented by this service package ranging from fixed-schedule control systems to fully traffic responsive systems that dynamically adjust control plans and strategies based on current traffic conditions and priority requests. This service package is generally an intra-jurisdictional package. Systems that achieve coordination across jurisdictions by using a common time base or other strategies that do not require real time coordination would also be represented by this package. Coordination of traffic signal systems using real-time communications is covered in the ATMS07-Regional Traffic Management service package. This service package is consistent with typical traffic signal control systems.

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS04	Traffic Metering	This service package provides central monitoring and control, communications, and field equipment that support metering of traffic. It supports the complete range of metering strategies including ramp, interchange, and mainline metering. This package incorporates the instrumentation included in the Network Surveillance service package (traffic sensors are used to measure traffic flow and queues) to support traffic monitoring so responsive and adaptive metering strategies can be implemented. Also included is configurable field equipment to provide information to drivers approaching a meter, such as advance warning of the meter, its operational status (whether it is currently on or not, how many cars per green are allowed, etc.), lane usage at the meter (including a bypass lane for HOVs) and existing queue at the meter.
ATMS05	HOV Lane Management	This service package manages HOV lanes by coordinating freeway ramp meters and connector signals with HOV lane usage signals. Preferential treatment is given to HOV lanes using special bypasses, reserved lanes, and exclusive rights-of-way that may vary by time of day. Vehicle occupancy detectors may be installed to verify HOV compliance and to notify enforcement agencies of violations.
ATMS06	Traffic Information Dissemination	This service package provides driver information using roadway equipment such as dynamic message signs or highway advisory radio. A wide range of information can be disseminated including traffic and road conditions, closure and detour information, travel restrictions, incident information, and emergency alerts and driver advisories. This package provides information to drivers at specific equipped locations on the road network. Careful placement of the roadway equipment provides the information at points in the network where the drivers have recourse and can tailor their routes to account for the new information. This package also covers the equipment and interfaces that provide traffic information from a traffic management center to the media (for instance via a direct tie-in between a traffic management center and radio or television station computer systems), Transit Management, Emergency Management, and Information Service Providers. A link to the Maintenance and Construction Management subsystem allows real time information on road/bridge closures and restrictions due to maintenance and construction activities to be disseminated. The sharing of transportation operations data described in this service package also supports other services like ATMS09-Traffic Decision Support and Demand Management.

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS07	Regional Traffic Management	This service package provides for the sharing of traffic information and control among traffic management centers to support regional traffic management strategies. Regional traffic management strategies that are supported include inter-jurisdictional, real-time coordinated traffic signal control systems and coordination between freeway operations and traffic signal control within a corridor. This service package advances the ATMS03-Traffic Signal Control and ATMS04-Traffic Metering service packages by adding the communications links and integrated control strategies that enable integrated, interjurisdictional traffic management. The nature of optimization and extent of information and control sharing is determined through working arrangements between jurisdictions. This package relies principally on roadside instrumentation supported by the Traffic Signal Control and Traffic Metering service packages and adds hardware, software, and fixed-point to fixed-point communications capabilities to implement traffic management strategies that are coordinated between allied traffic management centers. Several levels of coordination are supported from sharing of information through sharing of control between traffic management centers.
ATMS08	Traffic Incident Management System	This service package manages both unexpected incidents and planned events so that the impact to the transportation network and traveler safety is minimized. The service package includes incident detection capabilities through roadside surveillance devices (e.g. CCTV) and through regional coordination with other traffic management, maintenance and construction management and emergency management centers as well as rail operations and event promoters. Information from these diverse sources is collected and correlated by this service package to detect and verify incidents and implement an appropriate response. This service package supports traffic operations personnel in developing an appropriate response in coordination with emergency management, maintenance and construction management, and other incident response personnel to confirmed incidents. The response may include traffic control strategy modifications or resource coordination between center subsystems. Incident response also includes presentation of information to affected travelers using the Traffic Information Dissemination service package and dissemination of incident information to travelers through the Broadcast Traveler Information or Interactive Traveler Information service packages. The roadside equipment used to detect and verify incidents also allows the operator to monitor incident status as the response unfolds. The coordination with emergency management might be through a CAD system or through other communication with emergency field personnel. The coordination can also extend to tow trucks and other allied response agencies and field service personnel.

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS09	Transportation Decision Support and Demand Management	This service package recommends courses of action to traffic operations personnel based on an assessment of current and forecast road network performance. Recommendations may include predefined incident response plans and regional surface street and freeway control strategies that correct network imbalances. Where applicable, this service package also recommends transit, parking, and toll strategies to influence traveler route and mode choices to support travel demand management (TDM) programs and policies managing both traffic and the environment. TDM recommendations are coordinated with transit, parking, and toll administration centers to support regional implementation of TDM strategies. Incident response and congestion management recommendations are implemented by the local traffic management center and coordinated with other regional centers by other service packages (see ATMS07-Regional Traffic Management and ATMS08-Traffic Incident Management). All recommendations are based on historical evaluation, real-time assessment, and forecast of the roadway network performance based on predicted travel demand patterns. Traffic data is collected from sensors and surveillance equipment as well as other transportation management centers (see ATIS06-Transportation Operations Data Sharing). Forecasted traffic loads are derived from historical data and route plans supplied by the Information Service Provider Subsystem. This service package also collects air quality, parking availability, transit usage, and vehicle occupancy data to support TDM, where applicable.
ATMS10	Electronic Toll Collection	This service package provides toll operators with the ability to collect tolls electronically and detect and process violations. The fees that are collected may be adjusted to implement demand management strategies. Field-Vehicle Communication between the roadway equipment and the vehicle is required as well as Fixed Point-Fixed Point interfaces between the toll collection equipment and transportation authorities and the financial infrastructure that supports fee collection. Toll violations are identified and electronically posted to vehicle owners. Standards, inter-agency coordination, and financial clearinghouse capabilities enable regional, and ultimately national interoperability for these services. Two other service packages, APTS04: Transit Fare Collection Management and ATMS16: Parking Facility Management also provide electronic payment services. These three service packages in combination provide an integrated electronic payment system for transportation services. The vehicle equipment and roadside readers that these systems utilize can also be used to collect road use statistics for highway authorities. This data can be collected as a natural by-product of the toll collection process or collected by separate readers that are dedicated to probe data collection.

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS11	Emissions Monitoring and Management	This service package monitors individual vehicle emissions and provides general air quality monitoring using distributed sensors to collect the data. The collected information is transmitted to the emissions management subsystem for processing. Both area wide air quality monitoring and point emissions monitoring are supported by this service package. For area wide monitoring, this service package measures air quality, identifies sectors that are non-compliant with air quality standards, and collects, stores and reports supporting statistical data. For point emissions monitoring, this service package collects data from on-board diagnostic systems and measures tail pipe emissions to identify vehicles that exceed emissions standards and/or clean vehicles that could be released from standard emissions tests, depending on policy and regulations. Summary emissions information or warnings can also be displayed to drivers. The gathered information can be used to implement environmentally sensitive TDM programs, policies, and regulations.
ATMS12	Roadside Lighting System Control	This service package includes systems that manage electrical lighting systems by monitoring operational conditions and using the lighting controls to vary the amount of light provided along the roadside. These systems allow a center to control lights based on traffic conditions, time-of-day, and the occurrence of incidents. Such systems can increase the safety of a roadway segment by increasing lighting and conserve energy at times when conditions warrant a reduction in the amount of lighting.
ATMS13	Standard Railroad Grade Crossing	This service package manages highway traffic at highway-rail intersections (HRIs) where operational requirements do not dictate more advanced features (e.g., where rail operational speeds are less than 80 miles per hour). Both passive (e.g., the crossbuck sign) and active warning systems (e.g., flashing lights and gates) are supported. (Note that passive systems exercise only the single interface between the roadway subsystem and the driver in the architecture definition.) These traditional HRI warning systems may also be augmented with other standard traffic management devices. The warning systems are activated on notification by interfaced wayside equipment of an approaching train. The equipment at the HRI may also be interconnected with adjacent signalized intersections so that local control can be adapted to highway-rail intersection activities. Health monitoring of the HRI equipment and interfaces is performed; detected abnormalities are reported to both highway and railroad officials through wayside interfaces and interfaces to the traffic management subsystem.

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Service Package	Service Package Name	Service Package Description
ATMS14	Advanced Railroad Grade Crossing	This service package manages highway traffic at highway-rail intersections (HRIs) where operational requirements demand advanced features (e.g., where rail operational speeds are greater than 80 miles per hour). This service package includes all capabilities from the Standard Railroad Grade Crossing service package and augments these with additional safety features to mitigate the risks associated with higher rail speeds. The active warning systems supported by this service package include positive barrier systems that preclude entrance into the intersection when the barriers are activated. Like the Standard package, the HRI equipment is activated on notification by wayside interface equipment which detects, or communicates with the approaching train. In this service package, the wayside equipment provides additional information about the arriving train so that the train's direction of travel, estimated time of arrival, and estimated duration of closure may be derived. This enhanced information may be conveyed to the driver prior to, or in context with, warning system activation. This service package also includes additional detection capabilities that enable it to detect an entrapped or otherwise immobilized vehicle within the HRI and provide an immediate notification to highway and railroad officials.
ATMS15	Railroad Operations Coordination	This service package provides an additional level of strategic coordination between freight rail operations and traffic management centers. Rail operations provides train schedules, maintenance schedules, and any other forecast events that will result in highway-rail intersection (HRI) closures. This information is used to develop forecast HRI closure times and durations that may be used in advanced traffic control strategies or to enhance the quality of traveler information.
ATMS16	Parking Facility Management	This service package provides enhanced monitoring and management of parking facilities. It assists in the management of parking operations, coordinates with transportation authorities, and supports electronic collection of parking fees. This service package collects current parking status, shares this data with Information Service Providers and Traffic Management, and collects parking fees using the same in-vehicle equipment utilized for electronic toll collection or contact or proximity traveler cards used for electronic payment. Two other service packages, APTS04: Transit Fare Collection Management and ATMS10: Electronic Toll Collection also provide electronic payment services. These three service packages in combination provide an integrated electronic payment system for transportation services.
ATMS17	Regional Parking Management	This service package supports communication and coordination between equipped parking facilities and also supports regional coordination between parking facilities and traffic and transit management systems. This service package also shares information with transit management systems and information service providers to support multimodal travel planning, including parking reservation capabilities. Information including current parking availability, system status, and operating strategies are shared to enable local parking facility management that supports regional transportation strategies.

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Service Package	Service Package Name	Service Package Description
ATMS18	Reversible Lane Management	This service package provides for the management of reversible lane facilities. In addition to standard surveillance capabilities, this service package includes sensory functions that detect wrong-way vehicles and other special surveillance capabilities that mitigate safety hazards associated with reversible lanes. The package includes the field equipment, physical lane access controls, and associated control electronics that manage and control these special lanes. This service package also includes the equipment used to electronically reconfigure intersections and manage right-of-way to address dynamic demand changes and special events.
ATMS19	Speed Warning and Enforcement	This service package monitors vehicle speeds and supports warning drivers when their speed is excessive. Also the service includes notifications to an enforcement agency to enforce the speed limit of the roadway. Speed monitoring can be made via spot speed or average speed measurements. Roadside equipment can display the speed of passing vehicles and/or suggest a safe driving speed. Environmental conditions and vehicle characteristics may be monitored and factored into the safe speed advisories that are provided to the motorist. For example, warnings can be generated recognizing the limitations of a given vehicle for the geometry of the roadway such as rollover risk for tall vehicles. This service focuses on monitoring of vehicle speeds and enforcement of the speed limit while the variable speed limits service (covered in ATMS22-Variable Speed Limits service package) focuses on varying the posted speed limits to create more uniform speeds along a roadway, to promote safer driving during adverse conditions (such as fog) and/or to reduce air pollution.
ATMS20	Drawbridge Management	This service package supports systems that manage drawbridges at rivers and canals and other multimodal crossings (other than railroad grade crossings which are specifically covered by other service packages). The equipment managed by this service package includes control devices (e.g., gates, warning lights, dynamic message signs) at the drawbridge as well as the information systems that are used to keep travelers apprised of current and forecasted drawbridge status.
ATMS21	Roadway Closure Management	This service package closes roadways to vehicular traffic when driving conditions are unsafe, maintenance must be performed, and other scenarios where access to the roadway must be prohibited. The service package includes automatic or remotely controlled gates or barriers that control access to roadway segments including ramps and traffic lanes. Remote control systems allow the gates to be controlled from a central location or from a vehicle at the gate/barrier location, improving system efficiency and reducing personnel exposure to unsafe conditions during severe weather and other situations where roads must be closed. Surveillance systems allow operating personnel to visually verify the safe activation of the closure system and driver information systems (e.g., DMS) provide closure information to motorists in the vicinity of the closure. The equipment managed by this service package includes the control and monitoring systems, the field devices (e.g., gates, warning lights, DMS, CCTV cameras) at the closure location(s), and the information systems that notify other systems of a closure. This service package covers general road closure applications; specific closure systems that are used at railroad grade crossings, drawbridges, reversible lanes, etc. are covered by other ATMS service packages.

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Service Package	Service Package Name	Service Package Description
ATMS22	Variable Speed Limits	This service package sets variable speed limits along a roadway to create more uniform speeds, to promote safer driving during adverse conditions (such as fog), and/or to reduce air pollution. Also known as speed harmonization, this service monitors traffic and environmental conditions along the roadway. Based on the measured data, the system calculates and sets suitable speed limits, usually by lane. Equipment over and along the roadway displays the speed limits and additional information such as basic safety rules and current traffic information. The system can be centrally monitored and controlled by a traffic management center or it can be autonomous. This service establishes variable speed limits and communicates the speed limits to drivers. Speed warnings and enforcement of speeds limits, including variable speed limits, is covered in the ATMS19-Automated Speed Warning and Enforcement service package. Variable speed limits are an Active Traffic Management (ATM) strategy and are typically used in conjunction with other ATM strategies (such as ATMS23-Dynamic Lane Management and Shoulder Use and ATMS24-Dynamic Roadway Warning).
ATMS23	Dynamic Lane Management and Shoulder Use	This service package provides for active management of travel lanes along a roadway. The package includes the field equipment, physical overhead lane signs and associated control electronics that are used to manage and control specific lanes and/or the shoulders. This equipment can be used to change the lane configuration on the roadway according to traffic demand and lane destination along a typical roadway section or on approach to or access from a border crossing, multimodal crossing or intermodal freight depot. This package can be used to allow temporary or interim use of shoulders as travel lanes. The equipment can be used to electronically reconfigure intersections and interchanges and manage right-of-way dynamically including merges. Also, lanes can be designated for use by special vehicles only, such as buses, high occupancy vehicles (HOVs), vehicles attending a special event, etc. Prohibitions or restrictions of types of vehicles from using particular lanes can be implemented. The lane management system can be centrally monitored and controlled by a traffic management center or it can be autonomous. This service also can include automated enforcement equipment that notifies the enforcement agency of violators of the lane controls. Dynamic lane management and shoulder use is an Active Traffic Management (ATM) strategy and is typically used in conjunction with other ATM strategies (such as ATMS22-Variable Speed Limits and ATMS24-Dynamic Roadway Warning).

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS24	Dynamic Roadway Warning	This service package includes systems that dynamically warn drivers approaching hazards on a roadway. Such hazards include roadway weather conditions, road surface conditions, traffic conditions including queues, obstacles or animals in the roadway and any other transient event that can be sensed. These dynamic roadway warning systems can alert approaching drivers via warning signs, flashing lights, in-vehicle messages, etc. Such systems can increase the safety of a roadway by reducing the occurrence of incidents. The system can be centrally monitored and controlled by a traffic management center or it can be autonomous. Speed warnings that consider the limitations of a given vehicle for the geometry of the roadway (e.g., rollover risk for tall vehicles) are not included in this service package but are covered by the ATMS19 – Speed Warning and Enforcement service package. Roadway warning systems, especially queue warning systems are an Active Traffic Management (ATM) strategy and are typically used in conjunction with other ATM strategies (such as ATMS22-Variable Speed Limits and ATMS23-Dynamic Lane Management and Shoulder Use).

Service Packages

Service Package	Service Package Name	Service Package Description
ATMS25	VMT Road User Payment	This service package facilitates charging fees to roadway vehicle owners for using specific roadways with potentially differential payment rates based on time-of-day, which specific roadway is used, and class of vehicle (a local policy decision by each roadway owner). Vehicle owners need only register with a single payment entity of their choice (a participating state, municipal, or regional DOT, an authority, or a private entity), and payments are reconciled by the entity receiving payment (and travel history) with all roadway owners that participate in the VMT payment scheme, which may also include the Federal government. Vehicle owners would pay nothing for distances traveled where there are no payments required (e.g. in jurisdictions that have not implemented a distance based payment or for roadway operators that collect payment using traditional tolls), although a Federal payment rate might cover some or all roadway operations (a Federal policy decision). Basic operation depends on the vehicle tracking its own location, and periodically reporting its travel history to the registered entity receiving payment using C-V communications. Roadway VMT Payment can duplicate the functions of current toll road payment schemes based on F-V communications, parking payment functions, as well as augment and/or replace federal and state gasoline taxes (which are otherwise ineffective for vehicles that don't use gasoline). The payments per distance traveled can be structured to provide some amount of demand management by motivating vehicle owner travel choices to minimize payments. The use of this service package for demand management is a local policy decision by each roadway owner. Alternatively, for vehicle owners that prefer a strictly odometer ("high privacy") based payment approach (that does not need to record and report specific locations and times of travel), then the payment amount may assume a payment rate corresponding to the most expensive roads at the most expensive times. Specific payment rates for this option are a local policy decision. Odometer readings (from vehicle registration and periodic safety inspection events stored at the state DOT where the vehicle is registered) can be used as a back-office audit to detect gross vehicle equipment failures and fraud (e.g. disabling or dismounting vehicle equipment). In addition, vehicle equipment can be read by fixed or mobile roadside equipment using F-V communications for a more immediate audit of in-vehicle equipment and enforcement (for vehicle owners that have not chosen the odometer-only method of payment). Payment can be made periodically through a normal bill/payment cycle that is part of the registration process a vehicle owner chooses, or using a vehicle mounted or entered payment instrument/information with vehicle operator or owner initiated payment points. This facilitates payment by vehicle operators (instead of owners) for various commercial operations such as rental vehicles, taxi operators.

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Service Package	Service Package Name	Service Package Description
ATMS26	Mixed Use Warning Systems	This service package supports the sensing and warning systems used to interact with pedestrians, bicyclists, and other vehicles that operate on the main vehicle roadways, or on pathways which intersect the main vehicle roadways. These systems could allow automated warning or active protection for this class of users.
AVSS01	Vehicle Safety Monitoring	This service package will diagnose critical components of the vehicle and warn the driver of potential dangers. On-board sensors will determine the vehicle's condition, performance, on-board safety data, and display information.
AVSS02	Driver Safety Monitoring	This service package will determine the driver's condition, and warn the driver of potential dangers. On-board sensors will determine the driver's condition, performance, on-board safety data, and display information.
AVSS03	Longitudinal Safety Warning	This service package allows for longitudinal warning. It utilizes safety sensors and collision sensors. It requires on-board sensors to monitor the areas in front of and behind the vehicle and present warnings to the driver about potential hazards.
AVSS04	Lateral Safety Warning	This service package allows for lateral warning. It utilizes safety sensors and collision sensors. It requires on-board sensors to monitor the areas to the sides of the vehicle and present warnings to the driver about potential hazards.
AVSS05	Intersection Safety Warning	This service package monitors vehicles approaching an intersection and warns drivers when hazardous conditions are detected. The service package detects impending violations (e.g., red-light violations) and potential conflicts between vehicles occupying or approaching the intersection (e.g., situations where a left turn would be unsafe because of approaching traffic). When a potentially hazardous condition is detected, a warning is communicated to the involved vehicles using short range communications and/or signs/signals in the intersection.
AVSS06	Pre-Crash Restraint Deployment	This service package provides in-vehicle sensors and on-board communications to monitor the vehicle's local environment, determine collision probability and deploy a pre-crash safety system. It will include on-board sensors to measure lateral and longitudinal gaps and together with weather and roadway conditions will determine lateral and longitudinal collision probability. It will exchange messages with other equipped vehicles to determine the precise location of surrounding vehicles. It will deploy a pre-crash safety system when a crash is imminent.
AVSS07	Driver Visibility Improvement	This service package will enhance driver visibility using an enhanced vision system. On-board display hardware is needed
AVSS08	Advanced Vehicle Longitudinal Control	This service package automates the speed and headway control functions on board the vehicle. It utilizes safety sensors and collision sensors combined with vehicle dynamics processing to control the throttle and brakes. It requires on-board sensors to measure longitudinal gaps and a processor for controlling the vehicle speed.
AVSS09	Advanced Vehicle Lateral Control	This service package automates the steering control on board the vehicle. It utilizes safety sensors and collision sensors combined with vehicle dynamics processing to control the steering. It requires on-board sensors to measure lane position and lateral deviations and a processor for controlling the vehicle steering.

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Service Package	Service Package Name	Service Package Description
AVSS10	Intersection Collision Avoidance	This service package will determine the probability of an intersection collision and provide timely warnings to approaching vehicles so that avoidance actions can be taken. This service package builds on the Intersection Safety Warning field and in-vehicle equipment and adds equipment in the vehicle that can take control of the vehicle to avoid intersection violations and potential collisions. The same sensors and communications equipment in the roadway infrastructure are used to assess vehicle locations and speeds near an intersection. This information is determined and communicated to the approaching vehicle using a short range communications system. The vehicle uses this information to develop control actions which alter the vehicle's speed and steering control and potentially activate its pre-crash safety system.
AVSS11	Automated Vehicle Operations	This service package enables "hands-off" operation of the vehicle on automated portions of the highway system. Implementation requires lateral lane holding, vehicle speed and steering control. Communications between vehicles and between the vehicles and supporting infrastructure equipment supports cooperative check-in to the automated portion of the system and transition to automated mode, coordination of maneuvers between vehicles in automated mode, and checkout from the automated system as the driver resumes control of the vehicle.
AVSS12	Cooperative Vehicle Safety Systems	This service package enhances the on-board longitudinal and lateral warning stand-alone systems by exchanging messages with other surrounding vehicles and roadside equipment. Vehicles send out information concerning their location, speed, and direction to surrounding vehicles. The roadside equipment provides information about potential safety hazards in the vehicle path such as stalled (unequipped) vehicles, wrong-way drivers, debris, or water hazards. The on-board systems can then process this information and present warnings to the driver including headway warnings, merge warnings, unsafe passing warnings, and warnings about hazards detected in the vehicle path. Special messages from approaching emergency vehicles may also be received and processed.
CVO01	Carrier Operations and Fleet Management	This service package provides the capabilities to manage a fleet of commercial vehicles. The Fleet and Freight Management subsystem provides the route for a commercial vehicle by either utilizing an in-house routing software package or an Information Service Provider. Routes generated by either approach are constrained by hazardous materials and other restrictions (such as height or weight). Any such restricted areas are determined by the Commercial Vehicle Administration. A route would be electronically sent to the Commercial Vehicle with any appropriate dispatch instructions. The location of the Commercial Vehicle can be monitored by the Fleet and Freight Management subsystem and routing changes can be made depending on current road network conditions. Once a route has been assigned, changes must be coordinated between the Fleet and Freight Management subsystem and the Commercial Vehicle. Commercial Vehicle Drivers would be alerted to any changes in route from the planned route and given an opportunity to justify a rerouting. Any unauthorized or unexpected route changes by the Commercial Vehicle will register a route deviation alert with the Fleet and Freight Management subsystem. The Fleet and Freight Management subsystem can also notify local public safety agencies of the route deviation when appropriate (e.g., if there is safety sensitive HAZMAT being carried), by sending an alarm to the Emergency Management subsystem.

Service Packages

Service Package	Service Package Name	Service Package Description
CVO02	Freight Administration	This service package tracks the movement of cargo and monitors the cargo condition. Interconnections are provided to intermodal freight shippers and intermodal freight depots for tracking of cargo from source to destination. In addition to the usual cargo monitoring required to insure that cargo gets from origin to destination, the Fleet and Freight Management subsystem monitors shipments to make sure that no tampering or breach of security occurs to the cargo on commercial vehicles. Any such tampering will be reported to the Fleet and Freight Management subsystem. In addition to exceptions (e.g., alerts) that are reported, on-going indications of the state of the various freight equipment are reported to the Fleet and Freight Management subsystem. The commercial vehicle driver is also alerted of any tampering or breach of cargo security. Freight managers may decide to take further action on the alerts and/or provide responses that explain that the alerts are false alarms. If no explanation is received, the Fleet and Freight Management subsystem may notify the Emergency Management subsystem. Commercial vehicle and freight security breaches may also be sent to the Commercial Vehicle Check subsystem.
CVO03	Electronic Clearance	This service package provides for automated clearance at roadside check facilities. The roadside check facility communicates with the Commercial Vehicle Administration subsystem to retrieve infrastructure snapshots of critical carrier, vehicle, and driver data to be used to sort passing vehicles. This allows a good driver/vehicle/carrier to pass roadside facilities at highway speeds using transponders and Field-Vehicle Communications to the roadside. Results of roadside clearance activities will be passed on to the Commercial Vehicle Administration. The roadside check facility may be equipped with Automated Vehicle Identification (AVI), weighing sensors, transponder read/write devices and computer workstations.

Service Packages

Service Package	Service Package Name	Service Package Description
CVO04	CV Administrative Processes	This service package supports program administration and enrollment and provides for electronic application, processing, fee collection, issuance, and distribution of CVO credential and tax filing. Through this process, carriers, drivers, and vehicles may be enrolled in a variety of programs including electronic clearance and wireless inspection programs which allow commercial vehicles to be screened at mainline speeds. Through this enrollment process, current profile databases are maintained in the Commercial Vehicle Administration subsystem and snapshots of this data are made available to the roadside check facilities. Current program status is maintained and made available to carriers, drivers, and other authorized users of the data. Enrolled carriers are provided the option to review and challenge the collected data. Commercial Vehicle Administration subsystems can share current program status and credential information with other Commercial Vehicle Administration subsystems, so that it is possible for any Commercial Vehicle Administration subsystem to have access to all credentials, credential fees, credentials status and safety status information. In addition, it is possible for one Commercial Vehicle Administration subsystem to collect HAZMAT route restrictions information from other Commercial Vehicle Administration subsystems and then act as a clearinghouse for this route restrictions information for Information Service Providers, Map Update Providers, and Fleet and Freight Management subsystems.
CVO05	International Border Electronic Clearance	This service package provides for automated clearance at international border crossings. It augments the Electronic Clearance service package by allowing interface with border administration and border inspection related functions. This service package processes the entry documentation for vehicle, cargo, and driver, checks compliance with import/export and immigration regulations, handles duty fee processing, and reports the results of the crossing event to manage release of commercial vehicle, cargo, and driver across an international border. It interfaces with administrative systems used by customs and border protection, immigration, carriers, and service providers (e.g., brokers) and inspection systems at international border crossings to generate, process, and store entry documentation.
CVO06	Weigh-In-Motion	This service package provides for high speed weigh-in-motion with or without Automated Vehicle Identification (AVI) capabilities. This service package provides the roadside equipment that could be used as a stand-alone system or to augment the Electronic Clearance (CVO03) service package.

Service Packages

Service Package	Service Package Name	Service Package Description
CVO07	Roadside CVO Safety	This service package provides for automated roadside safety monitoring and reporting. It automates commercial vehicle safety inspections at the roadside check locations. The capabilities for performing the safety inspection are shared between this service package and the On-board CVO and Freight Safety & Security (CVO08) service package which enables a variety of implementation options. The basic option, directly supported by this service package, facilitates safety inspection of vehicles that have been pulled off the highway, perhaps as a result of the automated screening process provided by the Electronic Clearance (CVO03) service package. In this scenario, only basic identification data and status information is read from the electronic tag on the commercial vehicle. The identification data from the tag enables access to additional safety data maintained in the infrastructure which is used to support the safety inspection, and may also inform the pull-in decision if system timing requirements can be met. More advanced implementations, supported by the On-board CVO and Freight Safety & Security (CVO08) service package, utilize additional on-board vehicle safety monitoring and reporting capabilities in the commercial vehicle to augment the roadside safety check.
CVO08	On-board CVO Safety	This service package provides for on-board commercial vehicle safety monitoring and reporting. It is an enhancement of the Roadside CVO Safety Service Package and includes support for collecting on-board safety data via transceivers or other means. The on-board safety data are assessed by an off-board system. In some cases the monitoring and safety assessment may occur remotely (i.e., not at a roadside site). Following the assessment, safety warnings are provided to the driver, the Commercial Vehicle Check roadside elements, and carrier. This service package allows for the Fleet and Freight Management subsystem to have access to the on-board safety data.
CVO09	CVO Fleet Maintenance	This service package supports maintenance of CVO fleet vehicles with on-board monitoring equipment and Automated Vehicle Location (AVL) capabilities within the Fleet and Freight Management Subsystem. Records of vehicle mileage, repairs, and safety violations are maintained to assure safe vehicles on the highway.
CVO10	HAZMAT Management	This service package integrates incident management capabilities with commercial vehicle tracking to assure effective treatment of HAZMAT material and incidents. HAZMAT tracking is performed by the Fleet and Freight Management Subsystem. The Emergency Management subsystem is notified by the Commercial Vehicle if an incident occurs and coordinates the response. The response is tailored based on information that is provided as part of the original incident notification or derived from supplemental information provided by the Fleet and Freight Management Subsystem. The latter information can be provided prior to the beginning of the trip or gathered following the incident depending on the selected policy and implementation.
CVO11	Roadside HAZMAT Security Detection and Mitigation	This service package provides the capability to detect and classify security sensitive HAZMAT on commercial vehicles using roadside sensing and imaging technology. Credentials information can be accessed to verify if the commercial driver, vehicle and carrier are permitted to transport the identified HAZMAT. If the credentials analysis and sensed HAZMAT information do not agree, the vehicle can be signaled to pull off the highway, and if required, an alarm can be sent to Emergency Management to request they monitor, traffic stop or disable the vehicle.

Service Packages

Service Package	Service Package Name	Service Package Description
CVO12	CV Driver Security Authentication	This service package provides the ability for Fleet and Freight Management to detect when an unauthorized commercial vehicle driver attempts to drive their vehicle based on stored driver identity information. If an unauthorized driver has been detected, Fleet and Freight Management can activate commands to safely disable the commercial vehicle. Alarms can also be sent to emergency management to inform them of a potential commercial vehicle hijacking or theft and potential hazardous situation. In addition, Emergency Management can request Fleet and Freight Management to disable a specific vehicle in their fleet.
CVO13	Freight Assignment Tracking	This service package provides for the planning and tracking of three aspects of commercial vehicle shipments. For each shipment, the commercial vehicle, the freight equipment, and the commercial vehicle driver are monitored for consistency with the planned assignment. Any unauthorized changes are determined by the Fleet and Freight Management subsystem and then the appropriate people and subsystems are notified. Data collected by the On-board CV and Freight Safety & Security and the On-board Driver Authentication equipment packages used in other service packages are also used to monitor the three aspects of assignment for this service package. In addition to this service package, Fleet and Freight Managers may also monitor routes and itineraries and this capability is included in Fleet Administration.
EM01	Emergency Call-Taking and Dispatch	This service package provides basic public safety call-taking and dispatch services. It includes emergency vehicle equipment, equipment used to receive and route emergency calls, and wireless communications that enable safe and rapid deployment of appropriate resources to an emergency. Coordination between Emergency Management Subsystems supports emergency notification between agencies. Wide area wireless communications between the Emergency Management Subsystem and an Emergency Vehicle supports dispatch and provision of information to responding personnel.
EM02	Emergency Routing	This service package supports automated vehicle location and dynamic routing of emergency vehicles. Traffic information, road conditions, and suggested routing information are provided to enhance emergency vehicle routing. Special priority or other specific emergency traffic control strategies can be coordinated to improve the safety and time-efficiency of responding vehicle travel on the selected route(s). The Emergency Management Subsystem provides the routing for the emergency fleet based on real-time conditions and has the option of requesting a route from the Traffic Management subsystem. The Emergency Vehicle may also be equipped with dedicated short range communications for local signal preemption and the transmission of alerts to surrounding vehicles. The service provides for information exchange between care facilities and both the Emergency Management Subsystem and emergency vehicles.

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Service Package	Service Package Name	Service Package Description
EM03	Mayday and Alarms Support	This service package allows the user (driver or non-driver) to initiate a request for emergency assistance and enables the Emergency Management Subsystem to locate the user, gather information about the incident, and determine the appropriate response. The request for assistance may be manually initiated or automated and linked to vehicle sensors. This service package also includes general surveillance capabilities that enable the Emergency Management Subsystem to remotely monitor public areas (e.g., rest stops, parking lots) to improve security in these areas. The Emergency Management Subsystem may be operated by the public sector or by a private sector telematics service provider.
EM04	Roadway Service Patrols	This service package supports roadway service patrol vehicles that monitor roads that aid motorists, offering rapid response to minor incidents (flat tire, accidents, out of gas) to minimize disruption to the traffic stream. If problems are detected, the roadway service patrol vehicles will provide assistance to the motorist (e.g., push a vehicle to the shoulder or median). The service package monitors service patrol vehicle locations and supports vehicle dispatch to identified incident locations. Incident information collected by the service patrol is shared with traffic, maintenance and construction, and traveler information systems.
EM05	Transportation Infrastructure Protection	This service package includes the monitoring of transportation infrastructure (e.g., bridges, tunnels and management centers) for potential threats using sensors and surveillance equipment and barrier and safeguard systems to control access, preclude an incident, and mitigate the impact of an incident if it occurs. Threats can result from acts of nature (e.g., hurricanes, earthquakes), terrorist attacks or other incidents causing damage to the infrastructure (e.g., stray barge hitting a bridge support). Infrastructure may be monitored with acoustic, environmental threat (such as nuclear, biological, chemical, and explosives), infrastructure condition and integrity, motion and object sensors and video and audio surveillance equipment. Data from such sensors and surveillance equipment may be processed in the field or sent to a center for processing. The data enables operators at the center to detect and verify threats. When a threat is detected, agencies are notified. Detected threats or advisories received from other agencies result in an increased level of system preparedness. In response to threats, barrier and safeguard systems may be activated by Traffic Management Subsystems to deter an incident, control access to an area or mitigate the impact of an incident. Barrier systems include gates, barriers and other automated and remotely controlled systems that manage entry to transportation infrastructure. Safeguard systems include blast shields, exhaust systems and other automated and remotely controlled systems that mitigate impact of an incident.

Service Packages

Service Package	Service Package Name	Service Package Description
EM06	Wide-Area Alert	This service package uses ITS driver and traveler information systems to alert the public in emergency situations such as child abductions, severe weather events, civil emergencies, and other situations that pose a threat to life and property. The alert includes information and instructions for transportation system operators and the traveling public, improving public safety and enlisting the public's help in some scenarios. The ITS technologies will supplement and support other emergency and homeland security alert systems such as the Emergency Alert System (EAS). When an emergency situation is reported and verified and the terms and conditions for system activation are satisfied, a designated agency broadcasts emergency information to traffic agencies, transit agencies, information service providers, toll operators, and others that operate ITS systems. The ITS systems, in turn, provide the alert information to transportation system operators and the traveling public using ITS technologies such as dynamic message signs, highway advisory radios, in-vehicle displays, transit displays, 511 traveler information systems, and traveler information web sites.
EM07	Early Warning System	This service package monitors and detects potential, looming, and actual disasters including natural disasters (hurricanes, earthquakes, floods, winter storms, tsunamis, etc.) and technological and man-made disasters (hazardous materials incidents, nuclear power plant accidents, and acts of terrorism including nuclear, chemical, biological, and radiological weapons attacks). The service package monitors alerting and advisory systems, ITS sensors and surveillance systems, field reports, and emergency call-taking systems to identify emergencies and notifies all responding agencies of detected emergencies.

Service Packages

Service Package	Service Package Name	Service Package Description
EM08	Disaster Response and Recovery	This service package enhances the ability of the surface transportation system to respond to and recover from disasters. It addresses the most severe incidents that require an extraordinary response from outside the local community. All types of disasters are addressed including natural disasters (hurricanes, earthquakes, floods, winter storms, tsunamis, etc.) and technological and man-made disasters (hazardous materials incidents, nuclear power plant accidents, and national security emergencies such as nuclear, chemical, biological, and radiological weapons attacks). The service package supports coordination of emergency response plans, including general plans developed before a disaster as well as specific tactical plans with short time horizon that are developed as part of a disaster response. The service package provides enhanced access to the scene for response personnel and resources, provides better information about the transportation system in the vicinity of the disaster, and maintains situation awareness regarding the disaster itself. In addition, this service package tracks and coordinates the transportation resources - the transportation professionals, equipment, and materials - that constitute a portion of the disaster response. The service package identifies the key points of integration between transportation systems and the public safety, emergency management, public health, and other allied organizations that form the overall disaster response. In this service package, the Emergency Management subsystem represents the federal, regional, state, and local Emergency Operations Centers and the Incident Commands that are established to respond to the disaster. The interface between the Emergency Management Subsystem and the other center subsystems provides situation awareness and resource coordination among transportation and other allied response agencies. In its role, traffic management implements special traffic control strategies and detours and restrictions to effectively manage traffic in and around the disaster. Maintenance and construction provides damage assessment of road network facilities and manages service restoration. Transit management provides a similar assessment of status for transit facilities and modifies transit operations to meet the special demands of the disaster. As immediate public safety concerns are addressed and disaster response transitions into recovery, this service package supports transition back to normal transportation system operation, recovering resources, managing on-going transportation facility repair, supporting data collection and revised plan coordination, and other recovery activities. This service package builds on the basic traffic incident response service that is provided by ATMS08, the Traffic Incident Management service package. This service package addresses the additional complexities and coordination requirements that are associated with the most severe incidents that warrant an extraordinary response from outside the local jurisdictions and require special measures such as the activation of one or more emergency operations centers. Many users of the National ITS Architecture will want to consider both ATMS08 and this service package since every region is concerned with both day-to-day management of traffic-related incidents and occasional management of disasters that require extraordinary response. Disaster Response and Recovery is also supported by EM10, the "Disaster Traveler Information" service

Service Packages

Service Package	Service Package Name	Service Package Description
EM09	Evacuation and Reentry Management	This service package supports evacuation of the general public from a disaster area and manages subsequent reentry to the disaster area. The service package addresses evacuations for all types of disasters, including disasters like hurricanes that are anticipated and occur slowly, allowing a well-planned orderly evacuation, as well as disasters like terrorist acts that occur rapidly, without warning, and allow little or no time for preparation or public warning. This service package supports coordination of evacuation plans among the federal, state, and local transportation, emergency, and law enforcement agencies that may be involved in a large-scale evacuation. All affected jurisdictions (e.g., states and counties) at the evacuation origin, evacuation destination, and along the evacuation route are informed of the plan. Information is shared with traffic management agencies to implement special traffic control strategies and to control evacuation traffic, including traffic on local streets and arterials as well as the major evacuation routes. Reversible lanes, shoulder use, closures, special signal control strategies, and other special strategies may be implemented to maximize capacity along the evacuation routes. Transit resources play an important role in an evacuation, removing many people from an evacuated area while making efficient use of limited capacity. Additional shared transit resources may be added and managed in evacuation scenarios. Resource requirements are forecast based on the evacuation plans, and the necessary resources are located, shared between agencies if necessary, and deployed at the right locations at the appropriate times. Evacuations are also supported by EM10, the "Disaster Traveler Information" service package, which keeps the public informed during evacuations. See that service package for more information.

Service Packages

Service Package	Service Package Name	Service Package Description
EM10	Disaster Traveler Information	This service package uses ITS to provide disaster-related traveler information to the general public, including evacuation and reentry information and other information concerning the operation of the transportation system during a disaster. This service package collects information from multiple sources including traffic, transit, public safety, emergency management, shelter provider, and travel service provider organizations. The collected information is processed and the public is provided with real-time disaster and evacuation information using ITS traveler information systems. A disaster will stress the surface transportation system since it may damage transportation facilities at the same time that it places unique demands on these facilities to support public evacuation and provide access for emergency responders. Similarly, a disaster may interrupt or degrade the operation of many traveler information systems at the same time that safety-critical information must be provided to the traveling public. This service package keeps the public informed in these scenarios, using all available means to provide information about the disaster area including damage to the transportation system, detours and closures in effect, special traffic restrictions and allowances, special transit schedules, and real-time information on traffic conditions and transit system performance in and around the disaster. This service package also provides emergency information to assist the public with evacuations when necessary. Information on mandatory and voluntary evacuation zones, evacuation times, and instructions are provided. Available evacuation routes and destinations and current and anticipated travel conditions along those routes are provided so evacuees are prepared and know their destination and preferred evacuation route. Information on available transit services and traveler services (shelters, medical services, hotels, restaurants, gas stations, etc.) is also provided. In addition to general evacuation information, this service package provides specific evacuation trip planning information that is tailored for the evacuee based on origin, selected destination, and evacuee-specified evacuation requirements and route parameters. This service package augments the ATIS service packages that provide traveler information on a day-to-day basis for the surface transportation system. This service package provides focus on the special requirements for traveler information dissemination in disaster situations.
MC01	Maintenance and Construction Vehicle and Equipment Tracking	This service package will track the location of maintenance and construction vehicles and other equipment to ascertain the progress of their activities. These activities can include ensuring the correct roads are being plowed and work activity is being performed at the correct locations.

Service Packages

Service Package	Service Package Name	Service Package Description
MC02	Maintenance and Construction Vehicle Maintenance	This service package performs vehicle maintenance scheduling and manages both routine and corrective maintenance activities on vehicles and other maintenance and construction equipment. It includes on-board sensors capable of automatically performing diagnostics for maintenance and construction vehicles, and the systems that collect this diagnostic information and use it to schedule and manage vehicle maintenance.
MC03	Road Weather Data Collection	This service package collects current road and weather conditions using data collected from environmental sensors deployed on and about the roadway (or guideway in the case of transit related rail systems). In addition to fixed sensor stations at the roadside, sensing of the roadway environment can also occur from sensor systems located on Maintenance and Construction Vehicles. The collected environmental data is used by the Weather Information Processing and Distribution service package to process the information and make decisions on operations. The collected environmental data may be aggregated, combined with data attributes and sent to meteorological systems for data qualification and further data consolidation. The service package may also request and receive qualified data sets from meteorological systems.
MC04	Weather Information Processing and Distribution	This service package processes and distributes the environmental information collected from the Road Weather Data Collection service package. This service package uses the environmental data to detect environmental hazards such as icy road conditions, high winds, dense fog, etc. so system operators and decision support systems can make decision on corrective actions to take. The continuing updates of road condition information and current temperatures can be used by system operators to more effectively deploy road maintenance resources, issue general traveler advisories, issue location specific warnings to drivers using the Traffic Information Dissemination service package, and aid operators in scheduling work activity.
MC05	Roadway Automated Treatment	This service package automatically treats a roadway section based on environmental or atmospheric conditions. Treatments include fog dispersion, anti-icing chemicals, etc. The service package includes the environmental sensors that detect adverse conditions, the automated treatment system itself, and driver information systems (e.g., dynamic message signs) that warn drivers when the treatment system is activated.
MC06	Winter Maintenance	This service package supports winter road maintenance including snow plow operations, roadway treatments (e.g., salt spraying and other anti-icing material applications), and other snow and ice control activities. This package monitors environmental conditions and weather forecasts and uses the information to schedule winter maintenance activities, determine the appropriate snow and ice control response, and track and manage response operations.

Service Packages

Service Package	Service Package Name	Service Package Description
MC07	Roadway Maintenance and Construction	This service package supports numerous services for scheduled and unscheduled maintenance and construction on a roadway system or right-of-way. Maintenance services would include landscape maintenance, hazard removal (roadway debris, dead animals), routine maintenance activities (roadway cleaning, grass cutting), and repair and maintenance of both ITS and non-ITS equipment on the roadway (e.g., signs, traffic controllers, traffic detectors, dynamic message signs, traffic signals, CCTV, etc.). Environmental conditions information is also received from various weather sources to aid in scheduling maintenance and construction activities.
MC08	Work Zone Management	This service package manages work zones, controlling traffic in areas of the roadway where maintenance, construction, and utility work activities are underway. Traffic conditions are monitored using CCTV cameras and controlled using dynamic message signs (DMS), Highway Advisory Radio (HAR), gates and barriers. Work zone information is coordinated with other groups (e.g., ISP, traffic management, other maintenance and construction centers). Work zone speeds and delays are provided to the motorist prior to the work zones. This service package provides control of field equipment in all maintenance and construction areas, including fixed, portable, and truck-mounted devices supporting both stationary and mobile work zones.
MC09	Work Zone Safety Monitoring	This service package includes systems that improve work crew safety and reduce collisions between the motoring public and maintenance and construction vehicles. This service package detects vehicle intrusions in work zones and warns crew workers and drivers of imminent encroachment or other potential safety hazards. Crew movements are also monitored so that the crew can be warned of movement beyond the designated safe zone. The service package supports both stationary and mobile work zones. The intrusion detection and alarm systems may be collocated or distributed, allowing systems that detect safety issues far upstream from a work zone (e.g., detection of over dimension vehicles before they enter the work zone).
MC10	Maintenance and Construction Activity Coordination	This service package supports the dissemination of maintenance and construction activity to centers that can utilize it as part of their operations, or to the Information Service Providers who can provide the information to travelers.
MC11	Environmental Probe Surveillance	This service package collects data from vehicles in the road network that can be used to directly measure or infer current environmental conditions. It leverages vehicle on-board systems that measure temperature, sense current weather conditions (rain and sun sensors) and also can monitor aspects of the vehicle operational status (e.g., use of headlights, wipers, and traction control system) to gather information about local environmental conditions. It includes the on-board vehicle systems that collect and report environmental probe data, the infrastructure equipment that collects the probe data and the centers that aggregate and share the collected probe data.

Service Packages

Service Package	Service Package Name	Service Package Description
MC12	Infrastructure Monitoring	This service package monitors the condition of pavement, bridges, tunnels, associated hardware, and other transportation-related infrastructure (e.g., culverts) using both fixed and vehicle-based infrastructure monitoring sensors. Fixed sensors monitor vibration, stress, temperature, continuity, and other parameters and mobile sensors and data logging devices collect information on current infrastructure condition. This service package also monitors vehicle probes for vertical acceleration data and other probe data that may be used to determine current pavement condition.

APPENDIX E:
EACH Plan

Approved by RTPO Board January 10, 2012

This plan represents the culmination of months of work and dedication by professionals, community volunteers, and advocates. Special thanks are owed to all of those who participated in the development of this plan.

Plan Chapters: October 2010

Project List Update: January 2012

Prepared by the Regional Transportation Planning Organization for Whatcom County

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Table of Contents

Acknowledgements

In June, 2006, Whatcom Council of Governments (WCOG) received a grant from Washington State Department of Transportation to develop a coordinated transportation plan for access to employment and human services. As the Regional Transportation Planning Organization for Whatcom County, WCOG convened a stakeholder group composed of local and regional human services agencies and transportation providers advised and assisted in writing the Employment Access and Coordinated Human Services Transportation (EACH) Plan. A complete list of the groups invited to participate is included in the appendix.

WCOG consulted with two standing committees that advise the Regional Transportation Planning Organization Board: the Community Transportation Advisory Group (CTAG) and the Transportation Technical Advisory Committee (TTAC). Members of these groups reviewed and assisted in refining the EACH plan.

Community Transportation Advisory Group Members include:

- Larry Wickkiser, BellAir Charters
- Carol Berry, WWU Sustainable Transportation Coordinator
- Dave Pros, Real Estate Professional
- Chris Hatch, Forestry Industry
- Kathy Berg, Birch Bay Community
- Glenn Hallman, Council on Aging
- Carol MacDonald, Mt. Baker Foothills Chamber of Commerce
- Patrick Pollock, Cherry Point Industrial Area
- J. Garcia, Western Washington University Associated Students
- Terry Terry, Lummi Island Community

Transportation Technical Advisory Committee members include representatives from the following agencies and jurisdictions. Participants generally represent the Public Works Engineering and Planning Departments of these jurisdictions.

- City of Bellingham
- City of Blaine
- City of Everson
- City of Ferndale
- City of Lynden
- City of Sumas
- Whatcom County
- Lummi Nation
- Nooksack Indian Tribe
- Whatcom Transportation Authority
- Port of Bellingham
- Washington State Department of Transportation
- Whatcom Council of Governments

CTAG and TTAC advise the Regional Transportation Planning Organization (RTPO) Policy Board on transportation issues and priorities. The RTPO Board is composed of elected officials from each of the member jurisdictions in Whatcom County. One role of the RTPO Board is the publication of the Whatcom Transportation Plan in fulfillment of federal and state requirements. The 2010 update of the Employment Access and Coordinated Human-services Transportation (EACH) Plan was presented to the RTPO Policy Board in October 2010 for adoption. The 2012 update of the Whatcom Transportation Plan will include elements of the EACH Plan.

Introduction

Coordinated Transportation

In the broadest sense, everyone in Whatcom County benefits when transportation planning and implementation is done in a coordinated way: coordination of transportation services can result in less duplication of service and better stewardship of public funds. The EACH Transportation Plan focuses on improving coordination among the agencies and organizations providing transportation for community members who have special needs. The EACH stakeholder group, including representatives from a wide variety of agencies serving special needs populations, prepared the EACH Plan and continue to work together to advise on updates.

Transportation and the Economy

Whatcom County population grew 11% from 2005 to 2010 (180,800 to 196,529). During the same period, economic difficulties grew at significantly higher rates. Here are some examples of economic difficulties (years where data available):

- unemployment increased 90% (8.3% in 2009, up from 4.9 in 2005)
- foreclosures increased 100% (1.6% , up from 0.8% in 2005)
- homelessness due to job loss increased 100% (39% , up from 19% in 2007)
- foodbank visits increased 40% (2007 to 2009)
- major decline in transit agency funding, due to reduction in sales tax collections

Economic hardship has created a larger proportion of the Whatcom County population who have special needs due to low income. Human services agencies are affected by an increase in the number of people seeking assistance. Transit and passenger rail ridership numbers are higher, but funding to support local transit has declined. When transit service is reduced while ridership is high, those who need transportation assistance may have to wait longer for buses and find conditions are more crowded once the bus arrives.

More aware of the high cost of owning and operating a car, those who have cars are driving less to save money on fuel. According to a July 2010 Wall Street Journal article, people are choosing houses close enough to walk to stores and amenities and buyers are willing to pay higher prices for homes in walkable neighborhoods: the cost of transportation has become a bigger part of the real-estate equation.

While the high cost of driving has caused difficulties for low income travelers, the reduced rates of driving appears to have increased safety nationwide. Fatality rates are lower as fewer people are driving, and traffic congestion stabilized. According to the National Highway Traffic Safety Administration, people are driving less or driving fewer miles when they do drive. Fewer people appear to have access to cars: car sales in 2009 were at their lowest level since 1982, according to Business Week.

Public transportation ridership increased each year from 2005 – 2010.

- Amtrak Cascades – increased 17 % from 2009 to 2010
- WTA – increase of about 50 % from 2006 to 2009
- Airporter Shuttle – increase of 13% from 2005-2009

WTA bus trips now represent 5% of all trips in the Bellingham area (compared to 3% average nationwide). During the same period, the number of walking trips increased 12% and bicycling increased 25%.

At a time when economic conditions heighten the demand for bus service, fewer buses will be running. WTA is primarily (90%)

funded by sales tax revenue, similar to highways, roads, and airports which are publicly subsidized by other taxes. Because of reduced sales tax revenue, WTA reduced service beginning in autumn 2010. And even though rising fuel costs have increased bus ridership, fuel costs have increased the cost of operating the bus system even more.

Economic decline has expanded the proportion of Whatcom County residents who have limited income. Low income is one of the special needs categories for which the EACH coordinated human services transportation plan is intended. Economic pressures highlight the importance of efficient investment of scarce public resources in transportation.

Chapter 1 - Participation

Defining EACH focus: Who needs transportation assistance?

People with special needs sometimes need assistance with transportation. People with special needs are technically defined as those who for age, income, or disability reasons cannot transport themselves. Planning for transportation that works for these populations can be a task shared by planners and human services agencies.

Transportation planning in Whatcom County is carried out by several agencies:

- City and County planning and public works departments
- Whatcom Transportation Authority (WTA)
- Lummi Nation
- Whatcom Council of Governments
- Washington State Department of Transportation
- Port of Bellingham

Here are some examples of transportation assistance and services provided by some human service agencies:

Northwest Regional Council	• Medicaid Brokerage: transportation vouchers or subsidies to medical appointments for those eligible
School Districts	• School Bus • Walk Route Maps
The Willows Retirement Residence	• wheelchair vans for scheduled outings
Head Start	• mini-buses for eligible children, where funded
Camp ReBound	• summer camp bus
Places of worship	• mini-vans for seniors or members with disabilities
Meals on Wheels	• home delivered meals • congregate meal distribution
Mt. Baker Ski Area	• shuttle bus for seasonal employees • shuttle bus for 5th graders
Whatcom County Health	• mobile dental health clinic
Disabled Veterans Association (DAV)	• medical shuttle to Veterans Administration Hospital in Seattle
Domestic Violence Shelters	• volunteer drivers, as requested (volunteers must pass a security screening process)
Whatcom Volunteer CHORE program	• volunteer drivers for seniors
Various church alms programs	• small cash donations to pay for vehicle fuel or bus fare
Whatcom Alliance for Healthcare Access	• mobile medical care services
Sterling Drive Church "The Bike Shop"	• bicycle repair for low-income children and children of farm workers
everybodyBIKE and The Hub	• bicycles and bike education for low-income adults and children

Human service agencies are invited to participate in planning and project prioritization through the public participation process of each jurisdiction. Few human service agencies participate in transportation planning meetings on a regular basis.

Schools and human service agencies such as hospitals and food banks do not often allocate funds or resources to transportation planning. Some offer case-by-case transportation advice to clients, as requested. According to the Whatcom Alliance for Healthcare Access (WAHA), lack of transportation is often a barrier for community members to access medical appointments. The following examples illustrate some of the transportation challenges identified by social service providers:

- A person living in a shelter has an average of six case managers, each located in different places and each requiring regular visits.
- Head Start rules restrict bus ride for children participating in the program to a maximum of 30 minutes. An eligible child in Glacier cannot reach the Kendall Head Start location within that time limit.
- Some Head Start students in Blaine, Ferndale, or Glacier can't enroll because of lack of transportation or inflexible federal transportation policies
- A low-income mother reported that she needs four bus transfers to get to work and drop her child at child care
- For low income families, missing an energy appointment for their house can result in not having heat during the entire winter.
- Residents who want to see a doctor four miles away sometimes are paying or subsidized for a 25 mile taxi ride because of their distance from the taxi base
- The hub-and-spoke model of the current bus routes leaves gaps for those who need to travel between the "spokes" (e.g., Sumas to Lynden, etc.)
- Lummi Nation elders who were eligible for Specialized Transit service found the application process complex and didn't apply or, in some cases, did not know they were eligible
- Low-wage, entry-level jobs are often scheduled for nights and weekends when bus service is low or absent
- School districts provide transportation for homeless students to attend their school of origin. Families housed in temporary shelter distant from the original home have resulted in unbudgeted additional school bus trips of hundreds of miles each day.

Transportation planning includes a variety of activities. Special needs transportation often focuses on public bus service, specialized vans, private bus shuttle service, or taxi service. Transportation service providers described some challenges to meeting the needs of social service travel and employment access:

- Low population in remote areas makes regular WTA bus service too costly
    - For example, cost efficiency is measured in "boardings per revenue hour." When buses travel long distances in rural areas with few residents, more hours reap few boardings: high cost, low revenue. The WTA board has difficulty justifying inefficient operations.
- Policy barriers prevent "grouping" some travelers to common destinations in the same taxi
    - For example, a taxi paid for by medicaid for a qualified medical appointment cannot transport in the same vehicle another person going to the same destination for an unrelated purpose.
- Policies emphasizing independent living at subsidized housing complexes provide no incentive for ride-sharing on paratransit to common destinations, resulting in higher overall costs per trip
    - For example, multiple paratransit vans may be dispatched to a low-income housing complex to take one individual at time to the main discount grocery store, each traveling at a different time of day or different day of the week.

- The cost of maintaining and operating vehicles has become too expensive for many social service organizations
    - For example, Whatcom County Parks Department formerly provided transportation to recreation classes and activities in the National Forest but sold the passenger vans due to the increased cost of maintenance
- Transportation planners and WTA hold public outreach meetings to gather suggestions about how to improve service but few people with special needs appear to be able to attend. Some meetings are held during hours or in locations where public bus service is unavailable
    - For example, low income parents sometimes hold more than one job to make ends meet and do not have time to attend meetings or learn about issues and comment.

Transportation Investments

Each jurisdiction plans and pays for transportation facilities. Here are some examples of local investments in transportation:

- maintaining or widening roads
- building new roads
- building sidewalks
- building trails and boardwalks
- building park & ride lots and parking garages
- operating public bus service
- operating ferry, train, or airport services

Leaders in Whatcom County recognize the cost effectiveness of supporting a wide array of transportation modes and projects.

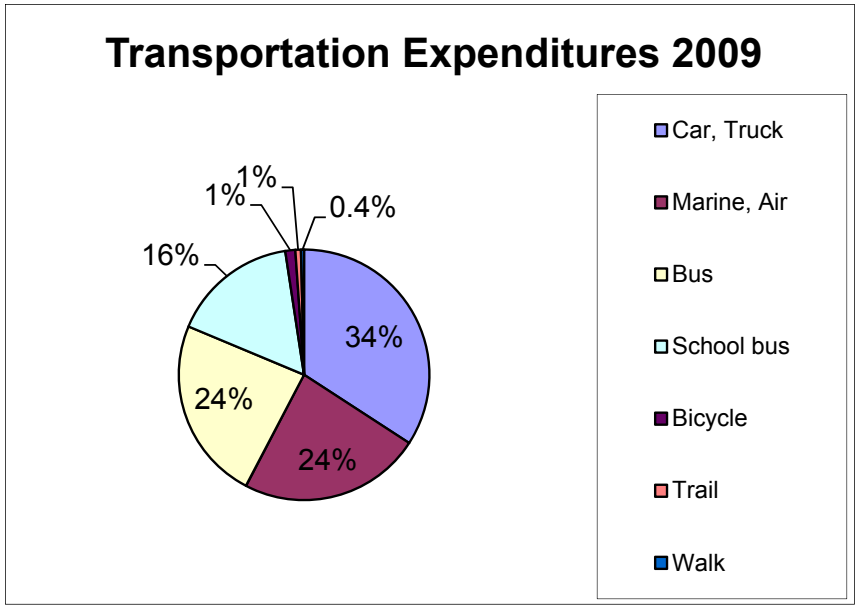
The Whatcom County Comprehensive Plan goals and policies support multi-modal transportation, noting benefits to the economy, reductions in traffic congestion, improvements to health, and equitable access for people of all abilities. Coordinated transportation planning for human services furthers these Comprehensive Plan goals.

Transportation projects paid for by public funds each year take many forms: roads, highways, sidewalks, airports, ferries, bike lanes, buses, and more. The chart shows the rough proportion of 2009 public funds spent by the port, county, cities, state, transit authority, and school districts on projects serving various modes of transportation. The total amount spent for these projects is about $167 million.

People with special needs walk for transportation at higher rates than the general population. According to the national 2008 Fatal Accident Reporting System (FARS) Data, 13% of traffic fatalities in Washington State were people walking. Statewide, 1.21% of Section 402 safety funds were spent on pedestrian safety improvements. In Whatcom County, pedestrian projects received less than 1% of transportation investments in 2009.

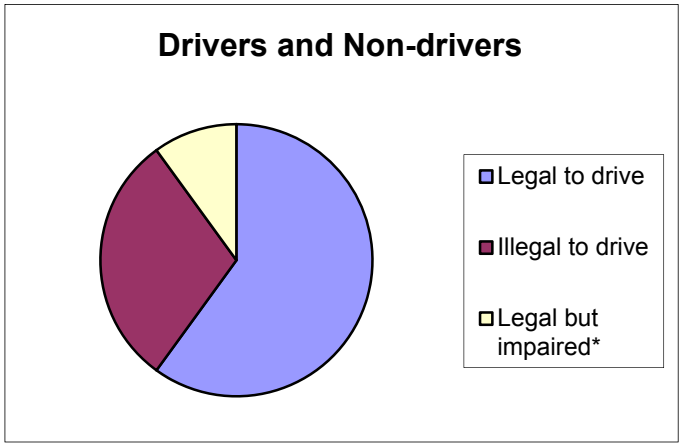
About 30% of the population are legally not permitted to drive for age or disability reasons. An additional 10% are permitted to drive but, due to seizures, medication, vision, or other impairments, pose an increased crash risk for other roadway users and perhaps would not choose to drive if other transportation options were available. According to the Northwest Area Agency on Aging, drivers over the age of 70 are involved in traffic crashes at a higher rate per mile driven than other adults. By 2030, 20% of the population will be over the age of 65.

People with special needs rely on cars for some trips and support the maintenance of a safe and reliable road system through their taxes. Those with special needs who cannot drive may benefit from a portion of the road taxes directed toward projects that serve other types of transportation needs than driving.



Proportional transportation expenditures in Whatcom County estimated based on 2009 budgets

(Note: Figures based on Whatcom Transportation Improvement Program, Port of Bellingham budget, average daily cost per pupil for bus transport as estimated by Bellingham School District applied to all school districts; WTA budget. The proportion of expenditures labeled "Car" does not include total planning, administration and operations costs, however, WTA and Port budgets do include administration and operations costs. Consequently, the proportion of local budgets spent on car/truck infrastructure may be higher than shown in the chart. Sidewalk, trail, and bike lane projects were estimated at 25% of total project costs where these were included in road project budgets.)



* About 10% of people legally licensed to drive regularly experience medical or other conditions that impair their ability to drive safely.

Chapter 2 - EACH Stakeholder Group Formation

WCOG began to form its advisory group for the EACH Transportation Plan by asking:

- What types of people need access to employment?
- What are the demographics of people who need access to medical care and other human services?
- Where are the organizations located that serve these populations?
- What services could help meet unfilled transportation needs?

Organizations that work with people who need transportation assistance include almost every demographic group: employers, schools, hospitals, and more. The 2007 stakeholder group was formed of representatives from human services agencies contacted through e-mail, telephone, outreach meetings, presentations, and website postings. Other groups such as employers, public works engineers, planners, and pedestrian advocates were invited and kept informed through e-mail, telephone, and announcements at area meetings of these interest groups. The EACH stakeholder meetings took place in Bellingham at the WCOG office. Stakeholders located in the Mt. Baker foothills and the Sumas area participated via conference telephone due to distance.

The 2010 EACH update process addressed the EACH goal of involving a wider variety of transportation and human services providers than had participated in 2007. Through presentations to these and other groups, wider participation was encouraged:

- Readiness to Learn consortium (school district professionals serving homeless students and other students with special needs)
- Community Resource Network monthly meeting (Bellingham area Opportunity Council meeting of representatives from shelters, food banks, alms ministiries, financial literacy programs, transition housing, disabled services, and others)
- Ferndale Community Resource Network (Ferndale area social services groups)
- Bellingham School District Assistant Superintendent for Transportation
- Bellingham/Whatcom Housing Authority (Senior and Disabled Housing)
- WorkSource (Workforce Development Council)
- Whatcom Community College Transitions Program (Support program for special needs students transitioning from social services to career-building and work)
- Spinal Cord Injury Support Group
- State Independent Living Council, Whatcom interest group
- Transportation Technical Advisory Committee (Regional Transportation Planning Organization advisory body composed of transportation engineers and planners for all local jurisdictions)
- Community Transportation Advisory Group (Regional Transportation Planning Organization and WTA citizen advisory committee)

Human service agencies' staff recognized that coordination of transportation could result in greater efficiency in allocation of their own agencies' resources. Jurisdictions could save money on road budgets through improved mobility management programs. Participation in the EACH stakeholder group gave many human service agencies their first opportunity to participate in transportation planning.

The table below lists the groups invited to participate in the 2010 EACH Plan update. Description of the transportation needs and services provided by these organizations is included in Appendix 2.

Human Services Agencies

Aging and Disabilities Services Administration

ARC of Whatcom County

Bellingham Food Bank

Bellingham /Whatcom County Housing Authority

Boys and Girls' Clubs of Whatcom County

Cascade Vocational Services

Catholic Community Services

Department of Social and Health Services, Whatcom Office

Early Learning and Family Services Northwest

Interfaith Coalition (Clinic, Housing)

Kulshan Community Land Trust

Lighthouse Mission Ministries

Lions' Club

Nooksack Tribe Health Services

Northwest Regional Council (Area Agency on Aging)

Opportunity Council

Rebound of Whatcom County

St. Joseph Hospital

SeaMar Health Clinic

Spinal Cord Injury Support Group

Visiting Angels

Whatcom Alliance for Healthcare Access

Whatcom Coalition for Healthy Communities

Whatcom Community and Family Network

Whatcom Council on Aging (Meals on Wheels, Senior Centers, "55 Alive")

Whatcom/Skagit Housing (Rural Self-help Homes)

YMCA (childcare, etc.)

YWCA (transition housing, etc.)

Schools

Blaine School District

Bellingham Technical College

Northwest Educational Service District (School Bus)

Readiness to Learn Consortium (participants from all school districts)

Whatcom Community College

Western Washington University

Transportation Providers

BellAir Charters

Cascade Ambulance Service, Inc.

Love, INC (volunteer drivers)

Lummi Transit Service

Northwest Regional Council (Medicaid Brokerage Transport)

Rural Metro (Medical Transport)

Veterans of Foreign Wars (VFW) Medical Transport

Whatcom Transportation Authority (WTA)

Whatcom Volunteer Center CHORE program

Washington State Department of Transportation (WSDOT) Agency Council on Coordinated Transportation (ACCT)

Yellow Cab of Whatcom County

Jurisdictions or Departments

Bellingham Emergency Management

City of Bellingham public works/Transportation Options Department

City of Bellingham Consolidated Plan for Human Services (Community Development Department)

Whatcom County Public Works Engineering

Whatcom County Health Department (Developmental Disabilities)

Whatcom County Department of Emergency Management

Employers and Employer Groups

Bellingham/Whatcom Chamber of Commerce

Farm Friends/Farmworker Groups

Mt. Baker Chamber of Commerce

Sustainable Connections

Workforce Development Council/Worksource

Chapter 3 - Vision of Coordinated Transportation

EACH stakeholders agreed on the following vision statement for the work of the group:

"A barrier-free transportation system that helps people with special needs in Whatcom County to carry out daily trips in a convenient and cost effective way."

The EACH Stakeholders agreed to define special needs populations according to Revised Code of Washington 47.06b: "Those people, including their attendants, who because of physical or mental disability, income status, or age, are unable to transport themselves or purchase transportation."

Mission of Coordinated Transportation:

"To coordinate services, resources, and investments to transform Whatcom's transportation system into one that serves people of all abilities in an equitable and convenient way."

Goals of Coordinated Transportation:

The group agreed on the following goals, listed in priority order:

1. **Clear and Understandable**: All social service organizations and their participants understand and benefit from a simple and effective system of coordinated transportation.
2. **Equitable Funding**: Public investments favor projects and services that improve transportation conditions for people of all ability levels.
3. **Safe and Comfortable**: The transportation system is safe, accessible and comfortable for children and other special needs travelers.

4. **Environmentally Friendly**: Balance comfort, environmental-friendliness, and existing resources so that everyone has a safe, accessible way to meet daily service or transportation needs.

Initial Objectives for Coordinated Transportation:

EACH stakeholders came to consensus that the first tasks to address the top priority goal include three equally important and mutually interconnected objectives. While the stakeholders agreed that all three must happen concurrently, they agreed on the following priority order for the initial objectives:

1. Increase connectivity by reducing gaps in the public transportation system.
2. Increase awareness of existing services and of the coordination work of the EACH stakeholder group.
3. Reduce the complexity of trip arrangements and of eligibility requirements for services.

Strategic Action Recommendations

Stakeholders recommended several project actions to carry out the objectives. Partners and stakeholders implemented some projects from 2005 to 2009 with EACH grant funding. A summary description of project results follows the action list below. Numbers in parentheses (e.g., (1-A)) refer to projects where action has been taken. The status updates in the next section give more detail on the actions taken.

1. Increase Connectivity:

- (1-A) Identify the highest priority "spokes" to connect; inform WTA board what frequency would be needed.
    - Areas to study: Everson to Sumas; Sumas to Kendall; Birch Bay to Blaine; Lynden to Sumas; Lynden to Blaine; Ferndale to Lummi Nation
- (1-B) Evaluate feasibility of changing the school bus system to a WTA system to eliminate duplication of facilities and services while increasing cost-effectiveness.
- Develop innovative solutions to serve areas where bus service is economically impractical using methods such as:
    - Engage private sector transportation providers in bridging gaps in the public transportation system where this would improve cost effectiveness and efficiency
    - Establish a "sub" base for taxi or other private shuttle service in Everson or Deming area
    - Design and implement an innovative pilot project transportation arrangement to provide trips during nights, weekends, and holidays and to places where WTA service is not cost-effective to offer
    - Expand the on-line Ride-Match service for trips other than work commutes
    - Contract with individuals in remote cities to transport their "neighbors" to services (i.e., expand on existing programs providing gas vouchers)
    - Study feasibility of contracting with school buses and their drivers (outside of school service times) to transport special needs clients during the mid-day period. (A program of this sort in Mason County

resulted in increased income for low-income drivers and increased cost-effective use of vehicles, benefiting schools.)

- (1-C) Reduce car trips through Transportation Demand Management and other support services such as:
    - Provide services nearer to the client rather than requiring the client to travel large distances
    - Resolve conflicting issues between land use policies (designed to prevent sprawl and protect farmland) and human services transportation (designed to serve remote residences equitably)
    - Coordinate with Transportation Demand Management programs to encourage ride-sharing
    - Congregate human services in centralized offices accessible by multiple transportation modes
    - Provide additional public transportation service to outlying areas currently not served, where compatible with growth management goals
- Replace Fixed Route Transit Buses: Some of the WTA bus fleet in operation in 2010 have mileage in excess of recommended standards such that maintenance costs exceed replacement. Replacing aging portions of the WTA fleet is a priority to meet the demands of providing reliable, cost-effective transit service.

2. Increase awareness:

- Increase public and agency awareness of transportation services available and how to use them through methods such as:
    - (2-A) Fund a "travel trainer" position or hot-line (WTA began this in 2008; also adding an on-line trip planner on internet site)
    - Establish a volunteer-staffed hotline for peer training on bus or other transportation options (peers can be seniors, college students, other demographic groups)
    - (2-B) Conduct community group presentations, outreach booths at Farmers' Markets, etc., around the county to inform public about transportation services and options
    - Expand outreach to employers to facilitate carpooling to neighboring employers
- (2-C) Increase awareness among agencies and providers of the EACH planning effort and how they can benefit and participate by such means as:
    - Work with the school district transportation managers to find ways to better coordinate
    - Create maps of transportation services and gaps for each target population
    - Create an inventory and matrix of groups who should be involved in coordinated transportation planning and increase outreach to and involvement of special needs travelers and groups not currently represented in the EACH Stakeholder Group.

- Find funding for on-going facilitation of a coordinated human services transportation planning group at WCOG or WTA
    - Coordinate the update of the 2007 Whatcom Transportation Plan with the EACH action plan and strategies

3. Increase convenience, simplicity:

- Improve the convenience of trip arrangements (e.g., number of bus transfers)
- Simplify the eligibility process and help everyone understand it
    - Connect rural residents to the "spokes" of fixed route service
    - Connect school students with after-school activities such as Boys' and Girls' Clubs, YMCA, child care centers, etc.

Implementation Status Report

Connecting the "spokes" in Rural Areas (1-A) – The word "spokes" refers to rural towns at the ends of the bus lines, unconnected to each other by bus service. For example, to travel from Sumas to Lynden by WTA bus results in a forty mile trip (total four hours), but the towns themselves are 10 miles apart.

WCOG met with special needs residents in some of the rural towns to begin to measure the degree of need for direct bus service in some of the rural areas. People with special needs from the Kendall and Sumas areas expressed interest in accessing community and medical services in Lynden. Participants proposed starting an hourly circulator mini-bus connecting Kendall, Sumas, Lynden, Blaine, and Birch Bay. A pilot project could help determine ridership and demand for such a circulator.

WCOG discussed such a circulator with WTA representatives on the EACH stakeholder group. Ridership for such a circulator would be too low to justify WTA service. BellAir Charters, a private shuttle business, could potentially operate a circulator pilot project to build ridership over time. Fares for riders on a private shuttle would be higher than typical WTA fares, however, fare assistance could be made available to low-income riders through an EACH grant.

Connecting Lummi Nation to Ferndale (1-A) – Lummi Nation established fixed-route transit service for the reservation in 2006, connecting residential areas to employment and service centers and to WTA fixed-route service. In 2009, total ridership increased to 41,449 with an average of 3,454 passengers per month, a 37.6% average annual increase. Lummi Transit anticipates ridership of 57,000 passengers by the end of 2010 and plans to add direct service to Ferndale in 2011.

School Bus System (1-B) – School districts in Whatcom County spent $6 million on pupil transportation in 2008, and costs have continued to rise since then. WCOG met with the Assistant Superintendent of the Bellingham School District to discuss opportunities for coordination between school buses and other transportation in the community. Many regulations, policies, and liability concerns limit flexibility on school transportation. For example, a mini-van – rather than a school bus - might offer cost sharing benefits if it could be made available to serve community transport needs outside the hours it is used to transport one or two homeless students. But policy barriers restrict the school district's ability to substitute a mini-van.

Barriers to making such a mini-van available for wider use include district policies, negotiated agreements, parental concerns, and costs for maintenance, fueling, insurance, liability, and union-driver rules. School district budgets do not include funding for staff to work toward developing such agreements and plans. If funding from an outside source, such as an EACH grant, became available

to pay for coordination meetings and planning, school district staff could potentially participate and work towards coordination.

Transportation Demand Management (1-C) – Whatcom Smart Trips is a community-wide trip reduction program that encourages and rewards people for making more of their daily trips by walking, bicycling, sharing rides and riding the bus. The program has taken 1.6 million car trips off the roads, a total of 26 million miles not driven since starting in 2006. The positive messaging and sophisticated marketing helps everyone feel good about using travel modes other than the private car. This strategy has helped people with special needs to feel better about their transportation options. EACH Mobility Management outreach leveraged Whatcom Smart Trips marketing to teach low-income seniors and activity directors about fixed route bus service that could meet their needs more conveniently than the specialized paratransit service. Low-income workers received bicycles and bike safety training for work and school commutes.

Add Public Transportation in Rural Areas (1-C) - Ridership increased in 2008 on WTA routes serving the Kendall area (with a higher proportion of low-income residents). WTA added service and capacity to meet demand.

Travel Training and Outreach (2-A)– WTA established a Travel Trainer staff position in 2008 to teach people with special needs about how to use fixed route bus service. At least six workshops have been held each year through the "Transitions Program" at which participants practice boarding a bus, using the stop request device, reading a schedule, and paying fares.

(2-B) WCOG staffed community outreach boothsat events and Farmers' Markets to educate the public about transportation options. Outreach at congregate meals at four senior centers included distribution of the "Travel Car Free" North Sound Connections guide.

WCOG worked with thirty elementary and middle schools to teach traffic safety skills for students walking and bicycling to school. Collaboration to improve walking and cycling routes for school children is resulting in cost savings on "hazard bussing" within the one-mile walk zone for Carl Cozier elementary school in Bellingham.

(2-C) WCOG contacted an expanded list of humans services providers to invite participation in the EACH stakeholder group. WCOG made EACH presentations at the Community Resource Network monthly meetings and the bi-annual Readiness to Learn Consortium.

Chapter 4 - People with Special Needs

People with special needs have a wide range of abilities and differing transportation needs. This chapter describes some strengths and challenges of population groups and how coordinated transportation can serve them.

There are some common characteristics and abilities among people with special needs and there are also some distinct differences. Sometimes a solution for one special need is a barrier for a different group. For example, wheelchair ramps in curbs can be a hazard to people with vision-impairments: people with low vision rely on feeling the curb edge to know there's a street to cross. Understanding some of the different needs helps focus coordination efforts among transportation planning agencies and human service providers.

Elders/Seniors

Advanced age does not, in and of itself, correspond to a need for transportation assistance. Many people who are over 65 years of age maintain active community involvement and continue to walk, drive, or use the bus as they have throughout life. According to the U.S. Census, 12.4% of Whatcom County residents are over the age

of 65, a rate 10% higher than the statewide average of 11.5%. The senior population is rising more quickly as the baby boomers age.

Aging eventually brings a decrease in abilities that can restrict transportation options. Many seniors suffer from common illnesses such as hypertension and diabetes, and medications for such diseases can impair one's ability to drive. Depending on physical abilities, elderly people may change transportation habits gradually. For example, a 70-year-old may choose to limit driving at night or on high speed roadways or in poor weather, rather than quit driving altogether.

Transportation helps older adults maintain social engagement, a key to mental health and vitality. "Next to health," according to one 80-year-old, "transportation is the most important thing," allowing her to participate in her community. The proximity of the senior's home to community activities and services becomes part of the transportation equation: a home far from stores, bus stops and community centers exacerbates isolation and the mental health risks associated with isolation.

Disabled seniors who do not have access to other transportation may qualify for WTA's Specialized Transportation services. After applying and completing the interview and approval process, seniors may request door-to-door Specialized Transportation for their specific trips within the WTA service area. The cash fare for Specialized Transport is the same as the fixed route fare ($1.00 in 2010). A care-giver may accompany the disabled rider fare free. Seniors age 75 and older ride free. Seniors 65 and older receive a 50% discount with a reduced fare card. The reduced fare is not applicable to Specialized Transport.

Some human services can be provided in the senior's home rather than requiring the elderly person to travel. However, providing in-home services should be balanced with the need for outside social interaction.

People with Disabilities

People who have sustained a long-term or permanent injury may need transportation assistance to reach vocational training and rehabilitation locations. People with disabilities that affect their ability to navigate the bus system on their own are eligible for Specialized Transportation service. Disabled riders who need assistance may be accompanied by a care-giver on the Specialized Transit bus.

There are many different kinds of disability. Facilities vary greatly in the ways they address transportation needs for different disabilities. The chart below illustrates how some transportation facilities work for certain types of disability but not for others. Wheelchair ramps, for example, are common facilities to address mobility challenges, but the chart shows that several other types of disability are not helped by wheelchair ramps. While public bus service is an essential service for most people with disabilities, it is worth remembering that there are some people whose disabilities prevent them from using the bus. The chart shows that places to walk or use a wheelchair safely can benefit many.

Many disabilities do not pose a barrier to use of sidewalks, public trails or even bicycles. Some people with disabilities require training in the types of services available and how to use them.

physical ability	**walk**	**bike**	**bus**	**drive**	**wheelchair**
vision impairment	x	*	x		
hearing loss	x	x	x	x	
paralysis, leg amputation	(w)	*	x	x	x
balance impairment	(w)	*	x	x	x
limited mobility †	(w)	*	x	x	x
obesity (see note)	(w)	*	?	x	x
behavioral ability	**walk**	**bike**	**bus**	**drive**	**wheelchair**
slowed reaction time	x		x		x
developmental disability	x	x	x		
seizures, epilepsy	x	x	x		
behavioral issues	x	x	?	?	
alcohol/drug use	x	x	?		

*A variety of cycle designs serve many types of ability. Examples include: handcycle, electric-assist cycle, tandem (to assist vision impaired person), three-wheel cycle or cargo cycle. Recumbent cycles are designed to reduce knee stress.

† e.g., An injury to knee or hip can limit walking distance; chronic conditions resulting in weakness such as asthma, diabetes, heart condition, etc.

(w) indicates wheelchair use or balance-assist device such as a walker. Feasible to use where sidewalks or other walkway infrastructure is available.

Note: In cases of severe obesity, wheelchairs are larger than the width of the standard public transit bus doorways and/or the combined weight of the rider and the electric-power battery pack for the wheelchair is heavier than the capacity of the standard WTA bus ramp lifts.

?: indicates that, in some cases, use of the mode is precluded for people with a certain condition. For example, a person who has been violent or who has not followed WTA rules on alcohol consumption may be trespassed from WTA property and not permitted to ride the bus.

Case Study: Senior & Disabled Housing Residents

WCOG met with residents of a senior housing apartment to find out what types of transportation services serve their needs well. Residents reported regularly using Specialized Transportation to go from the apartment to a large discount department store for weekly or monthly grocery shopping. The residents reported they were generally satisfied with the service of the Specialized Transit.

WTA estimates the fully-allocated average cost for each trip on Specialized Transportation is $43 per rider, while the average fully-allocated cost per rider for a fixed route bus is about $4. Regular WTA bus service departs every 15 minutes from the bus stop in front of the apartment building, connecting to hourly bus service to the large discount department store. The regular service offers the advantage of greater flexibility, less waiting time, and no need to call 24 hours in advance to request service. The residents reported that knee injuries limit their ability to walk from the bus stop to the door of the department store, a distance of about 100m (300 ft.). Inside the store, they use electric carts to navigate the aisles without walking. If the electric carts could be made available at the bus stop (e.g., by request), these residents could choose fixed route buses for these trips.

The residents were asked whether a delivery service would be useful to save them the time and physical difficulties of traveling to and from the grocery or department stores and carrying their purchases. Such a delivery service to a subsidized housing or assisted living center could aggregate several residents' purchases in one trip, potentially reducing traffic congestion and expense. All residents in the focus group indicated they would not use a delivery service. The shopping trip is valued as an outing and social opportunity.

Future research is needed to determine whether an increase in social outing opportunities separate from shopping could help reduce public transportation costs. Additional research is needed to

measure the feasibility of coordinating shopping trips to common destinations from multi-unit housing centers to increase the number of riders per Specialized Transit vehicle trip.

Rural Residents

Rural areas are characterized by farms, forests, or open spaces with few houses. The cost of building or operating transportation facilities in low density areas is high relative to the small number of people using those facilities. One example of this is rural road design standards in Whatcom County: the cost to build sidewalks and shoulders is generally too high to justify for most rural roads. Transit is another example: the cost per rider for WTA bus routes in rural areas is 2 to 3 times higher than for urban locations.

Rural residents with special needs present the challenge of how to allocate transportation budgets fairly. The higher cost of providing public services to people in rural areas results in limitations on the availability of that service. Rural levels of service are lower than urban levels of service for transportation, enforcement, parks, and other public amenities.

Human services are essential for the health of rural residents with special needs. Seniors with special needs in rural areas may have lived there all their lives. The trauma of moving from a family home can exacerbate health problems for elderly people. The Meals on Wheels program is an example of a human services program with a substantial transportation component. Meals on Wheels volunteer drivers deliver prepared food to the homes of people with special needs. Congregate meals are offered at community centers in rural areas so that people can eat together and benefit from social interactions.

Newcomers to rural Whatcom County may choose housing in rural areas because of the lower house prices. Transportation becomes a cost that is shifted from the home owner to public agencies when the rural resident has special needs that qualify for public health or other services. Northwest Regional Council (NWRC) is the Medicaid Brokerage in Whatcom County. NWRC reports that transportation costs take 75% of the Medicaid Brokerage dollar, and 33% of that transport money is spent on 1% of trips (often taxi) for remote rural residents. Transportation represents about 35% of the total NWRC annual budget.

Further research is needed to develop strategies to resolve the disproportionate public cost of transportation associated with serving rural residents with special needs. Research should review the ways that land use policies affect housing prices in rural and urban areas, in turn influencing home-buying decisions. Research should review whether adequate supplies of affordable housing are available situated in close proximity to human services and transportation providers.

“Flex service” on certain rural WTA bus routes allow the regular bus routes to deviate from the established route within a specified area (see diagram). Flex service makes it possible for those living within a mile of a regular bus route to access it. In some cases, flex routes compensate for the lack of trails or sidewalks: some special needs residents could walk or bicycle to the nearest bus route if a safe facility were available. Ridematch or carpool programs may be cost effective ways to assist rural residents.

Native American Rural Residents

Lummi Nation

The Lummi people established a civilization in the Whatcom region about 12,000 years ago, traveling among the islands, lowlands and mountains of the north Puget Sound and Georgia Straits. They shared a common language and culture with the other tribes in the Salish Sea region including the Semiahmoo, the Saanich, the Songhees, the Sookes, the Klallams and the Samish. Salmon

fishing has always been of great importance to the Lummi people.

The Point Elliot Treaty of 1855 established the reservation boundaries of Cha-shoo-sen island, composed of Lummi penninsula bounded on the north by the Nooksack and Lummi Rivers. The Lummi Indian Reservation consists of a 13,000 acre area located in Whatcom County in the northwest corner of Washington State. It is eight miles west of the city of Bellingham, and has a population of about 4,200 residents, about 53% of whom are registered tribal members or identify themselves as Native American.

Lummi Nation approved a tribal constitution in 1948 and established an executive Lummi Indian Business Council (LIBC) responsible for administering community and health services. The Lummi Housing Authority was established in 1968, building and assisting with hundreds of affordable housing projects since then. In recent years, the LIBC has improved economic opportunities, but throughout the 1900s systematic exclusion from native fishing grounds resulted in devastating poverty for the Lummi Nation and some effects of that poverty remain.

About 30 percent of enrolled Lummi members cannot drive for age or disability reasons. Forty-five percent of Lummi households have incomes of less than $15,000 and the unemployment rate on the reservation in 2000 was 38% (as compared to a 5.8% unemployment rate county-wide). About 23% of the reservation is zoned for residential use and tribal member homes are located along the roadways or clustered at historic centers and in tribal housing enclaves. Non-Lummi residential properties are concentrated at Sandy Point and along the eastern peninsula shoreline.

By 2025, transportation plans include completion and upgrade of Lummi Shore Road, construction of new roads on the interior of the reservation, safety improvements on existing roadways, improved bus service and new sidewalks, bicycle paths and recreational trails. Population is expected to triple, dictating an increased emphasis on non-motorized facilities such as sidewalks, pathways, and recreational trails.

In 2006, Lummi Nation Transportation/Planning Department, in cooperation with the Whatcom Transit Authority, established a fixed route bus route on the Lummi Reservation. The route provides Lummi residents with access to major employment sites such as the Silver Reef Casino, the Tribal Center, and Northwest Indian College. The Lummi Transit serves parts of the reservation where the WTA bus does not provide service and links residents to the clinic and service centers. On-demand service is available on weekends.

Annual ridership has increased an average of 37.6% each year since inception. In 2009, Lummi Transit served an average of 3,454 passengers per month. By the end of 2010, a projected 57,000 annual ridership is expected.

To meet increased demand, Lummi Transit plans to expand service hours on weekends and add a second bus run to the previously unserved Red River neighborhood and Ferndale. Negotiations for a new interlocal agreement with WTA will allow future non-stop service from the Lummi Reservation to the main retail center in downtown Ferndale.

Nooksack Tribe

The Nooksack Tribal center is located near Deming, Washington, on the banks of the Nooksack River near the confluence of the south fork and the main stem. Nooksack lands consist of several separate plots near the Mt. Baker foothills area in Whatcom County. Historically, the Nooksack peoples occupied a much larger land area: from the areas now known as Skagit County to British Columbia to areas east of the Cascade Mountains. The Nooksack developed an extensive in-land trading network and were skillful river canoe travelers.

The Nooksack Tribal center offers health and human services to tribal members. Located in and around the center are an elementary school, a medical and dental clinic, a Head Start program for pre-school children, and administrative offices. Because the tribal lands are scattered and separated around the County, transport for tribal members who live far from the tribal center can be a barrier to access the services.

Since 1994, The Northwest Regional Council (NWRC) Tribal Outreach and Assistance Program has successfully linked American Indian Elders with services they need. Serving the Lummi and Nooksack, this program assures access to elders and provides technical assistance for programs on and off the reservations. Focused outreach uses culturally appropriate materials and a culturally relevant approach to make services understandable and effective for older Indians.

Support for tribal caregivers, especially those who provide kinship care (care for young children or grandchildren) is an important part of the program, particularly because of the higher incidence of kinship care in Indian Country. NWRC received special recognition statewide for best practices in its kinship caregiver program. Transportation can be a barrier for non-parent relatives caring for low-income children or who have special needs because many social services are limited to parents, not other relatives. The Kinship Care support program was established in 2004 to address these types of issues.

Case Study: Deming Library Access for Nooksack Tribe Head Start

The Nooksack Elementary School and Head Start programs use the resources of the Deming Public Library, located across the street from the tribal center. The street is a state highway, SR542. The library offers weekly story-telling sessions and other educational activities oriented toward teaching children how to use the library resources. The distance between the tribal center and the library is 50m (150 ft). The tribe transports the children in a school bus once a week for library visits.

The Nooksack children's human services transportation challenge is either to limit their access to educational resources at the library (in order to stay away from traffic), or to walk across the highway to access the library and its educational programs. Head Start programs in other parts of Whatcom County have cut funding for transit vans in recent years.

During the times that the school bus is not operating, children and adults (both tribal members and Deming residents) walk the short distance to the library, crossing the highway. State Route 542 does not have marked crosswalks in the Deming tribal and commercial center.

Active Involvement of Washington State Department of Transportation (WSDOT)

WSDOT investigated the Deming location in 2008 and found that best practices in traffic management do not support installation of a pedestrian island, crossing light or other facility with the conditions present at this location. A significant consideration is the presence of turn lane and driveway into the Casino. The Nooksack Tribe re-constructed the Casino driveway in 2000. WSDOT engineers identified some design considerations for the driveway and near-by side streets that affect pedestrian crossing.

A conventional crosswalk is not feasible because the necessary refuge median would conflict with turning movements into the Nooksack Casino and commercial center. The use of other mid-block crossing technologies (i.e., pedestrian bridge or tunnel) must be warranted by volume of pedestrian usage.

WSDOT observed and counted pedestrians crossing the highway on one afternoon in fall 2008 when school was in session. The number of pedestrian crossings did not meet the minimum required to warrant an intervention. Several adult and child pedestrians crossed the highway during the observation period.

Based on the WSDOT 2008 findings, the existing facilities are sufficient for pedestrians at this location. WSDOT continues to work with the community to focus attention on other opportunities for coordinated human services transportation.

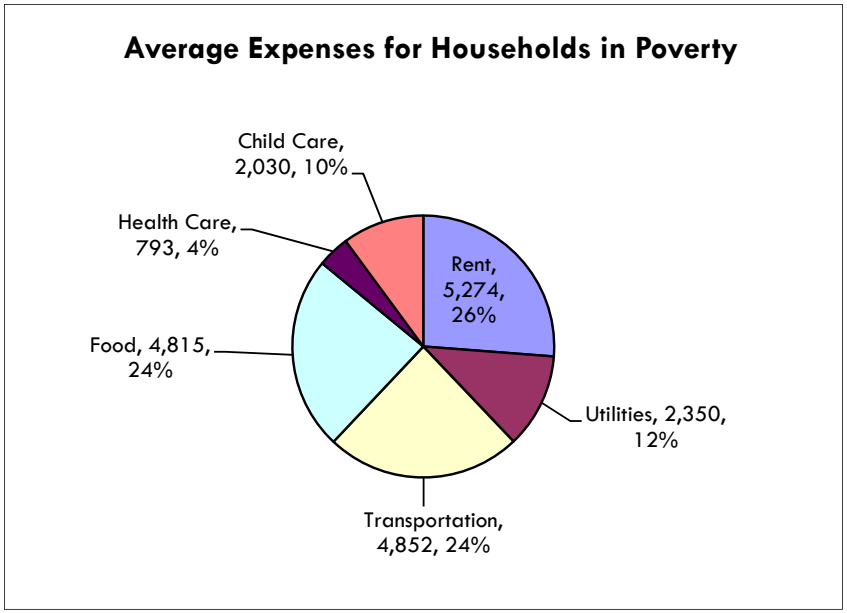
WSDOT engineers discussed the feasibility of construction of a pedestrian island or crossing lights or other facilities (e.g., elevated pedestrian bridge) to assist children crossing to the library from the schools. Engineers determined that the number of people walking across the highway does not meet the minimum required to warrant a constructed or signed facility. Installation of crosswalks or other crossing facilities and signage for School Zones on state highways in unincorporated areas (i.e., not within cities) is not standard practice in Washington. Kendall Elementary School is an additional example in Whatcom County of an elementary school on a state highway (547) where School Zone signage is not posted.

People with Low Income

People whose annual household income is at or near the poverty line qualify for some types of public assistance to meet basic needs. The poverty line is an income level lower than the amount needed to pay for basic services such as food, housing, transportation, and medical care. Each year, the federal Department of Health and Human Services calculates and sets a poverty income level, taking into account current economic conditions. The calculation assumes that housing costs are about 14% of the household budget.

In 2010, the Housing and Urban Development (HUD) low income level for a family of four in Bellingham was $32,200, that is, half the median income. Some human services are available to individuals or families whose income is higher than the official low income threshold. For example, Whatcom Alliance for Healthcare Access reports that individuals can qualify for assistance through the Behaviorial Health Program with an income up to 250% of the Federal poverty level or lower.

Each year, people of all ages and backgrounds find themselves without enough income to make ends meet. When these life circumstances are persistent, poverty results. A well-off person may become a low-income person after a bankruptcy, an uninsured health condition, loss of house or income from divorce, substance abuse, domestic violence, job loss, long-term disability or other events. For at least 4,000 Whatcom County residents annually, these challenges result in homelessness, according to the 2008 Whatcom County 10 year Plan to End Homelessness. Thousands of other Whatcom County residents do not fit the technical definition of homelessness because they are sharing housing with family or friends. These familes have low income and struggle



Average household expenses for a family of four living on a poverty-level income were published in the Catholic Campaign for Human Development's publication Poverty USA, 2004. Transportation constitutes a higher proportion of the budget than food and nearly equals rent.

Source: Bellingham Consolidated Strategic Plan 2008-2012, Housing

to pay for basic needs. WorkSource reports some instances of an employer offering a job to a qualified individual who has had to decline due to lack of transportation. In some cases, income from as little as three months' employment could have afforded the person sufficient resources to pay for transportation. Facilitated ridesharing or bridge transit funding for these cases could be a useful employment access transportation project.

Services for individuals or families living on a low income may include:

- free or reduced price meals
- debit cards for purchasing of food (Electronic Benefits Transfer (EBT) cards, formerly called food stamps)
- free or reduced price medical or dental care
- vocational training
- community voice mail
- free or reduced price child care or early learning programs
- transit passes or fare tokens

The goal of human services for people with low income is to assist them with skills, training, and support necessary for securing employment and stable, adequate income. Services address the circumstances that contribute to low income. Some of the services to which low income persons may need to travel are shown in the chart, correlated with samples of the types of circumstances that might be associated with these services.

It is clear from the chart that people with low income need transportation to many locations for different services, perhaps even more daily travel than those with higher income levels.

The cost of transportation to a medical appointment can be affected by factors unrelated to the medical care and unrelated to transportation. For example, a single parent with three toddlers cannot leave the toddlers unattended while going to the doctor. A taxi trip to a Medicaid appointment, if paid for by Medicaid Brokerage, cannot transport people other than the patient in that taxi, per federal policy. If the parent cannot afford childcare for the toddlers, the parent may have to skip needed treatments.

Services	Criminal Justice	Loss of income or home	Domestic Violence shelter	Family care (elders, children)	Injury or Disability
Boys and Girls Clubs				x	
Vocational Services	x	x			x
Catholic Community Services				x	x
Dept. Social & Health Svcs.	x		x	x	
Early Learning/Head Start				x	
Interfaith Clinic		x	x	x	x
Community Land Trust		x			
Dept. of Corrections	x				
Court/Parole Officer	x				
Mission/Emergency Shelter		x	x		
Veterans		x			x
Alliance for Healthcare Access				x	x
Council on Aging				x	
Housing or self-help homes	x	x	x	x	x
Financial literacy class		x	x		
WorkSource	x	x			x
Food Banks		x	x	x	
Substance Abuse treatment	x			x	
Clothing/School supplies		x	x	x	
Library		x		x	
Childcare		x	x	x	
Case managers	x	x	x	x	x
Adult Day Health				x	x
Day labor employment		x			
Medicaid/Medicare			x	x	x
Eviction prevention		x	x	x	

Delay in addressing a medical condition may lead to relying on public assistance for a longer period of time before he or she can regain work and adequate income.

When it is not possible for the parent to bring children along, the cost of paying for a sitter becomes part of the transportation equation. A trip that takes a longer time increases the cost of childcare (for example, paratransit or bus routes with low frequency service). Multiple bus transfers can be physically taxing when traveling with supplies, children, and strollers.

Case Study: Domestic Violence Survivor

Darlene (fictitious name) escaped from a violent partner with her two children aged 3 and 5. While she was living in the shelter for survivors of domestic violence, she worked on several goals:

- Counseling and medical care for the effects of the violence (adult and children)
- Attending support groups or classes for domestic violence awareness
- Apply for TANF, Workfirst, food stamps, other assistance (if qualified)
- Re-training for future employment
- Getting stable child care for her children, enrolling 5 yr old in school
- Applying for and gaining stable employment
- Transitioning to stable, safe, affordable housing
- Legal and criminal court processes related to the domestic violence

The table below shows the distances from Darlene's Bellingham shelter to the service centers to which she traveled regularly (daily, weekly, or monthly). Travel time indicates the total estimated amount of time for Darlene to walk to the bus stop, ride the bus, and then walk to the destination.

Travel times to the sample destinations are estimated based on a shelter location where bus service operates once per hour during week days. Travel times would be shorter for those living in the downtown core or along high-frequency bus routes (called "GO lines"). Travel times can double for a person living in a rural area or in cities with low frequency bus service (e.g., Sumas or Blaine).

Shelters offer training on how to re-establish credit, budget, manage expenses, and save. Some trainings give specific guidance on buying a car. According to the Whatcom Educational Credit Union, buying a car too soon unbalances a newly established budget, returning a low income person back into debt. The instructor reported several examples of a low income family "gifted" with a car by a well-intentioned family member finding that the hidden costs of the car's maintenance, registration, insurance, fuel, and parking, overwhelm and derail budget plans.

Sample Destinations	**Frequency**	**Distance** (both ways), **Travel time** (bus & walk)
Food Bank	weekly	4 miles, 2 hrs.
Department of Social and Health Services office	monthly	8 miles, 3 hrs.
Workfirst case worker	monthly	8 miles, 3 hrs.
Workfirst classes at Community College	daily	8 miles, 2 ½ hrs
County Courthouse	monthly	4 miles, 2 hrs.
Public Defender or law office	various	4 miles, 2 hrs.
Childcare center	daily	3 ½ miles, 2 hrs
Elementary School	varies	varies*
Family Services Center (e.g., counseling)	weekly	4 miles, 2 hrs.
Discount grocery store(s)	weekly	9 miles, 4 hrs.
Al-Anon or other support group(s)	weekly	within shelter
Interfaith Medical clinic	varies	4 miles, 2 hrs
Financial Literacy or other classes	weekly	4 miles, 2 hrs.

*If it is in the child's best interest, school districts transport children to their "original" school, which may be in a different county or in a different district, depending on whether the family could be placed in a shelter near or far from their original home.

The lesson appears to be that even if a private car is a good long term solution for low income person's transportation needs, there is a period of months or years while re-establishing financial strength during which that person or family cannot afford to own and operate a private car. During that period, a variety of transportation options (walking, bicycling, transit, ride-share, etc.) are necessary for full access to human services and life activities.

People with low income sometimes walk or bicycle because it can be less expensive. But they are more likely not to have health insurance or other resources. Safety is a priority because they are less able to afford medical treatment and the risk of job loss. Where roads have high traffic but no sidewalks, shoulders, or trails, a low-income person may feel exposed to increased risk while walking or biking. The cost of protective equipment (lights, reflective clothing,

helmets, secure storage, etc.) can be a barrier.

EACH project funding established a program in 2008 to help low income people

and families learn how to use a bicycle for transportation. After completion of the three-session training, the "everybodyBIKE Earn-a-Bike" program assists in providing bicycles for transportation use.

School Children

"Youth" conjures up images of health and energy, but youngsters fit the definition of people with special needs in transportation: most children cannot provide for their own transportation due to age. About half of the special needs travelers in Whatcom County are children. Children need to travel to many of the same destinations as adults: shops, events, special classes, sports practice, friends' houses, jobs, and more.

Until the late 1970s, most children walked or bicycled for transportation regularly in the U.S. They still do in most other countries, but much less so in the U.S. A study of three generations of 9-year-olds in the U.S. found that by 1990, the radius around the home in which children were allowed to play had shrunk to a ninth of what it had been in 1970. Physical activity is important for healthy child development and the Centers for Disease Control and Prevention recommend walking and bicycling for transportation as daily physical activity for all ages.

Since 2005, federal and state-funded programs have encouraged walking to school through supervised walking groups called "Walking School Buses." Safe Routes to School education, enforcement and engineering efforts may increase the proportion of child trips made by walking. Parental and community acceptance of walking as appropriate transportation for children will hinge on accessible and continuous sidewalks, safe crossing facilities at intersections, and enforcement emphasis that favors pedestrian safety.

School bus service provides some assistance for school children during the school year for attendance during regular school hours. But after school activities are not part of the school bus service schedule. Students and their families benefit from access to the school grounds during evening, summer, weekends, and other times when regular classes are not in session.

Coordinated transportation planning should include provision for safe routes to walk or bike within one mile of each school. Where traffic hazards exist within the one-mile radius, human services transportation should address the hazards with a goal to facilitate walking or cycling to school (rather than hazard bussing as an open-ended solution). For students living outside the one-mile walk radius, school bus transportation is part of the range of human services transportation modes.

School bus transportation

The cost of school bus equipment and operations is significant for every school district. In 2008, 3% of the Bellingham School District annual budget went to busing, equivalent to the entire vocational education budget. State funds paid for about half the cost, the remaining $970,000 came from cuts to instructional programs. Bellingham identified some school bus transportation-related expenditures to consider cutting to address the 2009 budget shortfall. The school board reports that a comprehensive transportation study is required before changes to the school bus system can be implemented. Funding for such a study could be an appropriate EACH grant project.

Nationwide, the annual amount spent for school bus transportation exceeds the expenditures of all public transit agencies combined. Coordination between public transit and school buses seems like an opportunity for mutual cost savings. The Federal Transit

Administration commissioned a Transportation Research Board Report (TCRP Report 56) in 1999 that documented transit and school bus cooperation projects nationwide. In spite of many barriers -- legislative, policy, funding, operations, union contracts, attitudes – thirteen communities succeeded in some degree of coordination. According to the Bellingham school district, coordination with WTA for maintenance facilities or fuel purchases could potentially be evaluated at some future time to determine whether cost savings would result. A significant barrier is the cost of paying school district and WTA staff to meet together regularly over time to define and negotiate the terms of coordination. This type of planning could be an appropriate project for EACH funding.

Safe Routes to School Case Study

Carl Cozier Elementary School provided hazard bussing to students living 3/4 mile from the school along a section of Fraser Street without sidewalks. Apartments in this area of Fraser Street house several young families of modest means. In 2010, the City of Bellingham constructed sidewalks, marked crosswalks, and a trail boardwalk along Fraser Street. The mayor, superintendent, school principal and the neighborhood association hosted a special ribbon-cutting event to begin the school year celebrating walking to school. The school district estimates an annual savings of more than $20,000 that formerly was spent on hazard bussing.

Car-free Residents

Some Whatcom County residents choose not to own or use a private car, or to reduce their use of a private car, for reasons other than income, age, or ability. Reasons might include:

- reducing traffic congestion
- reducing air and water pollution
- reducing energy consumption
- observing religious customs
- traveling from an event where alcohol is served
- suspension of license due to a previous driving infraction
- increasing physical activity
- increasing social interaction

Since 2008, the number of people interested in reducing car use has increased due to the high cost of petroleum, increased enforcement against driving while intoxicated, and heightened publicity about non-car options. In the 1990s, vehicle miles traveled (VMT) was increasing at 4% per year (while population growth was half that). In 2008, VMT declined 0.5% nationwide, and in Bellingham, VMT declined 4% from 2007 to 2009.

Around Washington State, various coordinated transportation programs, called "Mobility Management," help people make daily trips without driving. Mobility Management programs ease highway traffic congestion during commute times, while helping people with disabilities access needed services. In Whatcom County, Whatcom Smart Trips is the mobility management program that assists and rewards people of all ability levels to make more of their daily trips by sharing rides, riding the bus, walking or cycling. Ride-share and ride-match programs, education, publicity, events, and advocacy for trails and sidewalks are part of a program to provide connectivity to bus routes and destinations for people of all abilities.

In 2009, the EACH Travel Training program published the North Sound Connections guide and, in partnership with the North Sound Connecting Communities project, launched the North Sound Connections website (www.NorthSoundConnections.com). The guide features schedules for regional public and private transportation providers in a four county area, along with contact information, trip planning tips, and a map. The website

offers a basic on-line trip planning service: the traveler enters her origin and destination points, and the website provides a list of transportation providers and links to schedules for that trip. In the future, when transit schedules on-line are available in compatible, linkable digital formats, a more detailed regional trip planner will be possible. Seniors traveling to Seattle area medical centers use information from North Sound Connections to avoid the drive.

Summary

Residents with special needs live throughout Whatcom County often in dispersed locations. Clusters of low income housing and senior assisted living centers can be identified, but an equally large proportion of people with special needs live independently. School children, elderly non-drivers, and job-seekers are some examples of people whose homes could be far from service providers but who need access to school, medical appointments, or employment, or training. Transportation assistance to and from dispersed rural areas may require site-specific solutions, but some overall policies that coordinate transportation planning generally will help special needs populations.

Chapter 5 - Existing Transportation Services

Public roads, transit buses, private shuttles, ferries and rail are some of the transportation services that serve all residents of Whatcom County, including people with special needs. Paratransit (also called Specialized Transportation), Medicaid brokerage transport services, volunteer driver programs, special event vans, and school buses are examples of services that specifically assist people with special needs. This chapter describes the main types of public and private services available.

Whatcom Transportation Authority (WTA) is the County's public transportation provider, operating a variety of bus and van services.

Fixed route bus service: WTA operates 36 routes served by large, conventional buses, serving regular stops on a published schedule. These routes serve specific corridors and stops are marked by posted signs. The fare is $1.00 per ride for the general public and $0.50 for those with a reduced fare card or over 65 years of age. Children under 8 years of age and seniors over 75 may ride free of charge.

Specialized bus service: Smaller van-type buses offer door-to-door service for people who qualify through an eligibility process. The service is available within a ¼ mile area of the fixed route corridors during regular service hours. The Americans with Disabilities Act (ADA) provides for specialized transportation service within this type of ¼ mile corridor.

Flex routes: Specific rural routes (for example, 71X and 72X) offer the option for a passenger to request the bus to deviate slightly from the established route, within a designated zone. This service helps people to use the regular bus, and helps those with mobility impairments who can't otherwise get to the bus stop. When no one has pre-requested a deviation to the route, the bus travels as a Fixed Route bus.

Safety Net Service: In areas of the County not served by other WTA services, the Safety Net offers a minimum service on designated days of the week. The service is available to all residents by calling and requesting a ride, but it is only available on assigned days of the week for each area. While the pick up and drop-off is door-to-door, timing may be problematic, requiring a "window" of up to two hours within which the ride could arrive.

Van-pool Service: For groups coming from and going to a similar destination, Van Pools offer a subscription service using volunteer

drivers. WTA supplies and maintains the van. The service is self-sustaining with the cost paid by the subscribing users. The program is popular. In July 2008, a waiting list of nine groups had submitted requests for Van Pool vehicles.

Community Use Van: From 2000 to 2006, WTA-supplied and maintained vans assigned to community groups for use in areas outside the fixed route service. Volunteer drivers completed a training and provided limited service according to the needs of the local community. These vans acted as collectors to bring riders to fixed route stations or other destinations not served by the WTA. Point Roberts, Lummi Island, a treatment center in north Lake Whatcom, and Lummi Nation operated vans. WTA has helped these groups to find other solutions since termination of the program

County Connector Bus: Pilot project fixed-route bus between Skagit and Whatcom Counties. Service is provided through a partnership between the two agencies and is dependent on funding from a state grant.

Lummi Nation Transit Provides deviated fixed route transportation service to Lummi Reservation residents.

Lummi Transit Fixed Route Provides weekday service from 6:20 am to 8:14 pm and weekend service from 8:13 am to 6:00 pm. Lummi Transit is fare-free and provides transportation primarily to residents in the southern end of the reservation to connect them to government offices, stores, schools, clinics, and employment centers.

Lummi Transit's two 25 passenger buses and one 14 passenger bus operate on a fixed-route as shown on the map. The route connects with WTA for travel to Bellingham and other areas in Whatcom County. Lummi Transit transports patients off-reservation to access the regional Methadone treatment clinic and to access off-reservation tribal clinics. Ridership demand for these medical transport services exceeds capacity on the existing equipment.

In 2006, Lummi Transit served 16,560 passengers with an average of 1,380 passengers per month. By 2009, total ridership jumped to 41,449 with an average of 3,454 passengers per month. This ridership increase amounted to a 37.6% average annual increase. Lummi Transit estimates it will serve 57,000 passengers by December 2010, a 37.6% annual increase.

Ridership surveys show increased demand for expanded hours on weekends and a second bus route to serve the Red River neighborhood, at the northern end of the reservation, and Ferndale. Completion of an interlocal agreement with WTA is expected to result in non-stop Lummi Transit service from the Reservation to Ferndale's commercial center. Ridership counts on the test run, community surveys, and future funding will determine the permanency of the expanded route.

Amtrak Regularly scheduled regional passenger rail service connecting cities in the state, nationally, and internationally. Rail service is supplemented by Thru-way Bus coach services. Discounted, Multi-ride tickets available.

Whatcom Chief Ferry Regularly scheduled daily ferry service connecting Lummi Reservation and Lummi Island. Operated by Whatcom County Public Works, the ferry transports motor vehicles, and walking and bicycling passengers.

Private Transportation Businesses offering transit or shuttle services:

Airporter Shuttle/BellAir Charters: Daily scheduled bus service connecting to SeaTac Airport and intermediate points. The Shuttle serves Blaine (by reservation only); Birch Bay, Lynden, Ferndale and Bellingham, providing 11 roundtrips each day.

Charter and contracted services are also provided by special arrangement. Within Whatcom County, the Bellair Baker Shuttle offers service to the Ski area on a seasonal basis. Recent new services include a Thanksgiving Shuttle service from Western Washington University to the Bellevue area in King County and back.

Taxi and Limousine Services: Individual car and van service customized for each trip; some social services provide taxi vouchers or arrange taxi transportation for eligible medical patients where applicable public transportation services are not available. Yellow Cab and Yellow Van taxi companies offer a full-time call center and a range of services for older riders. A family member can create a personal account for an older relative and add money as needed. Yellow Van's five wheelchair accessible vans comprise the largest fleet of all taxi services in the north Puget Sound region. A premium fee ($45 per ride, in 2009) is added to the standard taxi fare for each use of the wheelchair service.

Medicaid Brokerage Statewide, NWRC is recognized among its sister agencies as having a highly cost-efficient system for allocation of transportation funds.

Intercity Bus: Regularly scheduled regional bus service connecting to major cities is provided by the Greyhound company and by Quick Shuttle. Until the 1970s, this type of carrier was required to serve cities within and between counties.

Private Charter Coach: Several private corporations, such as Hesselgrave, casinos, and tour companies offer contracted service for events, charters or to serve client companies.

Victoria San Juan Cruises Provides seasonal passenger-only ferry service from Bellingham to Victoria B.C. and to San Juan Island County. (Also called "San Juan Commuter")

Charter Airlines Charter flights can be arranged to and from Bellingham International Airport. Island Air is based in Friday Harbor, San Juan County. St. Joseph Hospital reports a significant number of residents of San Juan County who travel to Bellingham for medical care.

Other services:

School Bus Services: Each of Whatcom County's eight public school districts provide bus service to bring students to and from regularly scheduled classes. Some schools offer additional bus service to serve students participating in extra-curricular activities. School Districts are required to provide bus service outside of their district to homeless students who have been relocated to a shelter far from their "home" school. This pupil transportation need has increased in recent years and has created additional costs. Where possible, School Districts have collaborated with each other to share the transportation responsibilities for homeless students.

Private Schools: Of the 28 private schools in Whatcom County, only five provide bus or van shuttle services. Lynden Christian School is the largest with over 1,000 students, providing daily with a fleet of ten buses. Private schools offer specialized programs or instructional methods that can result in students traveling several miles each way.

Event/Community Group bus or van service: Many places of worship, summer camps, and assisted living residences operate van or bus service to assist members to attend weekly services and events. Some of these van services are operated on a volunteer basis and others are operated by employee drivers. Some hotels and casinos operate charter or shuttle services. Rental companies offer mini-vans and shuttle buses to organizations with appropriate insurance for operating such vehicles.

VFW VA Hospital Shuttle: The local Veterans' group offers a week-day shuttle service for Seattle-area hospital appointments for veterans. The van is purchased through fundraising by VFW volunteers, and is not wheel-chair accessible. Insurance and

maintenance are paid for by the Veterans Administration, the drivers are unpaid volunteers. Veterans' medical care and access was identified as a priority statewide in 2009.

Taxi Vouchers: DSHS has in the past provided a limited number of taxi vouchers in special cases to assist a person with a new job until she or he can make other arrangements. Whatcom Yellow Cab serves a large volume of Medicaid taxi trips each day, receiving a list of trips from the hospital and other service providers the day before trips are scheduled. Northwest Regional Council has a good system in place to ensure that those who can, use the bus, instead of taxis.

Gasoline Vouchers: The Washington State Department of Social and Health Services (DSHS) and the Northwest Regional Council (NWRC) Medicaid Services Coordinator provide a limited amount of vouchers to purchase automobile fuel. People can use these to reimburse colleagues with whom they carpool. (This service was more commonly used prior to the expansion of WTA service to Kendall and Lummi Nation areas).

Delivery Services: DSHS sends staff to remote site offices on a regular basis to serve residents who cannot access the Bellingham office. Some vendors offer delivery of materials or purchases for a fee, or if a minimum order value is reached. Two grocery stores and two specialty food delivery services offer home delivery of groceries for a fee. Whatcom Volunteer Center "CHORE" program and the non-profit Love, INC., offer volunteer drivers for transportation or for delivery for people with special needs.

RideMatch Service: Internet-based car-pool match service for commute trips. Individuals register and make contacts for sharing commute trips or for special events. The website "Craig's List" offers an informal ride-share program and Western Washington University students can access a ride-share program at through the university website.

Medical Transport: Private non-emergency ambulance services such as Cascade Ambulance Service and Rural Metro transport people to local or distant hospitals and medical centers.

Car Share or Rental Services Private rental businesses offer short term use of motor vehicles for those who cannot afford to or choose not to own a car. Car Share services such as Zip Car operate on a membership basis with fees based on hourly use. In 2010, there was no local car share service operating in Whatcom County.

PediCab Service Short distance non-motorized transport service for special events or in downtown areas. A private business has operated this service in Bellingham from 2003 to 2009. A similar service is scheduled to resume in 2011.

Mobility Management: Special needs populations benefit from community-wide education programs and marketing to increase awareness of transportation options. Whatcom Smart Trips educates people of all ability levels through marketing and promotion of walking, taking the bus, sharing a ride, and bicycling to reduce car trips. Participants benefit from the message that walking, bicycling, riding the bus, and sharing rides is a popular and positive way for everyone to travel, not just those with special needs. Discounts, prizes, reduced-rate bus passes, emergency ride home, and other incentives inspire community members to use the variety of transportation available. Appendix 4 includes a detailed description of the Whatcom Smart Trips program.

Low Income Children's Bicycle Transportation: A non-profit social services bicycle shop located in a low-income neighborhood teaches children bicycle riding skills and maintenance through hands-on, supervised instruction. The children may earn a bicycle through work and by paying a modest sum. Supervised bicycle rides teach bicycle traffic skills and an understanding of bike and trail routes for transportation. The project addresses several special needs issues in one project: transportation, job skills-training, healthy physical activity, and confidence building. With bicycle

transportation skills and equipment, the children access libraries, after-school programs, community events, and other services that are not available to those relying on an adult to transport or accompany them.

Chapter 6 - Transportation Service Gaps

People with special needs living in rural areas report many service gaps for transportation, often citing lower frequency bus service. If public bus service in rural areas with low population density were offered frequently enough to meet all the needs of special needs residents, it would be costly. In spring, 2010, a wide majority of rural residents voted against funding public transit at current service levels. Elected officials determine that it is not cost effective for a public transit service to run frequent bus service where there are few riders, just as road widening is too expensive for every low-traffic road. Safety Net and Specialized service can meet some of the needs in low-ridership areas.

Recognizing the high cost of building and operating transportation services, stakeholders note that the costs of housing, human services and transportation are intertwined. Coordinated transportation will be more sustainable if it includes efforts to address the economic factors that encourage social service recipients to choose inexpensive housing in remote locations. When special needs residents move to rural areas, their lower housing cost shifts significant transportation costs for human services onto agencies or the public. Cost of delivering social services to remote locations is higher, as is the cost of offering transit service to low-density areas.

Other innovations offer some promise for increasing connectivity while remaining cost effective. The EACH Stakeholder Group discussed the following potential innovations:

- Contracted shuttle service from small rural towns (e.g., Sumas) to larger rural cities (e.g., Lynden). Service providers could be private business (e.g., Taxi or Airporter) or non-profit (e.g., church or volunteer program). Service would operate when and where WTA bus is not available.
- Agencies could contract with school bus drivers to provide mid-day rides for special needs trips. This approach works to supplement the income of school bus drivers who would otherwise have un-paid mid-day time when they are not driving the school bus.

Participating human service agencies provided data on trip origination and destination points for those utilizing agency services. The data was then compared with existing public bus fixed route service to determine where some gaps in service may exist. WTA service area map for 2008 is shown in the Appendix. WTA information on the location of specialized transit trips does not show strong concentrations of trip origin and destination points: most trips are not concentrated in particular areas. Social services and WTA have limited ability to share information about specialized trips, due to privacy concerns.

Population growth data and anonymized specialized transit trip data suggest that circulator shuttle connections among the smaller cities could serve a number of special needs trips. Stakeholders suggest a shuttle route connecting Kendall, Sumas, Everson and Lynden on a 90-minute schedule during week days could serve youth, seniors, and medical human services trips. Connection to Lynden allows access to the WTA fixed-route bus to Bellingham and to commercial and medical services in Lynden. A pilot project operated by a private company is included in the priority project list as a method to determine demand, build ridership, and measure feasibility for larger scale implementation.

A second area for potential shuttle service could include Cherry Point, Birch Bay, Blaine, Ferndale, and (depending on Lummi Transit service plans) Lummi Nation.

These smaller cities are currently served only by bus routes that travel to and from the central hub of Bellingham. The current WTA "hub and spoke" design does not offer connection between the "spokes," and the low ridership projections in rural cities makes it cost prohibitive for WTA to begin a rural circulator route. A private shuttle could build ridership to levels necessary for WTA participation. Rural residents may ride the bus if service is provided in the currently unserved areas, if the example of the Lummi Transit program is a guide: ridership there grew 30% per year.

WTA's priority is to serve the most populous corridors by providing service along routes that radiate out from the highest population area. This system of "hub" and "spokes" is cost effective in serving the most passengers per mile of bus travel. Regular frequent service between "spokes," i.e., the rural towns and small cities in the table above, is not cost effective because the population density is low. Whatcom County Comprehensive Plan policies emphasize maintaining low population in the agricultural and forestry areas. Additional research is needed to determine cost effective approaches that meet land use planning goals while providing for special needs transportation in these areas.

Transportation Needs

To serve the employment access and medical and human service needs with an effective coordinated transportation system, EACH Stakeholders identified the following gaps:

- Night, weekend, and holiday public transportation service – throughout the County and connecting to other counties
- Connecting the "spokes" – between small cities and rural residential centers (for example, a circulator among Sumas, Nooksack, Everson, and Lynden; or Lummi Transit connections to Ferndale)
- Rural service more than the designated two Safety Net days per week
- Wheelchair-accessible intercity public transit and medical shuttles to out-of-county services (for example, Seattle area hospitals or transportation hubs)
- Sidewalks or trails connecting human services centers to transit stops and commercial or residential destinations within ¼ mile
- Sidewalks or trails connecting rural commercial centers to residences within ¼ mile
- Employee and visitor transportation to Mt. Baker Ski Area and National Forest

A detailed list of projects addressing these gaps is listed in priority order in the Priority Project List, Chapter 10.

Duplications of service that were identified include the following:

- Veterans Medical shuttle (daily to Seattle) and Lummi Nation medical shuttle (daily to Everett) and volunteer drivers (periodically driving seniors to Seattle area medical specialists)
- Daily or weekly delivery of Meals-on-Wheels to rural locations; Food Bank delivers to rural locations; some rural residents travel to Bellingham Food Bank
- School bus service in some cases travels similar routes and times as public bus; children eligible for school bus are sometimes driven to school by parents
- Duplicated transportation provided by separate vehicles for different patients from and to identical locations at the same time, a situation created by policies of different

funding organizations that prohibit combining trips.

- Cost of long-distance taxi service in remote rural areas (where circulator or shuttle services could provide a wider range of service for lower cost)
- Cost of community group van ownership and maintenance (such as places of worship, veterans groups, group homes, or charities) when the vans are used a small portion of the year
- Private shuttle services for recreation sites such as casinos or resorts

Emergency Management

The Governor's Council on Disabilities and Employment hosted a community forum in Lynden in November, 2009. The Lynden Fire District Chief described the training and planning process for addressing the needs of people with disabilities during emergencies. Fire fighters are trained to assist people who use wheelchairs in evacuating buildings during emergencies. There are gaps in training for some special needs transportation issues in emergencies such as: communicating with people who have hearing impairments or developmental disabilities, or whose language is other than English.

Whatcom County Department of Emergency Management plans for and coordinates response for emergencies throughout Whatcom County and all its cities except Bellingham. The Bellingham Department of Emergency Management coordinates emergency response within city limits and publishes the City of Bellingham Emergency Management Plan. Both Whatcom and Bellingham emergency plans acknowledge the need for coordination of transportation during emergencies and both have established agreements with WTA for emergency use of transit vehicles and drivers, if needed. A specific methodology for addressing people with special needs is not included. Neither emergency management department has communicated with the school districts about potential use of school buses for emergency evacuation. The types of floods, earthquakes, or hurricanes for which such time-sensitive evaculation would be necessary are not likely to occur in this region, according to one emergency management staffer.

A project to assist the Emergency Management staff in defining in greater detail the methods, agreements, and preparations for emergency special needs transportation may be an appropriate EACH grant proposal.

Chapter 7 - Common Origination Points

In cities or towns where there are higher general residential densities, EACH stakeholders identified clusters of housing where special needs populations constitute a higher percentage than average. In those locations, coordinated transportation may result in solutions that serve more people for a lower cost per traveler. Below are some of the areas or towns where EACH stakeholders identified potential clusters of residences using special needs transportation:

Paradise Lakes and Peaceful Valley Residential Area, located two miles north of Kendall Elementary School on the Kendall-Sumas Road, state route 547. Paradise Lakes is home to about 4,000 residents, of whom about 70% meet the definition of special needs residents for income or age reasons. Paradise Lakes is an unincorporated residential area in a part of the county mainly zoned for forestry. Locally available services in Paradise Lakes are limited to regular daily bus service to Bellingham. The residential area is two miles from the elementary school, library, and store. The two-mile distance is a barrier for school and playground access for children and other special needs travelers because there is no sidewalk or trail along the highway. The City of Sumas is about 8 miles northwest of Paradise Lakes and is the closest employment and service center. There is no regular bus service between Paradise Lakes and Sumas.

Lummi Nation, located 8 miles west of Bellingham and 6 miles south of Ferndale has a population of about 4,200. Facilities and employers on the Lummi Nation include the Silver Reef Casino, Northwest Indian College, the Lummi Nation School, elder housing, farms, and tribal government offices. Regular daily WTA and Lummi Transit bus routes serve travelers on the reservation to get to services and jobs on the reservation. Residents of Lummi Nation travel to Ferndale for many services, and Lummi Transit proposes expanded bus service there.

Nooksack Tribe. Registered tribal members live on lands dispersed throughout eastern Whatcom County foothills. The tribal offices, social services, and elementary school are located in Deming, along with the Nooksack Casino.

East County Foothills includes the cities of Sumas, Nooskack and Everson. Everson is located 20 miles northeast of Bellingham and has a population of 2,135. It is a small employment and service center for the surrounding rural unincorporated area where agriculture is a leading employer. Unincorporated villages include Nugents Corner, Kendall, and areas zoned for forestry in the Cascade Mountain foothills. There are medical and dental offices, a library, elementary school, day care centers, and a full-service grocery store in Everson. Rural residents and visitors with private transportation can access services in Everson from Sumas, Kendall and villages in the foothills. Weekday bus service brings travelers to Bellingham (south) but no buses connect the east county communities to Lynden or Blaine (west).

Lynden is an incorporated city located 15 miles north of Bellingham and has a population of approximately 11,000. It is a commercial and service center for a large farming area in unincorporated northwestern Whatcom County. Regular bus service carries travelers going to Bellingham and on a circulator route within Lynden. Access to Lynden's medical, dental, educational and employment services is geographically closer than Bellingham for residents in the rural areas and small cities to the north and east of Lynden. Five retirement and senior residences are located within the Lynden city limits.

Ferndale is an incorporated city located 7 miles northwest of Bellingham and has a population of 11,000. It is the second largest city in Whatcom County and is an employment, commerce, and service center for the area. Two regular daily bus routes serve travelers going to Bellingham or Blaine, and one of the routes offers a local circulator route. Ferndale is the residence for many employees of the Cherry Point Industrial area located 10 miles west of the city. Human services available in Ferndale include retirement and assisted living housing, a Senior Activity Center, and several schools and childcare facilities.

Blaine is an incorporated city located at the northwest corner of Whatcom County at the border with Canada and it has a population of 5,000. The Blaine school district serves students from Birch Bay, an unincorporated area 5 miles south of the city with a rapidly growing population of more than 5,000. There are retirement and assisted living housing units in Blaine and Birch Bay. Regular daily bus routes serve travelers to Birch Bay, Ferndale, and Bellingham.

Maple Falls and Glacier are located in eastern Whatcom County near the National Forest boundary. The year-around combined population of these two villages is estimated to be fewer than 400, and recreational visitors represent a seasonal population increase of up to 4,000. The Mt. Baker School District serves students living in these villages. The closest social services are in Sumas or Everson, 20 or 30 miles west. Safety Net bus service is available one day per week by reservation.

Bellingham is the largest city in Whatcom County with a population of 80,000. It is the largest employment center for the County and provides a large variety of human services for residents throughout the county, including a large regional hospital, university, and community and technical college. The Lighthouse Mission is an

example of an emergency shelter offered in Bellingham that is not available in other parts of Whatcom County. Retirement homes and assisted living centers are located in the Birchwood area near the hospital, downtown, along Fairhaven Parkway, and in north Bellingham's Cordata neighborhood.

More than 30 regular daily bus routes serve Bellingham area along with daily passenger rail, airline flights, regional Airporter shuttle service, regional and local ferries, and taxi service.

Bellingham Farm Worker Housing. Sterling Meadows is a housing development located in the northwest area of Bellingham to serve low income people who work on the farms in Whatcom County. Workers travel from this residential site to farms in the rural areas around Everson and Lynden, and many other agricultural work sites.

Chapter 8 - Common Destinations

Residents with special needs travel to the same spectrum of sites that the general population visits: employment sites, childcare facilities, schools, medical services, commercial areas, recreation areas and more. Some residents with special needs travel more frequently to sites that offer specific types of services:

- Vocational training
- Medical and rehabilitation centers
- Senior and assisted living activity centers
- Residential shelters
- Human services appointments (e.g., DSHS, Case Managers, etc.)

The majority of these sites are clustered in the Bellingham area. For special needs residents in the small cities and rural areas, transportation to Bellingham is not cost effective. People traveling to work during late night hours or on weekends have few transportation options available.

According to data from the Opportunity Council, all Whatcom's providers of mental health services receiving federal funding are located in Bellingham, as are 75% of the substance abuse care providers. Of the remaining 25%, one substance abuse care provider is located in each of Everson and Lynden, and two are located in Ferndale. About 70% of the total number of persons with developmental disabilities in Whatcom County live in Bellingham and Ferndale.

The following list describes some of the destinations accessed by people with special needs:

Department of Social and Health Services, Bellingham Office: The DSHS office offers programs to assist people with low income. People come to the DSHS office to apply for cash or food assistance, medical assistance, in-home and nursing-home care for elderly people, and treatment programs for substance misuse. The office is located in a shopping mall area in north Bellingham, about ¼ mile from the Cordata bus terminal. The office is two miles from downtown Bellingham where the nearest subsidized housing complex, emergency shelters and food bank are located. In September 2010, the office reported approximately 90 new applications each day, a rate 70% higher than 2009 average levels.

Goodwill Jobs Training Center: The center offers free classes in computer programs, job search skills, language proficiency, and high school graduation equivalency degree (GED) preparation. The center is located in a shopping mall northeast of Bellingham, about ¼ mile from a high-frequency bus line. The center is located about one mile from a child care center.

Interfaith and Planned Parenthood Health Clinics: These clinics offer sliding-scale medical services to people with low income. A range of preventative, diagnostic, and educational services are

available in addition to medical care. The clinics are located in downtown Bellingham, within three blocks of the WTA terminal, and within walking distance of two shelters, three subsidized housing complexes, a senior center, the food bank, and two day-use drop-in centers for people without homes.

Lighthouse Mission and other shelter or meal programs: Drop-in centers offering temporary shelter and once-a-day meals to people without homes. At least three area churches offer once-per-week community meals on different days of the week.The Lighthouse Mission is located in downtown Bellingham and it offers daily meals and shelter for men in need. Agape House, Dorothy Place, and other shelters offer temporary shelter for women and children without homes. Three shelters and five subsidized housing complexes are located in downtown Bellingham, within walking distance of medical and dental clinics, drop-in centers (e.g., for washing), the transit terminal and other services.

Triage Center: A Triage Center is located in the Irongate Industrial area in the northeast part of Bellingham. The Center offers emergency assistance and assessment during night or weekend hours specifically for behavioral health and substance abuse issues. The goal of the Center is to reduce reliance on emergency room visits: emergency room visits are costly and visits to the emergency room have increased for certain populations because there was no other option available. The urgent nature of emergency situations dictates that access the Triage Center would not generally be by public bus. However, persons treated and discharged from the Triage Center are likely to benefit from public bus service. The Irongate Industrial area is not served by frequent bus service and the level of bus service that is offered is not consistent with the needs of the population being served by the Triage Center.

Adult Family and Assisted Living Homes: Adult family homes serve a wide variety of special needs populations. When these homes are established outside the transit service corridor where the Americans with Disabilities Act (ADA) provides access, transportation becomes problematic and costs increase. Strategies to encourage these residential services to locate along the transit corridors would reduce specialized transportation costs. Historically, the homes operated vans to transport residents but increased expense of vehicle operation and maintenance has generally curtailed this service.

Mt. Baker Ski Area Located in the National Forest at the end of State Route 542, the Mt. Baker Scenic Byway, the ski area (in winter) and the recreational camping and trails (in other seasons) are a major destination in Whatcom County. Daily visitors to the Ski Area and the National Forest hiking and camping areas are estimated to be more than 4,000 on high traffic days, summer or winter. Employees at the ski area are seasonal and receive incomes that are generally too low to support daily private car travel from areas with affordable housing. The Ski Area business funds a seasonal ski bus to transport children in the fifth grade to and from the ski area. The Ski area business subsidizes a shuttle van for employees going to and from the ski area for work during the winter season.

Rural Industrial Jobs Food processing plants are located outside Blaine and Lynden; a major employment center with oil refineries, an aluminum smelter, and shipping terminals is located south of Birch Bay at Cherry Point. Public transportation to these remote sites is not available. Refineries have security regulations that restrict the number of private cars at the site, giving the Cherry Point area an interest in more transportation options for employees and contractors. Shuttle or bus service, park and ride sites, and connectivity to existing transit could create opportunities for collaboration with human services transportation.

Farms and Agricultural Processors: Rural and widely spaced by definition, farms in Whatcom County are a major industry and provide employment to many farm workers. Transportation to

and from farms is a challenge for those farm workers with low incomes. Affordable housing for farm workers is located in north Bellingham. Some farms assist in providing transportation. Farm workers sometimes have jobs at more than one farm, necessitating miles of travel during the day to access different work sites.

Chapter 9 - Recommendations for Action

Improvements to coordinated transportation fill gaps in the human services transportation system or reduce the duplication of service and increase cost efficiency. As described in Chapter 3, improvements focus on three priority areas:

- new public transportation services
- increased public awareness of transportation options
- reduced complexity for eligibility and use of services

Research shows that system improvements without ample and concurrent public education results in low ridership and low cost-efficiency. Strong public awareness-building and education along must go hand in hand with system expansions.

Stakeholders developed a priority project list that includes actions to address each emphasis area. Key projects are listed below, categorized according to the three emphasis areas. Some projects address more than one category.

I. Increase Connectivity:

1. Expand Lummi Transit fixed route service and on-demand service on and off the Lummi reservation. Improve tribal transit signage, bus shelters, and facilities for both Lummi Nation and the Nooksack Tribe. Investigate the coordinated transportation service needs for the Nooksack Tribe.
2. Develop transportation services to connect residents of rural areas to neighboring service or employement areas (e.g., Kendall, Sumas, Everson, Lynden, Cherry Point, Acme). Evaluate innovations such as volunteer-driven vans, contracted shuttle drivers, or enhanced ride-match/ride-share programs.
3. Work with private businesses to evaluate improved shuttle services in rural locations. Consider contracted services or rider-driver programs similar to the Community Connection vans formerly offered by WTA.
4. Address the lack of bus shelters at fixed-route stops by such measures as:
    a. inventorying existing bus shelter facilities,
    b. establishing funding for systematic construction of additional shelters as part of annual transportation program,
    c. changing development standards to require construction of bus shelters and pull-outs for developments over a threshold size.
5. Provide comprehensive Travel Planning and Ride Match service to broker human services trips and other types of mobility management and trip reduction; promote and publicize this service.
6. Provide shared-ride coordination, shuttle services, or public transportation service for low-income seasonal employees at rural or unserved remote areas (e.g., Ski Area, National Forest, industrial and agriculture processing sites, farms).
7. Inventory safe walking and bicycling facilities (sidewalks, crosswalks, trails, etc.) within one mile of each elementary and middle school in Whatcom County and establish a strategy for addressing missing links.

II. Increasing Awareness/Reduce complexity:

8. Travel Training – increase the methods and outreach to assist special needs travelers to learn how to use existing services, including fixed-route service, and to understand eligibility requirements for specialized or Para-transit service. Assist special needs travelers with completing eligibility process.
9. Travel training volunteer coordinator – establish a staff position or system to coordinate peer-to-peer instruction or a "hotline" to teach people how to use the bus and increase awareness of the range of services available to special needs groups and the general public.
10. Mobility Management – increase publicity and outreach for the Whatcom Smart Trips program and implement additional Individualized Marketing programs. A summary description of Whatcom Smart Trips is included in Appendix 4.
11. Educate low-income children and families on bicycle traffic safety and bicycle maintenance to increase transportation options. Assist people with special needs to learn how to cycle and to acquire bicycles for transportation use.

III. Increasing Coordination:

12. Assist jurisdictions to complete and implement Americans with Disabilities Act (ADA) Transition Plans, as required by law.
13. Increase outreach to and involvement of special needs groups in the on-going EACH Stakeholders and CTAG planning.
14. Augment research into Coordinated Human Services Transportation needs for inclusion in the Whatcom Transportation Plan 2012.
15. Promote and facilitate ridesharing through mobile electronic technology and/or through incentives such as gas vouchers and the Whatcom Smart Trips Transportation Demand Management program.
16. Evaluate transportation projects for human services criteria in ranking projects for annual Transportation Improvement Program funds.
17. Increase the number and type of human services available in small cities (Everson, Sumas) closer to rural populations.
18. Encourage public agencies to hold meetings in places served by public bus and to include instructions for access to offices and meeting sites by bus, bike, walking, or sharing a ride. Use innovative methods of reaching special needs groups such as interviewing those at locations where such populations congregate (e.g., Opportunity Council waiting room, SeaMar Health waiting room, etc.).
19. Research the feasibility of assisting people with re-instatement of drivers' licenses in cases where court-ordered requirements have been met.
20. Engage school districts to pursue a dialogue with WTA to determine opportunities to leverage resources for greater efficiency and cost effectiveness. Topics may include: sharing maintenance facilities, coordinating fuel purchases for greater discounts, investigating other methods for collaboration and cost savings.
21. Work with organizations which operate shuttle vans (e.g., churches, retirement homes, etc.) to determine whether coordination would offer cost savings and mutual transportation benefits for the organizations and for special needs travelers in rural areas.

22. Investigate whether coordination between delivery programs (such as Meals on Wheels) and resource programs (such as the Food Banks) can assist rural low income families to access services and lower transportation costs.
23. Assist School Districts or homeless families with Homeless Student Transportation where feasible.

Chapter 10 - Coordinated Transportation Project Priorities

The goals described in Chapter 3 form the basis for evaluating and ranking priorities.

Stakeholders reviewed projects and ranked them according to the following criteria:

Population served –

- the project serves a variety of types of special needs
- the project serves a large number of people
- the project serves a population which is otherwise unserved or underserved

Ability of the project to leverage existing resources –

- the project benefits from a variety of funding sources and partners
- the project has sustainable funding for future continuation

Short timeline for implementation –

- the project is ready to begin
- the project has a lead agency ready to implement

Measurability of results –

- the project can document cost efficiencies
- the project measures increased ridership of existing services
- the project gives accurate reporting and analysis

Employment Access and Coordinated Human Services (EACH) Plan Prioritized Project List - 2012 Update

Rank	Project	Interested Parties	Capital or Operations
1 (A)	WTA Ride Passes and Tokens: Purchase and provide transit passes, ride coupons and free-transfers to social service agencies for distribution to people with special needs.	NWRC, DSHS, Opportunity Council	Operations
2 (A)	Existing Lummi Nation Transit Service: Maintain existing service of deviated fixed route transit service and para transit on and around the Lummi Reservation	Lummi Nation, Health Department, NWRC	Operations
3 (A)	Expand Lummi Transit Service: Expand transit service to Ferndale and unserved areas of the reservation.	Lummi, Health, NWRC	Operations
4 (A)	Lummi Transit Vehicle Purchase: Purchase vehicles and equipment to replace existing vehicles on fixed route and para transit service.	Lummi Nation, City of Ferndale	Capital
5 (A)	Paratransit ADA Service: Replace six standard minibuses with six low floor minibuses for ADA paratransit service in Whatcom County.	WTA, Health Dept., NWRC	Capital
6 (B)	Mobile Food Bank: Coordinate food delivery service for seniors and people with special needs. Collaborate with Meals on Wheels and with other Food Banks in County.	Food bank, NWRC, Senior Services	Operations
7 (B)	Medical Shuttle Operations: Provide services for medical shuttle service to out-of-county services for special needs residents.	VFW, Lummi, Senior Services	Operations
8 (B)	Mobility Management: Expand community outreach to educate seniors, special needs travelers and their families and the general public on transportation options, and assist them to use the systems.	WCOG, WTA, Lummi, Senior Services	Operations
9 (B)	Mental Health Awareness Training: Conduct trainings for WTA staff and other transportation professionals to improve skills interacting with people with mental health conditions. Staff and implement outreach programs.	Whatcom County Health	Operations
10 (C)	Community Connection Shuttle: Operate scheduled service connecting small cities in eastern Whatcom County with each other & WTA	NWRC, Early Learning, WCOG	Operations
11 (C)	Mileage Reimbursement: for volunteer drivers providing rides using private vehicles	NWRC, Volunteer Ctr, Food Bank	Operations
12 (C)	Shared Vehicles: Operate services to augment homeless student and other special needs travel; coordinate use of shared vehicles.	School Districts, NWRC, Interfaith	Operations
13 (C)	Medical Shuttle: Purchase wheel-chair accessible van for providing medical shuttle service to specialists and VA hospitals outside Whatcom County. Partner with VFW and others.	VFW, Lummi, Senior Services	Capital

Rank	Project	Interested Parties	Capital or Operations
14 (D)	Travel Training: Conduct education and marketing outreach and education to inform special needs populations about transportation options and bus riding. Develop new outreach methods and support existing travel training.	WTA, WCOG, Senior Programs	Operations
15 (D)	Low Income Children's Bicycle Transportation: Fund operations of educational program teach-ing low-income children and adults about bicycle transportation and repair, assist them to acquire and maintain bicycles for daily use.	WCOG, Sterling Meadows/Farmworker	Operations
16 (D)	Transit Evening, Sunday, Holiday Service: Expand operations to provide fixed route service on more routes during evenings, weekends, and major holidays by public or private transit providers.	WTA, BellAir Charters	Operations
17 (D)	School access walkway: Construct sidewalks or mulit-use path along streets near elementary schools. (Note: construction projects not eligible 2011-2013 grant cycle)	Whatcom County, School District	Capital
18 (D)	Bulk Purchase Discount Bus Pass program: Purchase and distribute discount or free bus passes for large employer sites or groups.	Shelters, NWRC, schools, worksource	Operations
19 (D)	Bike Lockers: purchase and install bike lockers at shelters, libraries, transit hubs, low-income housing, schools, employement centers, etc. for use by people with special needs.	Housing Authority, WTA, shelters, libraries	Capital
20 (D)	Integrated Traveler Service: Plan, coordinate, and mangage a regional integrated traveler service based on the FTA pilot project MART Integrated Traveler Services (2008).		Operations
21 (D)	Integrated Traveler Service: Purchase equipment and software to manage the brokerage service.		Capital
22 (D)	Intercounty connector: Purchase vehicles to provide job access shuttle service between Whatcom, Skagit, and Island Counties, & Ferry.	WCOG, BellAir Charters	
23 (D)	Car Share Program: Coordinate, Market and manage a community car-sharing project to provide low income residents with occasional access to vehicles at low cost.		Operations
24 (D)	Car Share Program: Purchase vehicles, equip-ment, software, etc. for car sharing program.		Capital

Rank	Project	Interested Parties	Capital or Operations
25 (D)	Regional Trip Planning Website: Develop and operate internet-based trip planner software system with multiple transportation service providers; develop protocol for automatic update of schedule and rate data.	WTA, WCOG	Operations
26 (D)	Equity for Wheelchair Taxi Users: Create a fund to reimburse low-income wheelchair users the amount of the access fee charged by private taxi services.	Yellow Van	Operations
27 (D)	One-Stop- Social-Services -Shop: collaborate to plan a centralized or clustered Social Services center to reduce trips by service recipients.	NWRC, Health Dept,	Operations
28 (D)	Special Needs Bus Shelters: Purchase and install or construct bus shelters and/or covered bicycle parking shelters at WTA stations to serve special needs and low income transit users.	WTA, Lummi	Capital
29 (D)	EACH Plan Update: Coordinate, collaborate with partners, research, conduct outreach, and publish update for EACH plan. Coordinate planning for sharing vehicles to maximize resource use and cost efficiencies.	WCOG	Operations
30 (D)	Job Access Ski Area Shuttle: Purchase shuttle bus vehicle to transport workers and customers between Mt. Baker Ski Area and Kendall WTA station.	WCOG, BellAir Charters, WorkSource	Capital
31 (D)	Community Connection Shuttle: Purchase equipment to provide scheduled shuttle service connecting small cities and villages in eastern Whatcom County with each other.	NWRC, WCOG	Capital
32 (D)	Bike Locker Management: Plan, coordinate, market, monitor, and maintain bike lockers and/or establish and follow-up on agreements with partner agencies for management of lockers	Housing Authority, WTA, Mission, Library System	Operations
33 (D)	Job Access Ski Area Shuttle Operations: Provide administrative, operations, publicity and maint-enance services for shuttle transport between Mt. Baker Ski Area and Kendall WTA station.	WCOG, WorkSource, BellAir Charters	Operations
34 (D)	Construct Lummi Transit Facilities: Construct bus washing facility and bus shelters and amenities on and around the Lummi Reservation to improve service. (Note: construction not eligible 2011-2013 grant cycle)	Lummi	Capital

Rank	Project	Interested Parties	Capital or Operations
35 (D)	Emergency Management: Work with Emergency Management departments, fire districts, and enforcement staff to plan for special needs transportation during emergencies.	Fire Districts, County, City Emergency Mgmt	Operations
36 (D)	Shared Vehicles: Purchase vehicles to supplement the existing vehicles shared by non-profit and human service organizations collaborating on transport of people with special needs.	School Districts, NWRC, Interfaith	Capital
37 (D)	Automatic Vehicle Locator technology package: purchase, install, and operate devices that track location of WTA fixed route buses and relay real-time info to special needs travelers.	WTA, WCOG	Capital
38 (D)	Lummi Island Community Transit: pilot project for island-based transit shuttle using innovative, energy efficient technology.	Lummi,	Capital
39 (D)	Intercounty connector: Operate job access shuttle service between Whatcom, Skagit, and Island Counties with link to San Juan Ferry.	WCOG, BellAir Charters, WSF	Operations
40 (D)	Neighborhood-Based Outreach: Provide guidance and assistance to neighborhood groups (including school-based groups) to conduct outreach activities (including safe walk route events) to increase child transportation safety, reduce senior isolation and prepare for emergency situations. Collaborate with schools, Friendly Visitors program, CHORE Program, emergency management 72-hour preparation program, or other neighborhood or senior organizations.	WCOG, Health Dept, Lummi, Senior Center, School District	Operations
41 (D)	Fixed-Route Video Monitoring: purchase and install video recording equipment to upgrade security technology on all fixed route vehicles.	WTA, Lummi Nation	Capital
42 (D)	Real-Time Bus Arrival Time Signage: Purchase and install equipment and software to indicate next bus arrival time at bus shelters/hubs.	WTA, Lummi Transit,	Capital
43 (D)	Real-Time Bus Arrival Time Signage: Manage and maintain equipment and software	WTA, Lummi Transit	Operations
44 (D)	Coordinate Vehicle Sharing: Plan and coordinate a system to increase the cost-sharing among groups, places of worship, and others for vans and mini-buses.	Places of Worship, Senior Activity Groups	Operations

Rank	Project	Interested Parties	Capital or Operations
45 (D)	Multi-lingual and Multi-cultural Improvements: Develop an action plan for providing transit information in multiple languages and creating a multi-cultural outreach program. Increase multi-cultural awareness among transportation professionals. Staff and fund implementation.	Whatcom Human Rights Coalition, Interfaith Clinic	Operations
46 (D)	Real-Time Ride-Share On-line: Plan and coordinate a mobile-phone-based regional ride share system pilot project.	Transit, Mobility Management	Operations
47 (D)	Five 40-Foot Replacement Buses for Fixed Route Transit Service in Whatcom County: Purchase fixed route transit buses to replace fully-depreciated buses.	WTA	Capital
48 (D)	Paratransit ADA Service: Operate minibuses for ADA paratransit service.	WTA, Health Dept., NWRC	Operations

Chapter 11 - Coordination for the Future

Whatcom Council of Governments is updating the Whatcom Transportation Plan for publication in 2012. The Whatcom Transportation Plan identifies the combined Metropolitan and Regional Transportation Planning Organization goals, policies, and projects for Whatcom County. It describes the projects for each jurisdiction and includes the priority project list for funding. Elements of the Employment Access and Coordinated Human Services Transportation (EACH) Plan will be included in the Whatcom Transportation Plan update.

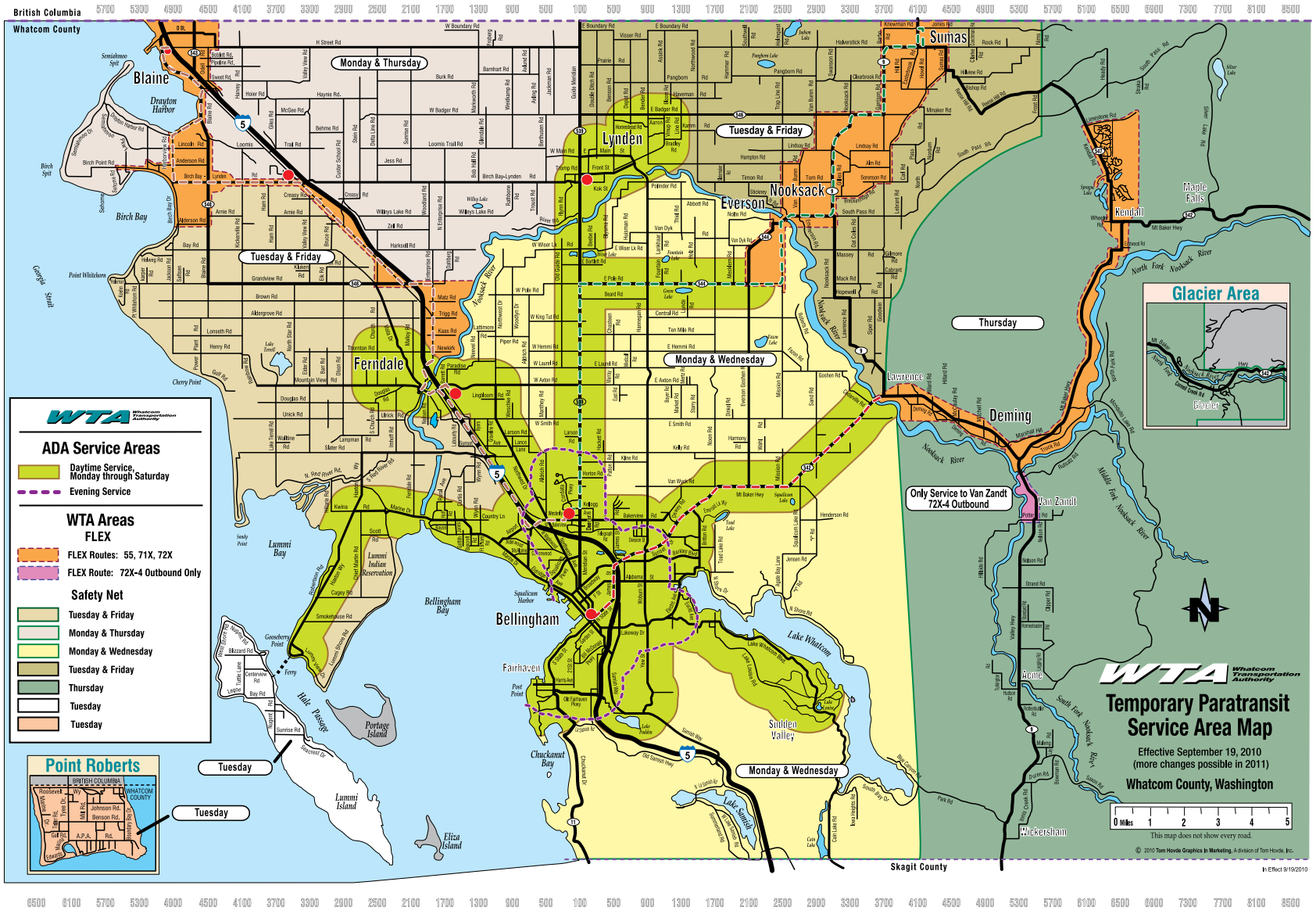
WCOG facilitates the Community Transportation Advisory Group (CTAG) composed of community members who provide input about ways the transportation system can better serve residents and business in Whatcom County. Members of CTAG represent human services agencies and special needs populations. These CTAG members represent EACH priorities and ensure that the regional and metropolitan plans address these priorities.

Methods to improve coordination related to special needs transportation may include:

- Increase the number of CTAG members representing human services agencies and special needs travelers.
- Recommend to the RTPO Policy Board that scoring criteria for projects in the Transportation Improvement Program (TIP) give increased weight to projects that serve special needs travelers.
- Expand and improve the regional on-line ride match system to serve various types of trips
- Expand the WTA travel trainer position to allow for more outreach; consider adding volunteer hotline coordinator duties
- Add an on-line trip planner interactive service to the WTA website and develop an expanded on-line regional multi-provider trip-planner website and publicity
- Engage a broader spectrum of human services representatives in the transportation planning process.
- Learn about transportation needs by talking directly with the people who are using or are expected to benefit from the service and use their advice to design the solutions that will work for them.

Appendix 1: Map of WTA Service Area and Routes 2008

Note: Routes have changed since September 2010



Appendix 2: Needs and Services: Partial List of Transportation Services Provided or Needed

Agency Name and Mission	Transportation Provided	Transportation Needs
Social Service Providers		
Area Agency on Aging The Northwest Regional Council serves as the Area Agency on Aging for Whatcom and surrounding Counties. Answers questions and refers people to appropriate services.	● Information provided on request about transportation services available for the elderly	
Washington State Aging and Disabilities Administration Administers service programs for in-home, community and residential Long Term Care for seniors and persons with disabilities, including persons with developmental disabilities. Answers questions and refers people to appropriate services.		
ARC of Whatcom County Advocates and assists in improving the quality of life for people with developmental disabilities. Projects increase independence and full inclusion in the community.		● Transport from home to activity centers, esp. weekends and evenings
Bellingham Food Bank Distributes food to people who visit the Bellingham facility; assists other food banks in Whatcom County.	● Periodic volunteer delivery of excess food to other food banks in County	● Transport to Food Bank themselves ● Delivery of food
Bellingham /Whatcom County Housing Authority Local agency providing housing to low income, senior, disabled and special needs families. Manages apartment complexes and single-family houses in	● Most apartments located near services and transit routes	● Transport to services ● Education on transportation options & how to use the bus ● Secure bicycle parking
Boys and Girls' Clubs of Whatcom County Offers programs to improve the health and social development of children and adolescents, especially those at risk.	● Coordinates with school district and day care buses	● Transport to and from Club sites to homes when bus not running ● Secure bicycle parking and repair
Cascade Vocational Services Provides employment services to people with disabilities and other special needs in Whatcom County. Collaborates with businesses to find employment solutions		● Transport to work sites during non-bus hours/days ● Bus buddies and education on transport options

Agency Name and Mission	Transportation Provided	Transportation Needs
Catholic Community Services Assists people with special needs by providing housing, family education and mental health guidance.	● Housing located in proximity to services and transit ● Home health aids sometimes transport by private car	● Education on transport options ● Secure bicycle parking ● Car-share system
Department of Social and Health Services *Whatcom Office* *Work First Program* *Temporary Assistance for Needy Families*	If qualified: ● Gas vouchers or reimbursements ● Transit passes or tokens ● Office location ¼ mi from bus terminal ●	● Office location far from human services, shelters, housing ● Accessible sidewalks ● Secure bicycle parking
Early Learning and Family Services Northwest Provides education and support for expectant parents, health and nutrition services, and child development and education.	● Shuttle vans for Head Start program	● Transit passes or tokens ● Variance procedure for van trips longer than 30 min.
Interfaith Coalition Medical and Dental Clinic Provides affordable comprehensive health care for children and adults.	● Mobile dental clinic ● Location of clinics near bus stops ● Location walkable to shelters and services	● Mobile medical clinic ● Secure bicycle parking
Kulshan Community Land Trust Facilitates affordable home ownership; preserves the affordability of land trust properties in perpetuity.	● Many house locations near transit or in walkable neighborhoods ● Transportation costs are part of financial qualification process	● Location Efficient Mortgage® financing partner

Agency Name and Mission	Transportation Provided	Transportation Needs
Lighthouse Mission Ministries Provides shelter, drop-in center, meals, rehabilitation, and assistance to homeless adults and children. Medical care through SeaMar Health Clinic	● Location close to bus stops and walkable to services ● Transit vouchers or tokens (as available)	● Short notice transport to/from services, other shelters, Triage Center, etc. ● Secure bike storage
Lions' Club (and similar service clubs) Various community services such as volunteer drivers for seniors' errands	● Some volunteer drivers assist seniors with errands ● Wheelchair loan program	● Coordination with other human services or transport programs ● Transport of donated wheelchairs
Maple Alley Inn, Community Meal programs Various programs serve weekly meals to people in need	● Volunteers pick up donated food and transport to meal preparation sites	● Carpool or transport arrangements for meal attendees
Nooksack Tribe Health Services Medical and Dental care for Nooksack Tribe members	● Mini van for school transport ● Clinic location near services, residences	● Transport for tribal members far
Northwest Regional Council - Area Agency on Aging Medicaid Transportation Brokerage for Whatcom and surrounding counties.	For Medicaid qualified individuals to medical appointments: ● Transit passes, tokens ● Gas vouchers or reimbursement ● Taxi ● Relocation guidance and assistance (helps rural residents move closer to services) ● Office located close to bus stop	● Reduced rate purchase price for transit passes, tokens ● Reduced rate quarterly pass ● Weekend and evening transit ● Rural shuttle ● Out-of-county medical shuttle

Agency Name and Mission	Transportation Provided	Transportation Needs
Opportunity Council Community Action program for education, shelter, food, and assistance to people in crisis or with special needs	● Transit passes and ride coupons (as available) ● Office walkable to services, transit ● Bike rack	● Mobile outreach services ● Co-location with other services ● More transit passes and ride coupons to meet needs ● Out-of-County transportation assistance
Rebound of Whatcom County and other camps Provides low income children with outdoor enrichment programs during summer and after-school program during school year	● Shuttle van/bus transport to and from camp ● Pick up from schools for after-school care ● After-school care located on bus route, near low income housing	● Coordination to share vehicle cost ● Cost-effective vehicle use during school year
St. Joseph Hospital Central provider of medical care for the region. Specialists in heart care, tests, surgery, rehabilitation, emergency care, etc.	● Located on bus route ● Ample car parking and wheelchair parking area	● Mobile outreach or branch clinics ● Certified child car seat technician on staff ● Evening, night, or Sunday bus ● Hourly weekday bus service ● Secure bicycle storage ● Transport to shelters for discharged low income patients ● Transport to or from Triage Center ● Walk/Bike education classes

Agency Name and Mission	Transportation Provided	Transportation Needs
Spinal Cord Injury Support Group Peer group offering guidance, support, and advocacy for people with spinal cord injuries that limit mobility		● County, City ADA implementation staff, advisory committees ● ADA Transition Plans implementation for all jurisdictions ● Wheelchair accessible inter-city bus (e.g. Greyhound, ThruWay Coach by Amtrak) ● Wheelchair curb cuts ● WTA service later in evening, on Sunday ● Enforce wheelchair parking violations ● Parking discount for wheelchair vans ● Universal Design standards for buildings, e.g., gas pump pay stations at wheelchair height
Visiting Angels; Visiting Nurse, etc. For-profit home healthcare and daily-living task assistance contractor for people with disabilities or special needs.	● Helpers drive clients in private vehicles for errands (mileage reimbursement) ● Safety inspection of employee vehicles ● Helpers assist clients to ride transit	● Coordination with other human services or transport programs
Places of Worship, Faith Communities Religious groups conducting worship services, events, and congregational care	● Vans and mini-buses to drive attendees to services ● Volunteer drivers, fuel reimbursement	● Coordination with other programs to maximize cost sharing
Whatcom Alliance for Healthcare Access Coalition of health care providers assisting people with special needs to get needed health and dental care	● Mobile and remote/visiting clinics ● Traveling specialists	● Mobile clinic van(s) ● Reduced cost or free transit passes or tokens ● Policy variances to allow transport of special needs clients in staff vehicles

Agency Name and Mission	Transportation Provided	Transportation Needs
Whatcom Coalition for Healthy Communities Clearing house sharing information about agencies and groups working to improve the community strength, capacity, and health of Whatcom County communities	● Transportation information and links on website ● Convened 2001 Transportation Summit; co-authored "It Matters How We Get There" ● Founded Community Transport. Advisory Group (CTAG)	● Re-energized participation in CTAG
Whatcom Community and Family Network Facilitates efforts to prevent child abuse, neglect, youth substance abuse, and to support families in transition	● Office located near bus stops, walkable to services ● Coordinates with other resource groups to reduce duplication	● Transportation options classes
Whatcom Homeless Service Center Coalition offering assistance to prevent eviction, assist in re-housing, and coordinate services for people at risk of losing homes.	● Co-location of services on-site ● Office and meetings located near frequent bus lines and during bus service hours ● Transport assistance to move possessions ● Annual event with bicycle education, among other services	● Discount or free ride coupons for bus ● Incentives for housing near bus lines within walking/biking distance of services, jobs
Whatcom Council on Aging *Meals on Wheels* *Senior Centers* *"55 Alive" Driver Education* Non-profit organization advising on programs to assist the elderly. Recruits and coordinates volunteers.	● Senior Centers located near bus lines ● Meals transported to rural houses & congregate meal sites ● Limited carpooling for special events ● Sponsors driver training program to reduce insurance premiums for senior drivers	● Coordinate transport with other human services ● Transit and multi-modal training for those reducing or no longer driving ● Carpool coordination for congregate meal attendees
Whatcom/Skagit Housing (Rural Self-help Homes) Sweat-equity house building program to assist low income residents to own houses.		● Location of houses near transit or walkable/bikeable to services

Agency Name and Mission	Transportation Provided	Transportation Needs
YMCA Supports healthy families with child care services and family activities.	● Locations near bus terminals ● Van/mini-bus transport for children to activities	● Bicycle skills education ● Secure bicycle storage ● Wheelchair access
YWCA Transitional housing for women and children with special needs, including those leaving domestic violence.	● Location near bus line ● Bicycle rack ● Wheelchair access	● Transit and multi-modal training for those without cars ● Reduced rate or free transit passes or tokens ● Secure bicycle storage
Schools		
School Districts Public educational districts offering elementary, middle, and high school instruction. Blaine, Nooksack Valley, Ferndale, Meridian, Mt. Baker, Lynden, Bellingham	● Wheelchair accessible School Bus ● School Walk Route maps ● school campus located near bus, services ● Sidewalks, parking	● Facilities for vision or hearing impaired ● Transit and multi-modal education ● Secure bike storage ● Trail access to campus ● Walking School Bus or Safe Routes to School programs
Bellingham Technical College Vocational, certificate, and degree programs and community interest courses	● Wheelchair accessible facilities ● Sidewalks, parking ● Location on bus route ● Bike racks ● Rural satellite class locations	● Secure bike storage ● Transit and multi-modal education
Northwest Educational Service District Provides consolidated administrative oversight for four-county regional school districts, especially for school bus compliance and training.	● Coordinates trainings for multi-county district – reducing duplication ● Helps districts find bus equipment at lower prices (bulk purchase, etc.) ● Forum for coordination of transportation managers (e.g., homeless transport)	● Safe Routes to School programs ● Coordination planning to integrate multi-modal transport with school bus system

Agency Name and Mission	Transportation Provided	Transportation Needs
Readiness to Learn Consortium Forum to coordinate human services programs assisting school children with special needs; participants from all school districts and social service agencies	● Semi-yearly meetings held near bus line ● Transport partnering for some child care sites and schools	● Pragram to shelter homeless families in their original school district ● Meetings located far from service centers ● Carpool among attendees
Whatcom Community College Vocational and degree programs for enrolled students and for enrichment.	● Free parking for students and staff ● Campus location near bus terminal ● Campus located ½ mi from DSHS office ● On-line classes	● Secure bicycle parking ● Reduced-rate or free bus passes ● Co-location with child-care provider (e.g., TANF parents) ● Rural satellite class locations
Western Washington University Accredited university offering four-year undergraduate degree programs and masters degree graduate programs for matriculated students.	● Pay parking lots for students and staff ● Bus pass provided to all students through activity fee ● Covered bicycle parking ● Managed bike lockers ● Night shuttle bus ● Parking shuttle bus ● Frequent WTA service	
Northwest Indian College Accredited four-year college offering degree programs and technical training; reduced tuition for enrolled tribal members.	● Free parking for students and staff ● Location near service agencies and bus lines	● Wheelchair accessible parking
Transportation Providers		
BellAir Charters Airporter Shuttle	● Daily inter-county shuttle service to major cities from Blaine to SeaTac ● Wheelchair access vans (24 hr advance reservation) ● Participation in EACH stakeholder group ● Ski-bus and event charter service	● Wheelchair access for all buses ● Bicycle transport option ● Multi-modal links (rail stations, transit) ● Bus stops located closer to services

Agency Name and Mission	Transportation Provided	Transportation Needs
Cascade Ambulance Service, Inc. Medical transport for non-emergency patient care at regional hospitals, clinics or specialist care providers	● Wheelchair access ● Can accommodate people with all types of mobility impairments	
Love, INC Religious organization offering volunteers to assist seniors and others with special needs	● Volunteers drive seniors to appointments, errands ● Delivery of groceries	● Funds for reimbursement of fuel/car costs of volunteers
Lummi Transit Service Tribal bus service	● Full-service transit (see description in Chapter 5)	● Capital and Operations needs described in project list (see
Rural Metro Medical transport provided on a fee basis to patients needing medical support during transit.	● Medical equipped vans and ambulances ● Most services central Puget Sound	
Disabled American Veterans (DAV) Volunteers drive a VA-owned van to provide medical transport to Seattle-area veterans hospital(s).	● Weekday service, one round-trip per day	● Wheelchair accessible van/bus ● Coordination with other medical transport needs/groups ● Increased capacity (more runs per day or on weekends; more destinations) ● Funding to compensate drivers or improve vehicles
WTA (Whatcom Transportation Authority)	● Full-service public transit (see description in Chapter 5)	● Capital and Operations needs described in project list (see Chapter 10)
Whatcom Volunteer Center CHORE program offers volunteer assistance to seniors for various tasks, including driving to appointments or errands, or delivery service.	● Reimbursement for mileage/fuel for volunteers who drive personal vehicles ● Coordination to match volunteers with special needs	● Funds for salary for drivers to meet demand
Agency Council on Coordinated Transportation Statewide advisory committee working with Washington State Department of Transportation (WSDOT) to improve transportation for Special Needs		● Regional representation ● Coordination with other special needs committees ● Local reporting or input gathering

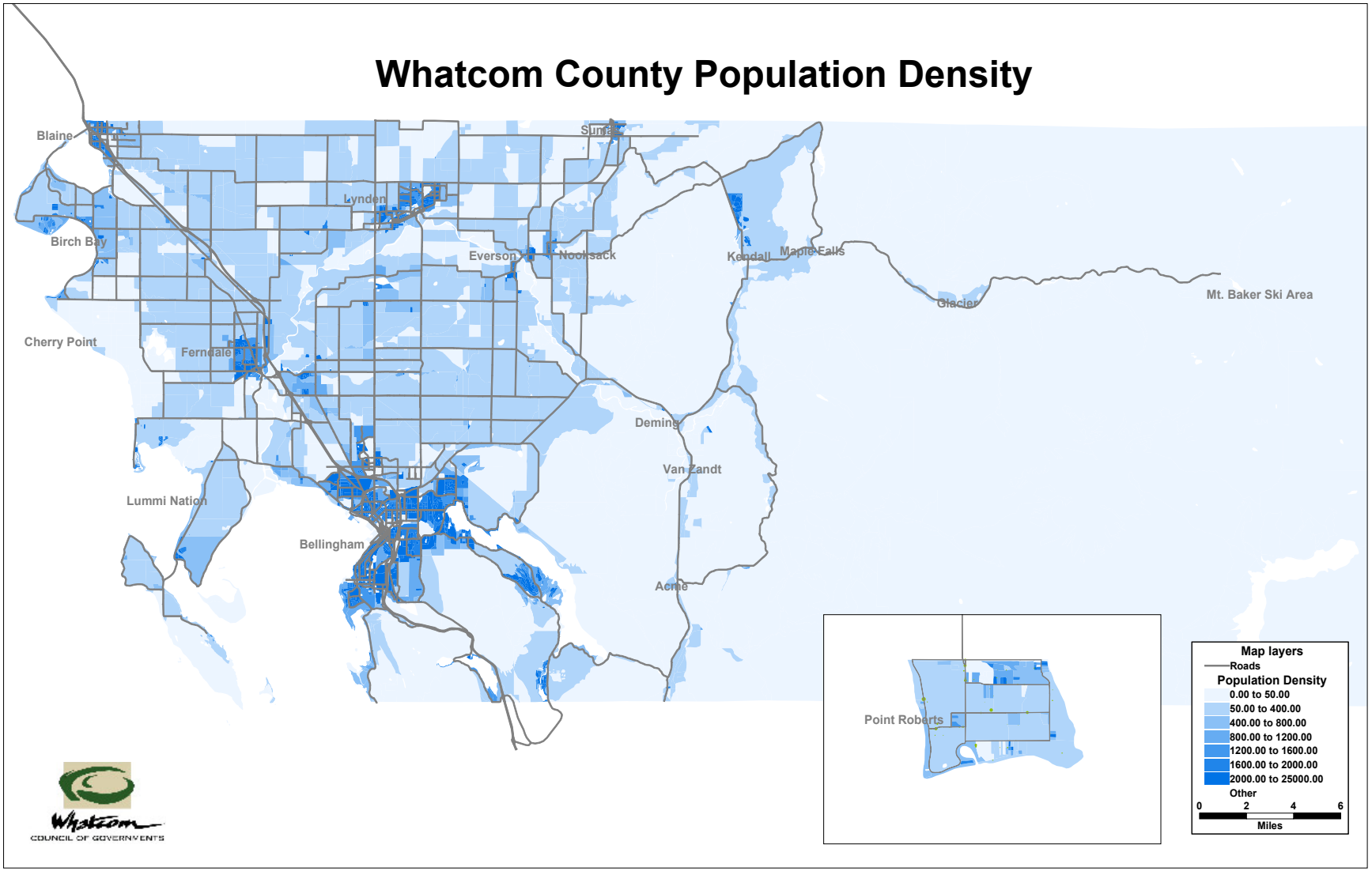
Agency Name and Mission	Transportation Provided	Transportation Needs
Yellow Cab of Whatcom County Feefor-service provider of taxi transport; contractswith WTA to supplement paratransit service and contracts with NWRC for medicaid transport.	● Largest wheelchair accessible van fleet in region ● Discount contract rates for social services agencies ● Regional dispatch system	● Policy changes at some agencies to allow multiple riders where funding rules currently restrict ● Funding for additional taxi vouchers for low income needs ● Subsidy to allow low income wheelchair users to be reimbursed for wheelchair van fee
Jurisdictions and Departments		
Bellingham Emergency Management Planning and coordination for emergencies and disasters. Evacuation plans.	● Agreements with WTA for transportation during emergencies	● Coordination with school districts for potential use of school buses during emergency
Bellingham Public Works Engineering Plans, designs, builds, and maintains roads, on-street parking, bike lanes, and city parking lots.	● Funding through property taxes and portion of sales tax ● Citizen comment system for maintenance requests ● New arterials to include sidewalk as standard ● Bike secure parking area in parkade	● Funding for increased sidewalk maintenance and construction ● Funding for bus shelters and lighting ● ADA Transition Plan
Bellingham Public Works Transportation Options Promotes trip reduction, walking, bicycling, and transit to reduce car traffic. Educates staff and public.	● Coordination with enforcement, planning, and public works ● Coordination with citizen Transportation Commission	● Funding for free or reduced-price transit passes for employee commute trips ● Secure bike storage and parking ● Transportation Benefit District funding for WTA
Bellingham Consolidated Plan for Human Services Strategic plan to address homelessness and housing problems for people with special needs	● Strategies to maintain transport independence	● Implementation of strategic plan

Agency Name and Mission	Transportation Provided	Transportation Needs
Whatcom County Public Works Engineering	● Funding for road construction and maintenance	● Wheelchair curb cut additional funding ● Funding for bus shelters, bike racks ● Sidewalk program near schools ● ADA Transition plan
Whatcom County Emergency Management	● Agreements with WTA for emergency use of buses	● Coordination with school districts for emergency use of
Whatcom County Health Department *Developmental Disabilities Division*	● Information and support for people with developmental disabilities and their families	● Evening, weekend, and holiday transit service ● Additional "safety net" service for rural areas
Whatcom County Superior Court	● Limited number of WTA ride coupons	● Funding for free or reduced-price transit passes for DUI offenders
Washington State Department of Corrections, Bellingham Office		● Funding for free or reduced-price transit passes for offenders in re-entry programs ● Travel training
Employers and Employer Groups		
Chambers of Commerce; Sustainable Connections Non-profit interest groups representing the interests of local private businesses	● Advocacy for transportation that benefits retail, commercial and freight businesses	● Transit shuttle for visitors to National Forest and related businesses
Whatcom Farm Friends Advocacy interest group for agricultural businesses and farm owners	● Community Supported Agriculture programs weekly deliveries	● Coordinated transport of produce to markets/ individuals
Farm worker advocacy group(s) Farm workers advocating for improved housing and transportation currently have a community presence in the Whatcom Human Rights Task Force	● Housing for farm workers (Sterling Meadows) ● Improved standards for living and working conditions	● Public transportation to and from agricultural work sites ● satellite social services sites

Agency Name and Mission	Transportation Provided	Transportation Needs
Workforce Development Council (WorkSource) Resource center assisting people to find jobs, get re-training, access unemployment assistance, etc.	● Central location near bus lines	● Funding for reduced-price bus tokens ● Additional car parking for class participants ● Temporary transport assistance to prevent refusing a job offer due to lack of car
Goodwill Industries Job Training Job skills training program for people new or returning to the workforce.	● Location near bus line ● Transit or gas voucher assistance for enrolled participants in good standing ● Bike rack	● On-site childcare for parents of participants ● Funding for additional reduced-price bus tokens ● Carpool or ride-share coordination

Appendix 3: Maps

- Whatcom Population Densities Map
- Whatcom Population, Jobs, and Transit Map
- Whatcom County 2000 Census: Below 50% of Median Income


Whatcom County Population Density
Blaine
Birch Bay
Cherry Point
Ferndale
Lynden
Sumas
Everson
Nooksack
Kendall
Maple Falls
Glacier
Mt. Baker Ski Area
Deming
Van Zandt
Lummi Nation
Bellingham
Acme
Point Roberts
Whatcom
COUNCIL OF GOVERNMENTS
Map layers
Roads
Population Density
0.00 to 50.00
50.00 to 400.00
400.00 to 800.00
800.00 to 1200.00
1200.00 to 1600.00
1600.00 to 2000.00
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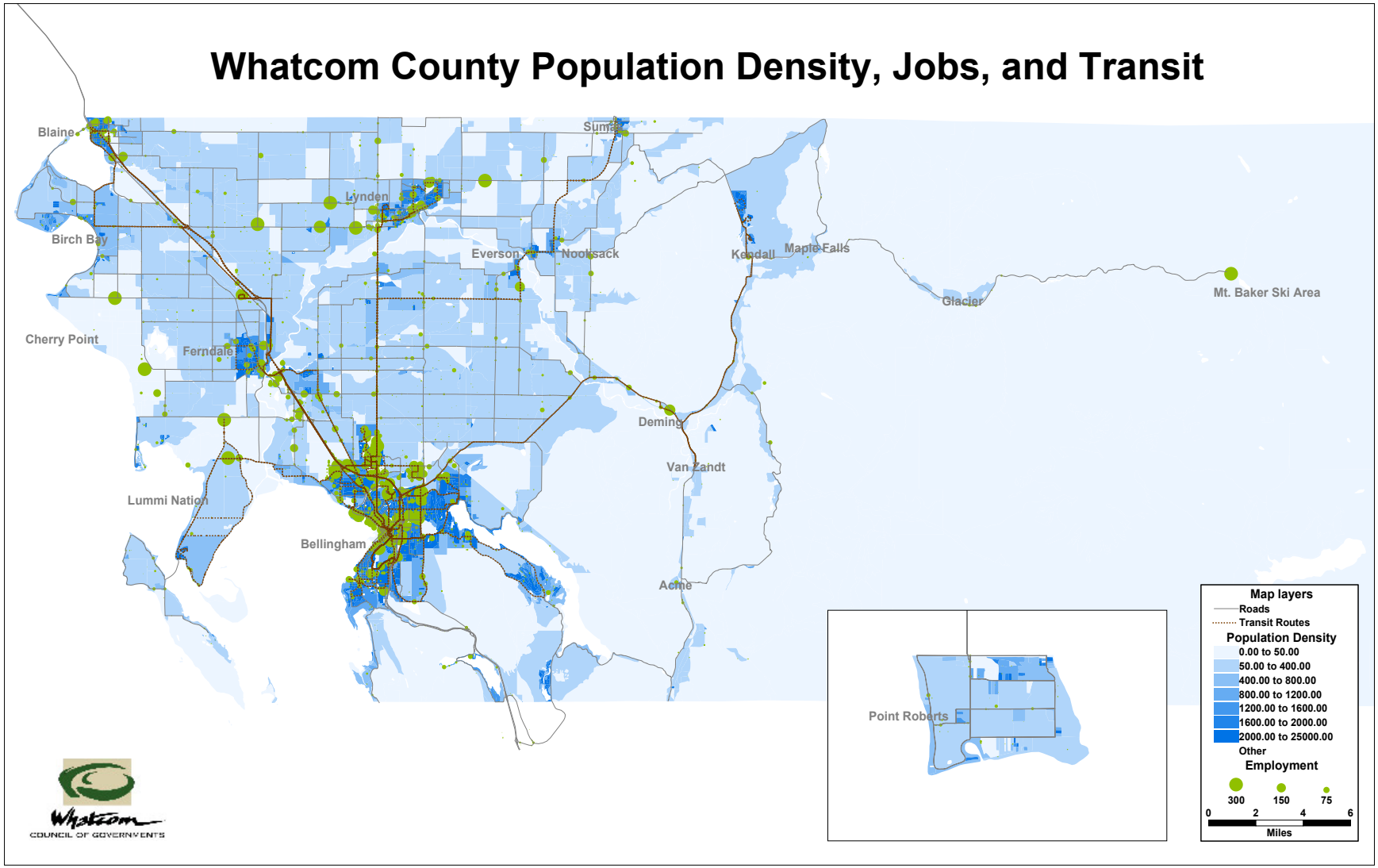
Other
0 2 4 6
Miles


Whatcom County Population Density, Jobs, and Transit
Blaine
Birch Bay
Lynden
Sumas
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COUNCIL OF GOVERNMENTS
Map layers
Roads
Transit Routes
Population Density
0.00 to 50.00
50.00 to 400.00
400.00 to 800.00
800.00 to 1200.00
1200.00 to 1600.00
1600.00 to 2000.00
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Other
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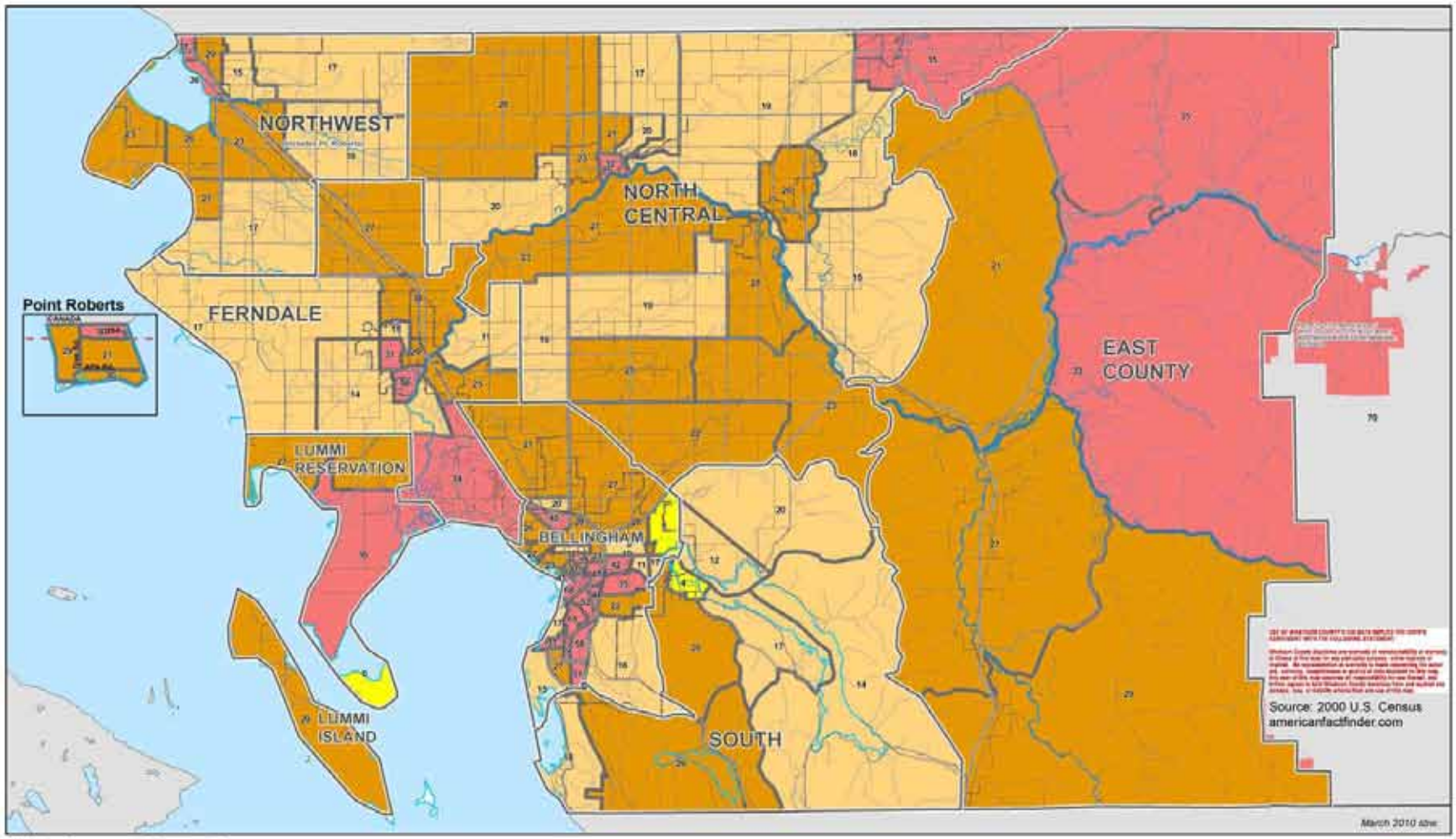
150
75
0
2
4
6
Miles



Whatcom County
2000 Census -% of Households
Below 50% of Median Income

Legend

- 0% - 10%
- 11% - 20%
- 21% - 30%
- >31%

Median Incomes Used from 2008:
-Bellingham $40,146
-Whatcom County (including remaining cities) $49,372

0 1 2 4 6 8 Miles

Appendix 4: Whatcom Smart Trips Program Summary

Whatcom Smart Trips is a program that markets sustainable transportation choices to the entire community. It is supported by the City of Bellingham, Whatcom Transportation Authority, Whatcom County, Whatcom Council of Governments (WCOG) and Washington State Department of Transportation. Whatcom Smart Trips is an outgrowth of our community's experience with the worksite-based Commute Trip Reduction program (CTR), which has reduced the percentage of single-occupant vehicle trips to CTR worksites from 78.08% to 73.52%.

Whatcom Smart Trips is also an outgrowth of a residential-based education and assistance program (called Individualized Marketing) that was piloted in Bellingham in 2004. Individualized Marketing resulted in an overall reduction in drive-alone trips of 8%. In combining these two approaches we maintain the value of employer investments in worksite programs, while we create new trip reduction opportunities by engaging more people in the effort. Many community members have an interest in reducing their vehicle trips, but the work trip is not necessarily the easiest trip for them to make on foot, by bicycle or on the bus. The new program encourages them to choose where they want to begin.

Whatcom Smart Trips includes the following list of educational, assistance and incentive programs. Except where noted, Whatcom Smart Trips programs are available to everyone age 18 or older and traveling to destinations in Whatcom County.

- Whatcom Smart Trips Website – allows adults living or working in Whatcom County to record the walking, cycling, transit and ridesharing trips that they make and track the vehicle miles not driven and pollution prevented at www.WhatcomSmartTrips.org .
- Smart Trips Incentives – include, discount cards, gift certificates, cash prizes and recognition for Smart Trips participants as they reach certain milestones in the number of smart trips made.
- Emergency Ride Home – provides limited, free taxi service to bus riders and Smart Trips participants who experience an emergency or illness at work and need to get home quickly.
- Employer Assistance – provides assistance to employers who implement voluntary and/or CTR-required worksite trip reduction programs.
- Group Bus Pass Sales – will provide discounted bus passes to individuals in groups where large percentages of the individuals will purchase bus passes. (The current demonstration project provides free passes to employees and residents of downtown Bellingham and Fairhaven.)
- School Smart Trips – This program is still being developed. It is expected to include educational and incentive programs at middle schools and may involve high school student leaders.
- everybodyBIKE – provides educational opportunities for children and adults who want to learn how to ride bicycles as transportation.

- Neighborhood Smart Trips – will provide home-based education and assistance to all interested individuals in Bellingham households. State and/or federal funding is being sought for this program.
- Smart Trips Public Awareness Campaign – includes advertising and public presentations to make the community aware of all elements of the Smart Trips program.

Appendix 5: Reference Documents

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Cornerstone Strategies (2008- 2010) *Everyone Counts: Whatcom County Homeless Count, a Point-In-Time Census of Homeless Residents* Whatcom County Health Department, et al., Bellingham, Washington

Whatcom County Developmental Disabilities Advisory Board (2008) *Whatcom County Developmental Disabilities Plan 2008-2012*, Whatcom County Health Department

Washington State Independent Living Council (2010) *WASILC Report*, Volume 2, Number 4, Olympia, Washington

Whatcom Transportation Authority (2010) *Annual Budget*, WTA, Whatcom County, Washington

APPENDIX F:
Agency goals and policies

Table of Contents

1. City of Bellingham, WA 2006 Comprehensive Plan Transportation Element Transportation Visions, Goals, and Policies

(Amended in 2008 to incorporate Multimodal Transportation Concurrency)

The Bellingham Comprehensive Plan Transportation Element is available in its entirety at:

http://www.cob.org/services/neighborhoods/community-planning/transportation/long-range-planning.aspx

PART 7: TRANSPORTATION GOALS (TG)

The following goals and policies have been developed through a series of public planning processes over the past 15 years including the following:

Visions for Bellingham, 1992;

- Bellingham Comprehensive Plan, 1995;
- Whatcom County Comprehensive Plan, 1997;
- Whatcom Council of Governments, Whatcom Transportation Plan, 2001;
- Washington State Transportation Plan 2003-2022

- Whatcom Transportation Authority, Six-Year Strategic Plan, 2004;
- Community Forum on Growth Management; 2004; and
- Transportation Concurrency Methodology Revision; 2008.

Transportation Visions for Bellingham

TV-1 Bellingham's transportation network is consistent with its position as a cultural and economic center, with particular emphasis on fixed or light rail access connecting Seattle, Bellingham and Vancouver, ferry service to the San Juan Islands, British Columbia and Alaska, and continued use of our waterfront for water transportation.

TV-2 Development patterns that encourage walking, biking and transit use are fostered through incentives and zoning regulations, including provisions for developments which allow people to live within walking distance of shopping and employment. These provisions may encourage small scale neighborhood centers as well as cottage industry or home occupations.

TV-3 Both pedestrian and bicycle facilities connect living, working, education, and recreational areas throughout the town. New development is designed to be pedestrian friendly. Walking is made easier by requirements for street trees and separated sidewalks on all new or reconstructed arterials except where existing mature vegetation or terrain suggest otherwise. Bicycling as a form of recreation and bicycling as a form of transportation flourishes, using facilities that are well lit and are built and maintained to allow year-round, all-weather use, and allow safe on and off-street travel.

TV-4 Bellingham continues to recognize the need for an efficient arterial system which minimizes through traffic on local residential streets. Transportation grant applications and local transportation funding priorities address multi- modal transportation improvements on City arterials, the Interstate 5 overpasses, and across the Interstate between Samish and West Bakerview.

TV-5 Bellingham reduces noise pollution and increases air quality by reducing its reliance on the automobile and promoting walking, bicycling, and other modes of transportation.

TV-6 Pedestrians enjoy improvements downtown that reduce or eliminate cars on some streets or alleys and provide space for public gatherings, such as a public square.

TV-7 Multi-modal transportation linkages between downtown and the waterfront connect the Central Business District with the Bay and provide a safe walkways and bicycle paths along Whatcom Creek between the Bay and Lake Whatcom.

TV-8 A significant increase in the number of bicycle commutes into the central downtown area reduces the need for new parking spaces while decreasing the congestion, noise and pollution caused by motorized traffic. Lower levels of motor-driven traffic (and a lessened need for parking) frees up street areas for open green spaces, creative commercial activities and cultural events that are increasingly attracting people to the downtown and waterfront area.

TV-9 Whatcom Transportation Authority's Primary Transit Network and high-frequency route enhancements reflect Bellingham's commitment to adjust to changing transportation needs, utilizing public transportation to improve air quality, to decrease parking demand and to reduce reliance on the use of the automobile. Route enhancements may include enhanced service hours, shuttles from outlying areas to downtown and Bellis Fair, a downtown area bus providing both internal circulation and access to parking, and the use of innovative or historic vehicles in downtown and Fairhaven.

TV-10 Transit riders enjoy an increased sense of security on Whatcom Transportation Authority's Primary Transit Network.

General Transportation Goals

TG-1 Enhance the function, safety, and appearance of Bellingham's streets.

TG-2 Encourage and provide for energy efficient means of transportation in Bellingham.

TG-3 Establish on-going mechanisms to improve communication and develop coordinated approaches to common problems among governmental jurisdictions in Whatcom County and to ensure coordination and consistency among state, regional, and local transportation plans.

TG-4 Raise the public's level of awareness about regional transportation issues, laws and regulations, and alternative transportation modes such as transit, rideshare, bicycling and walking to better achieve the goals of the comprehensive plan.

TG-5 Coordinate city and county comprehensive plans to encourage land use types, mixes, and densities that promote balanced and effective transportation systems.

TG-6 Provide a transportation system which minimizes environmental and social impacts and reduces reliance on fossil fuels.

TG-7 Focus on improving traffic circulation and reduce demand for constructing costly system improvements designed to accommodate additional single occupancy vehicle trips.

TG-8 Use Intelligent Transportation Systems (ITS) where appropriate to achieve Bellingham's transportation goals and increase the efficiency of the transportation system.

Streets and Ways

TG-9 Ensure a regional system of state highways and local arterial streets that is functional, well maintained and meets the demands of the future without unnecessarily disrupting individual neighborhoods.

TG-10 Emphasize, accommodate, and provide facilities for multiple transportation modes on Bellingham streets wherever possible.

TG-11 Consider Intelligent Transportation Systems (ITS) solutions that will increase Bellingham's arterial street capacity while reducing the need for new construction.

TG-12 Provide safe and functional residential streets while retaining those elements of the right-of-way which are valued aspects of the character of the area.

Truck Routes

TG-13 Provide truck access to industrial and commercial areas while minimizing the negative impacts associated with truck routes through design standards and location. TG-14 Segregate residential and heavy industrial traffic to the greatest extent possible.

TG-15 Use Intelligent Transportation Systems (ITS) that improve commercial vehicle mobility and provide safer, expedited travel through Bellingham and Whatcom County.

Multi-modal Connectivity

TG-16 Identify and commit to connecting 'missing links' within the land-based transportation network for all modes of transportation, including pedestrian, bicycle, transit, and motor vehicles.

TG-17 Work with transportation providers and other jurisdictions to increase the efficiency and convenience of inter-modal transportation connections within the regional transportation network.

TG-18 Identify and analyze low-cost opportunities to increase street connectivity to create better traffic circulation within neighborhoods and throughout the city.

Pedestrian and Bicycle Facilities

TG-19 Increase mode share of bicycle and pedestrian trips by providing a safe, well-connected, and convenient bicycle and pedestrian circulation network throughout the city.

TG-20 Prioritize pedestrian and bicycle facility improvements over auto-oriented improvements within Urban Villages and areas targeted for infill development.

Public Transit

TG-21 Support the WTA 2004 Strategic Plan to focus transit resources in Bellingham, but also provide high quality, safe, convenient, accessible, cost-effective transit service throughout the urbanized area of Whatcom County as an attractive alternative to the single-occupancy vehicle.

TG-22 Support WTA high-frequency transit service by allowing higher density development in designated Urban Villages in Bellingham and the Bellingham UGA.

TG-23 When new development takes place, support WTA high-frequency transit service by encouraging transit-oriented development along and within ¼ mile of WTA's Primary Transit Network within Bellingham and the Bellingham UGA.

TG-24 Support WTA efforts to meet the public transportation needs of all segments of the community.

TG-25 Support WTA efforts to meet service standards to protect average transit service speed on arterials as identified in the WTA's 2004 Strategic Plan. TG-26 Support efforts to increase public transportation's market share of total travel along WTA Primary Transit Network corridors in Bellingham and Whatcom County.

TG-27 Use Intelligent Transportation Systems (ITS) designed for improving transit services by providing more information at bus stops and on board buses, to enhance the safety of passengers and drivers, and to provide signal pre-emption for transit vehicles throughout Bellingham.

Alternative Transportation Mode Shift

TG-28 Set target goals to increase the mode share of pedestrian, bicycle, and transit trips and reduce automobile trips as a percentage of total trips, as listed below.

Mode	2004	2010	2015	2022
Automobile	87%	84%	80%	75%
Transit Bus	2%	3%	4%	6%
Bicycle	3%	4%	5%	6%
Pedestrian	8%	9%	11%	13%

(Note: 2004 data from FTA/Social Data Study)

TG-29 Secure multi-jurisdiction (City, County, WTA, Port, WCOG, WWU, WSDOT, FTA) funding to conduct Social Data and "Individualized Marketing" surveys, including follow-up travel behavior intervention in 2010, or one-year prior to the next Bellingham Comprehensive Plan update, to track and monitor progress towards mode shift targets.

TG-30 Bellingham reduces automobile trips on roadways and increases the efficiency of transportation facilities by developing and encouraging Transportation Demand Management (TDM) strategies to help achieve target goals for transportation mode shift, wherever possible.

TG-31 Encourage public education and funding for bicycle safety enforcement.

TG-32 Emphasize and commit to the implementation of infill and Urban Village land use strategies to create residential densities that will support safe, viable, and convenient opportunities to use transportation modes other than the private automobile.

Parking Supply Reductions

TG-32 Review parking requirements for major commercial and industrial uses for the purpose of reducing the supply of parking thereby providing a disincentive to automobile use.

TG-33 Establish reduced parking requirements for transit-oriented development within master-planned Urban Villages and along and within ¼ mile of the WTA Primary Transit Network while ensuring that there will be minimal impacts to surrounding residential neighborhoods.

TG-34 Encourage the "unbundling" (separate pricing) of parking spaces associated with residential development in Urban Villages to promote reduction in ownership of multiple automobiles.

TG-35 Encourage the provision of car-sharing with new residential development within Urban Villages to reduce the residential parking demand.

TG-36 Establish parking reduction allowances for residential units in Urban Villages and within ¼ mile of the WTA Primary Transit Network that require each unit to receive WTA bus passes in perpetuity.

Lake Whatcom Watershed

TG-37 Minimize impacts to Lake Whatcom water quality from transportation uses.

TG-38 Encourage and support alternative transportation modes in the Lake Whatcom Watershed.

Railroads

TG-39 Emphasize the importance of economically competitive and high quality transportation services and foster the development of passenger and freight rail while minimizing the negative impacts of railroads within the Bellingham urbanized area.

Port of Bellingham

TG-40 Provide adequate facilities for the water and air transportation of passengers and goods, and provide safe, convenient linkages to the air and water transportation systems.

TG-41 Include inter-county and international transportation links, such as airports, Amtrak, high speed rail, bus transit and ferries in comprehensive transportation planning in Whatcom County.

Hazardous Materials

TG-42 Insure the enforcement of existing regulations which protect the safety of the citizens from the potentially catastrophic effects of an accident involving the transportation of hazardous material.

PART 8: TRANSPORTATION POLICIES (TP)

General Transportation Policies

TP-1 Consider revision of land use plans to allow densities and mixes of uses that reduce the number and length of vehicle trips and increase the opportunity to use public transportation and non-motorized modes of travel.

TP-2 Reinforce the link between land use and public transportation by encouraging transit-oriented development along and within ¼ mile of WTA Primary Transit Network corridors and near urban villages, town centers, and neighborhood centers.

TP-3 Ensure that proposed capacity improvements to transportation systems are designed to serve proposals that are contiguous to existing development, as a means to discourage "leap frog" development patterns.

TP-4 Provide development incentives (such as increased density, increased square footage, and parking requirement reductions) for new development located within Urban Villages and along and within ¼ mile of WTA Primary Transit Network corridors when amenities for transit users, bicyclists and pedestrians are included, while minimizing impacts to surrounding residential neighborhoods.

TP-5 Encourage land development proposals to utilize the full capacity of the existing multi-modal transportation system, especially transit and non-motorized modes.

TP-6 Encourage public and private development proposals to enhance the street side environment to maximize comfort of the transit user and pedestrian.

TP-7 Encourage subdivision and commercial/retail project design which facilitates cost effective transit and emergency service delivery.

TP-8 Discourage transportation improvements, regardless of the financing mechanisms, that would trigger premature development -- that is, development which is inconsistent with applicable comprehensive plans and zoning.

TP-9 Ensure that alternative transportation modes are included in comprehensive plans, subdivisions, and other land developments.

TP-10 Support efforts to develop a mechanism for coordinating public transit service with school district bus service where reasonable in order to reduce trip duplication.

TP-11 Establish Level of Service (LOS) standards for a range of multimodal transportation modes to identify deficiencies and need for improvements.

Bellingham's adopted LOS standard is "**Person Trips Available by Concurrency Service Area**" based on arterial and transit capacity for motorized modes and on the degree of network completeness for pedestrian and bicycle modes, as listed below. The individual thresholds for each transportation mode available in each Concurrency Service Area are listed in Table 1. of BMC 13.70 Transportation Concurrency Management Ordinance.

Motorized Transportation Modes

- **Arterial Streets:** Peak Hour LOS Person Trips Available (PTA) during weekday p.m. peak hour based on data collected at designated Concurrency Measurement Points for each Concurrency Service Area;
- **Transit:** Determine seated capacity, measure ridership, and equate to person trips available via public transit service during weekday p.m. peak hour based on data collected at designated Concurrency Measurement Points for each Concurrency Service Area;

Non-motorized Transportation Modes

- **Bicycle:** Credit person trips according to degree of bicycle network completeness for designated system facilities/ routes for each Concurrency Service Area;
- **Pedestrian:** Credit person trips according to degree of pedestrian network completeness for designated system facilities/routes for each Concurrency Service Area; and
- **Trails:** Credit person trips according to degree of bicycle and pedestrian network completeness, where trails serve a clear transportation function for a Concurrency Service Area.

TP-12 To further support the Urban Village and infill strategy of the Land Use Element, the Bellingham City Council allowing some arterials to experience higher levels of vehicle traffic congestion during the weekday p.m. peak hour, as follows:

1.) On local arterials within designated Urban Villages;

2.) On local arterials that enter/exit the City; and

3.) On local arterials where mitigation is not feasible.

TP-13 Implement the Intelligent Transportation Systems to increase the capacity and safety of arterials and collectors in the City of Bellingham.

Finance

TP-14 Maintain the concurrency management system to ensure that adequate transportation facilities are available to serve new development. Develop a financing plan that identifies funding necessary to meet identified needs or requires reassessment of the development pattern and forecast if needs cannot be met.

TP-15 Develop regionally consistent and equitable transportation impact fees by which land developers are assessed fair-share contributions for any transportation improvements, including but not limited to pedestrian facilities, bikeways, or roadways that are that are identified in the six-year Capital Improvement Financing Plan listed in the Capital Facilities Element.

TP-16 Emphasize preservation and enhancement of the existing transportation system in funding transportation programs.

TP-17 Transportation funding for public roads should be directed primarily toward multi-modal improvements that will enhance safety and circulation within and between urban villages, infill areas, schools, and employment centers within City limits.

TP-18 Transportation funding for widening of public roads at the edges of the City should be minimized and peak hour traffic congestion should be allowed to increase at entry and exit points to the City to discourage single occupancy vehicle work commutes from rural residential areas to urban employment centers.

TP-19 Evaluate whether Intelligent Transportation Systems may be more cost-effective in improving the transportation network before committing to the expenditure of public funds on more traditional transportation improvement projects.

Public Education

TP-20 Support efforts by WTA, City and County Bicycle and Pedestrian Advisory Committees, and the WCOG to develop an ongoing public education program for all transportation users in the urban area to learn about the rights of pedestrians and other forms of non-motorized transportation.

TP-21 Coordinate efforts between Public Works, Planning and Community Development, and the Police Department to protect pedestrians and bicyclists on public streets.

TP-22 Support pro-active marketing, advertising, and public education efforts by the WTA, WCOG, and City and County Bicycle Pedestrian Advisory Committees to encourage major employers and businesses to provide incentives for their employees to use transit, non-motorized transportation, or car-pooling/ridesharing to get to work rather than single-occupant private automobiles.

TP-23 Work with the Bellingham School District to implement Transportation Education programs, designed to promote transit and non-motorized transportation modes as part of a regional demand management program.

Lake Whatcom Watershed

The following policies are intended to protect the Lake Whatcom Watershed and drinking water quality for the residents of Bellingham.

TP-24 Ensure all new residential streets are built to the Lake Whatcom road standard (Bellingham Municipal Code 13.04.075, or as amended).

TP-25 Implement disincentives for through traffic using Lake Whatcom Boulevard and incentives for through traffic to use Lake Louise Road, especially as traffic counts increase due to development in Sudden Valley.

TP-26 Design major transportation routes so they are not located adjacent to Lake Whatcom, and that wherever they are located, they have stormwater treatment that prevents water quality degradation in the lake

TP-27 Implement stormwater management measures, including Low Impact Development when possible, for all new roads and road/right-of-way improvement projects.

TP-28 Secure multi-jurisdictional funding (City, County, WTA, Lake Whatcom Water & Sewer District, and the Sudden Valley Association) to engage in effective public educational efforts to reduce vehicle trips within the Lake Whatcom Watershed.

TP 29 Secure multi-jurisdictional funding (City, County, WTA, Lake Whatcom Water & Sewer District, and the Sudden Valley Association) to establish and subsidize a dedicated WTA high-frequency service (15-minute headways) between Sudden Valley, Geneva, and downtown Bellingham to reduce auto dependence.

TP-30 Expand commute trip reduction efforts and strongly encourage employees working in Bellingham, but living within the Lake Whatcom Watershed to use transportation alternatives to the private automobile, such as bicycling, carpooling, public transit, and compressed work schedules.

Environment and Energy

TP-31 Improve air quality by reducing vehicle exhaust emissions by promoting: alternatives to the single occupant vehicle; use of cleaner fuels; and, improving the operating efficiency of the transportation system.

TP-32 Promote energy conservation by implementing transportation demand management policies and through the use of alternative fuels.

TP-33 Evaluate new facilities for adverse noise impacts, minimize if feasible, and mitigate as possible.

TP-34 Reduce the amount of impervious surfaces (e.g., streets, driveways) to the extent practicable to reduce total surface runoff, slow concentrations of pollutants and capture particulates.

TP-35 Minimize and control levels of harmful pollutants generated by transportation related construction, operations, and maintenance activities from entering surface and groundwater resources.

TP-36 Consider Intelligent Transportation Systems (ITS) that will decrease the need for new construction, decrease emissions by reducing delays and idling times, and enhance the transportation network in ways that minimize environmental impacts and reduction of open space.

Transportation Demand Management

TP-37 Develop programs to reduce single-occupancy vehicle use, vehicle miles traveled, trip length, and travel during peak periods. Encourage more major employers and developments to implement transportation management plans (including flexible work schedules) that reduce single occupancy vehicle use and travel during the peak periods.

TP-38 Support efforts by the Whatcom Council of Governments in developing a Regional Transportation Demand Management program to encourage high occupancy vehicle and alternative transportation use, including incentives developed through coordinated efforts of WTA, City of Bellingham, Whatcom County, Port of Bellingham and major employers.

TP-39 Encourage use of non-automotive travel modes by developing parking management plans. Mechanisms to be considered include:

- An emphasis on short-term parking in retail areas;
- Market-based pricing of on-street parking meters to encourage short-term day time parking;
- Incentive-based pricing in garages to encourage long-term day time parking;
- Reduction of free or subsidized employee long-term parking availability;
- Re-evaluation of appropriate minimum and maximum parking ratios for development proposals; and
- Elimination of "free" public parking in Urban Villages.

TP-40 Consider revisions to current zoning code requirements for the area adjacent to the CBD, Urban Villages, and major retail districts, as part of a parking management plan designed to reduce the minimum number of on-site parking spaces required for development and to increase preferential space and lower costs for car pool and van pool parking in private developments.

TP-41 Consider imposing a maximum amount of number of parking spaces allowed within Urban Villages and along the WTA Primary Transit Network where high frequency transit service exists prior to or concurrent with development.

TP-42 Support the location of safe new or expanded park-and-ride and car pool lots and support increased safety measures in existing park-and-ride and car pool lots.

TP-43 Encourage the use of common parking facilities among compatible, adjacent land uses where feasible.

TP-44 Provide preferential space and lower costs for car pool and van pool parking within the public right-of-way, and public facilities, where feasible. TP-45 Encourage major employers to provide dressing room, showers, and lockers to facilitate walking, jogging, and bicycling to work.

TP-46 The City should develop and promote Transportation Demand Management strategies and programs for the purpose of reducing automobile trips generated rather than increasing roadway capacity.

TP-47 Use Intelligent Transportation Systems (ITS) information management tools to inform the public of transportation options.

Highways and Arterials

TP-48 Establish Person Trips Available by Concurrency Service Area for motorized transportation modes at Concurrency Measurement Points on arterial streets during weekday peak hours. Identify those facilities that are currently operating below the adopted Peak Hour LOS and identify specific actions necessary to bring these facilities up to standard.

TP-49 Identify system expansion projects necessary to meet peak LOS standards during the planning period and develop a financing plan to complete the necessary improvements.

TP-50 Walking and bicycling facilities should be provided on all new, reconstructed, or retro-fitted arterial streets, where right-of-way allows.

TP-51 Ensure that design and maintenance standards for arterials are consistent between jurisdictions.

TP-52 Preserve the system of routes for long-distance, statewide travel by developing a regional policy that encourages the city and county to work with WSDOT to manage access to state highways. This policy will seek to minimize the number of access points to state highways to protect the safety, capacity and operating characteristics of these facilities.

TP-53 Assess the need and feasibility for preferential treatment for transit vehicles, van pools, and car pools to improve competitive transit time, (for example: HOV and transit-only lanes).

TP-54 New arterial corridors should follow topographic or land use patterns and minimize disruption to residential neighborhoods and the environment.

TP-55 Encourage the proper setting of speed limits to minimize traffic impact on residential neighborhoods.

TP-56 Preserve and maintain the existing arterial system to avoid costly reconstruction.

TP-57 Before committing to capacity-adding construction, consider using Intelligent Transportation Systems (ITS) alongside traditional infrastructure improvements to enhance the capacity of the existing system.

Residential Streets

TP-58 Residential street standards are to be used as a guide in the development process. The actual width of the right-of-way and pavement shall be reviewed on a case by case basis as per BMC 13.04. Right-of-way and pavement width shall be the minimum necessary to provide for the safe use of vehicles, public transit, bicycles, and pedestrians.

TP-59 The City should develop "Skinny Street," "Alley," and "Lane" standards for use in Traditional Neighborhood Design subdivisions, Cottage Housing developments, and Planned Unit Development projects.

TP-60 Discourage cul-de-sacs where topography allows and encourage well-connected streets in new and existing neighborhoods.

Non-motorized Transportation

TP-61 Give high priority to developing and maintaining non-motorized transportation facilities that lessen impacts on the environment and reduce energy consumption, such as the bicycle and pedestrian trails network.

TP-62 Identify site specific off-street bicycle/pedestrian facilities in the Parks and Open Space Element and in the Capital Improvement Program; on-street facilities should be incorporated into roadway improvement plans.

TP-63 Include adequate (e.g., to or exceeding WSDOT standards) facilities for safe and convenient bicycle and pedestrian travel in all roadway improvement projects where warranted and/or feasible.

TP-64 Utilize appropriate urban design elements to promote a pedestrian environment in areas of heavy pedestrian usage (e.g., commercial, governmental, business and medical centers, and transit centers).

TP-65 Provide safe, convenient and protected bicycle parking at activity centers such as commercial areas, institutions, parking garages, park-and-ride facilities and transit terminals.

TP-66 Develop appropriate bicycle treatments on those arterial streets designated as bicycle routes.

TP-67 Develop compatible bicycle/pedestrian facility standards between the City and County, including consistent maintenance standards and agreements.

TP-68 Maintain a street sweeping program including interagency agreements on sharing services as needed to ensure that all shoulders, bicycle routes, and designated bike lanes are swept clear of sand, glass, and debris at least twice a year.

TP-69 Maintain bicycle and pedestrian facility surfaces for comfort and safety.

TP-70 Existing trail facilities should be retrofitted and new trails designed in accordance with the 1990 Americans With Disabilities Act (ADA).

TP-71 Coordinate development plans and route classifications with Whatcom County for Bellingham Urban Growth Area roads and trails which will increasingly serve as bicycling and foot travel facilities for City residents.

TP-72 Continue to pursue the repair and construction of sidewalks and pedestrian ways, with an emphasis on areas with greater pedestrian use. Some of those areas of the City which deserve priority for sidewalk work include:

- Sidewalks which serve as routes to City schools and parks.
- Neighborhoods adjacent to Western Washington University and the CBD.
- Urban villages, neighborhood centers, and infill areas
- The more densely populated areas, especially developing multi-residential areas.
- Along and within ¼ mile of WTA Primary Transit Corridors

TP-73 Pedestrian circulation plans shall be required for commercial and large multi-family projects. Pedestrian facilities shall connect commercial and multi-family buildings with the abutting street(s) to encourage pedestrian/transit use.

TP-74 Require the construction of sidewalks or walkways with multiple residential, commercial or industrial development, where pedestrian facilities are appropriate, prior to issuance of occupancy permit.

TP-75 The following measures should be taken to insure safe, convenient and pleasant pedestrian facilities on city rights-of-way:

1. The pedestrian "walk" phases of signalized intersections should provide adequate crossing time for safe pedestrian crossing.

2. Sidewalks should, wherever right-of-way, topography, existing vegetation, grade and alignment allow, be separated from the street by a planting strip, rain gardens, or other low impact development techniques, especially where the curb lane is or will become a moving traffic lane.

3. Sidewalks should be a minimum of five feet wide and a minimum of eight feet in the central business district, urban villages, and neighborhood centers.

4. Where brick pavers are used on sidewalks, they should be installed and maintained to ensure safe walking conditions for pedestrians.

5. Asphalt overlays should not be permitted on sidewalks in the central business district.

TP-76 Where feasible, pedestrian and bicycle facilities should be constructed with pervious materials and/or installation.

TP-77 Marked crosswalks should be installed in the following circumstances:

1. Intersections in the Central Business District and Urban Villages.

2. Intersections controlled by traffic signals.

3. School route crossings.

4. Locations with high pedestrian volume, where warranted.

TP-78 Where appropriate, improve pedestrian crossing safety where trails, footpaths, or pedestrian routes must traverse busy streets.

Public Transit Service

TP-79 Emphasize capital and transportation system management investments that improve the reliability, safety, and attractiveness of the public transportation system.

TP-80 Support the public transportation system serving the needs of elderly, disabled, youth, low-income individuals and other persons with transportation disadvantages, in accordance with adopted standards.

TP-81 Support the public transportation system providing viable options for persons preferring public transportation as an alternative to the private automobile.

TP-82 Support the expansion of direct, high quality, cost-effective, public transportation service connecting residential neighborhoods and commerce, employment and other activity centers, in accordance with adopted standards.

TP-83 Assess the need for expanded regional service which connects Bellingham with activity centers of regional significance.

TP-84 Assess the need for cross-town service which connects major activity centers without the need to transfer in the CBD and express and/or limited stop service on routes with high commuter use.

TP-85 Assure continued preparedness of the public system for emergencies, including inclement weather and fuel shortages.

TP-86 Explore and utilize, where feasible and cost effective, existing and emerging technologies for alternative fuels and fuel efficiency measures for transit vehicles.

TP-87 Support multi-modal trips by providing secure bicycle storage facilities, park and ride lots, other transit facilities, and allowing for the transporting of bicycles on public transit vehicles.

TP-88 Integrate the public transit system with other modes of transportation including auto, bicycle, and pedestrian travel with intercity bus, rail, ferries and airline facilities.

TP-89 Explore alternative means of expanding public transportation services such as the use of accessible private ground transportation services and shared ride taxi service.

TP-90 Provide convenient auto and bicycle access to park-and-ride facilities on regional routes where warranted and cost-effective; examine the need for fringe area parking facilities on cross-town routes.

TP-91 Encourage the WTA to develop employer-subsidized transit pass programs in conjunction with major employers.

TP-92 Encourage employers to establish employee benefits for ridesharing and transit.

TP-93 Work with other agencies to investigate the potential for expanding WTA's high-frequency bus service and other forms of high capacity transit such as light rail transit.

TP-94 Use Intelligent Transportation Systems (ITS) to provide more information to transit travelers, enhance passenger and driver safety, and expedite transit travel.

Public Transit Service for Senior Citizens and Citizens with Disabilities

TP-95 Support the WTA to provide accessible public transit service levels, both accessible fixed route and demand responsive service which, at a minimum, comply with or exceed the ADA Act of 1990 and FTA requirements and standards, including new guidelines and standards that will be developed.

TP-96 Identify key areas and streets that require upgrading in order to provide accessible routes of travel where needed and warranted.

TP-97 Support establishment of a formal mechanism for policy, service and facilities planning and service delivery among all agencies who are involved with specialized transportation and accessible routes of travel.

TP-98 Support establishment of an intergovernmental formal public education and outreach process to promote public awareness of service for seniors and citizens with disabilities and address service availability, training of users, potential users and service providers.

TP-99 Encourage the WTA to continue to provide demand responsive service to individuals unable to access and use fixed route transit service, at a minimum, as required by the ADA Act.

TP-100 Provide pedestrian amenities that are appropriate for elderly and disabled citizens (e.g., larger signs for visually impaired, benches, etc.) according to the ADA Act.

Rail and Freight Transportation

TP-101 Encourage the preservation of rail rights-of-way in accordance with federal standards for maintenance and engineering.

TP-102 Support state and regional planning efforts to develop and improve passenger and freight rail transport in the region.

TP-103 Railroad access should be maintained to those industrial areas in the city which require it.

TP-104 Wherever it is shown to be feasible, use of duplicative rail lines should be consolidated.

TP-105 If and when they become available for other than railroad use, the City of Bellingham has an interest in acquiring vacant railroad properties for the purposes of passenger rail, light rail, etc.

TP-106 Maintenance and preservation of the former Burlington Northern Santa Fe passenger terminal building, listed in the national register of historic places, should be strongly encouraged.

TP-107 The City should work with Burlington Northern Santa Fe to seek ways to limit the noise and other impacts of the current switching facility on adjacent residential areas and aggressively pursue the relocation of the Burlington Northern Santa Fe switchyard to a non-residential location.

TP-108 The City should encourage railroads to place a high priority on maintaining their tracks where they intersect with city streets and should work with the city Public Works Director to determine priorities for those repairs.

TP-109 The City should work with Burlington Northern Santa Fe to provide safe and accessible pedestrian and bicycle crossings at trail, street, intersection, and other established pedestrian crossings.

TP-110 Wherever possible, when rail lines are constructed along city streets, they should be offset on the right-of-way so they are next to, rather than in the street.

TP-111 Any proposal which would significantly increase the number of rail cars moving through Bellingham should route that rail traffic on lines which are not adjacent to urban residential areas.

TP-112 Provide a recognized route system for trucks to provide truck assess to commercial and industrial land uses. Trucks are to use established routes except when a specific trip purpose cannot be reasonably served by this system.

TP-113 Restrict truck access if gross weight will adversely impact structural integrity of a street.

TP-114 Restrict truck access if truck activity adversely impacts a residential or commercial street.

TP-115 Encourage the location of a transfer facility to transport goods by container freight on rail systems for long distance movement of goods.

TP-116 Interstate freeway exits to the city's designated truck routes should be clearly signed indicating truck routes and their destinations.

TP-117 Such travel off the system for trucks, including travel to terminals or garages, should be limited to the shortest route between the destination and the nearest entrance to or exit from the truck route.

Hazardous Materials

TP-118 All trucks transporting hazardous materials should be restricted to designated routes. Any variance to these restrictions should be allowed only when authorized by a permit that is issued by the Police and Fire departments.

TP-119 Without a special permit, trucks transporting hazardous materials should only be allowed on Interstate 5, and the following two routes:

1. From the Interstate 5-Guide Meridian interchange south on Meridian Street to Squalicum Parkway to Roeder Avenue to the various industrial areas.

2. From the Interstate 5-Old Fairhaven Parkway interchange to Donovan to 10th to Harris to the various industrial areas.

TP-120 Switching of rail cars carrying hazardous materials should be relocated outside the urbanized areas and outside the City of Bellingham. Burlington Northern Santa Fe and the appropriate federal regulatory authorities should seriously consider rerouting all rail cars carrying hazardous material around Bellingham.

TP-121 Until such time as the switchyard is relocated the City should work with Burlington Northern Santa Fe to reduce accident risks at their switchyard.

TP-122 Consider using Intelligent Transportation Systems (ITS) packages that track the movement of hazardous materials and assist in the management of hazardous commercial goods.

Port of Bellingham

TP-123 Minimize noise impacts on Bellingham and the northern Urban Growth Area in any plans and improvements to accommodate increased air traffic.

TP-124 The City should work with the Port of Bellingham to develop multi-modal facilities, including small boat launches, providing for safe accessible access to and from Port properties, adjacent areas, and Bellingham Bay.

TP-125 The City should work with the Port of Bellingham and the United States Coast Guard to institute measures to ensure the safety of boaters on Bellingham Bay.

2. City of Blaine Transportation Goals and Policy

GOAL 1: Promote convenient, accessible, safe and environmentally responsible multi-modal transportation for residents, employers and employees, visitors and commerce.

POLICIES:

1.1 Transportation concurrency evaluation shall include provision of pedestrian and bicycle facilities along arterial roadways.

1.2 The City shall encourage development and maintenance of healthy community lifestyles by adopting, updating and implementing a comprehensive nonmotorized trails plan.

1.3 The City shall periodically review its transportation element and capital facilities element to ensure consistency with regional transportation plans and improvement programs as adopted by the Whatcom County Council of Governments and to ensure that appropriate Level of Service standards are assigned to state highways.

3. City of Everson Transportation Goals and Policies

In consideration of the needs and issues identified within this Transportation Element, the City of Everson adopts the following goals and policies:

1. Goal: Provide transportation systems that provide convenient and safe access to employment, educational and recreational opportunities for citizens and visitors, and that provide for the movement of goods and services.

Policy: Control access to arterials and connectors in order to minimize disruption of traffic.

Policy: Front new subdivisions on connectors and arterials rather than state routes.

Policy: Establish connectivity between new subdivisions, benefitting pedestrians, automobiles, utilities, and emergency services.

Policy: Keep industrial / commercial truck traffic off residential and local streets.

Policy: Within the city's financial ability to do so, bring old substandard roads up to standard.

Policy: Within the city's financial ability to do so, implement the improvements listed above under "system expansion needs," "system management needs" and "system maintenance needs."

2. Goal: Coordinate transportation planning and construction with neighboring jurisdictions and with the state.

Policy: For segments of state routes within city limits, set an LOS identical to that adopted by WSDOT for those segments.

Policy: Set LOS "C" (V/C ratio between 0.7 and 0.8 during p.m. peak hours) for city-designated arterial streets.

Policy: Participate in the regional (county-wide) planning process coordinated by WCCOG.

Policy: Coordinate with WSDOT with regard to state routes.

Policy: Coordinate with Whatcom County with regard to county arterials and collectors.

Policy: Coordinate with WTA with regard to transit.

Policy: Coordinate closely with Whatcom County during annexations and work toward solutions providing long-term benefit to citizens of both the city and the region.

3. Goal: Build and operate facilities as efficiently as possible.

Policy: Maintain and preserve the existing system.

Policy: Aggressively pursue low-cost funds such as grants and subsidized loans.

Policy: Undertake effective planning and build only what is planned.

Policy: Coordinate road projects with utility projects.

Policy: Adopt road design standards that are sensible and that do not needlessly impose cost.

4. Goal: Allocate costs fairly among those that benefit.

Policy: Use SEPA to mitigate off-site impacts associated with new development and redevelopment.

Policy: Initiate the use of LIDs, in conjunction with general funds, to reconstruct substandard local streets and sidewalks.

Policy: Use "no-protest" agreements, when appropriate, as a means of allowing approval of individual small-scale projects, while still providing for eventual construction of necessary improvements through formation of LIDs.

Policy: Facilities providing benefit to both newcomers and existing residents should be paid for by both groups, with each group paying a share proportional to their corresponding benefit.

5. Goal: Encourage energy conservation and minimize impacts to the environment.

Policy: Where feasible, encourage non-motorized transportation by developing marked on-street bike lanes on city arterial and connector streets.

Policy: Develop park-and-ride facilities when feasible.

Policy: Work with the WCCOG and major employers to encourage commute trip reduction.

Policy: Control stormwater run-off in order to reduce impacts to ground and surface waters.

Policy: Monitor and limit, where feasible, transportation of hazardous materials through the wellhead protection area.

4. City of Ferndale Goals and Policies

The Transportation Element was developed around one central goal.

Overall Goal: *The City will provide a safe, dependable, properly maintained, multimodal transportation system that promotes economic development and environmental vitality, and will explore innovative methods of resolving transportation-related issues."*

Goals and policies for implementation of the Transportation Element of the Comprehensive Plan support the City of Ferndale's vision statement.

1 The City will provide an efficient and safe transportation network to serve existing needs and to accommodate new growth and development.

Policies:

A. The City will coordinate planning and operation of transportation facilities with programs to optimize multimodal transportation programs.

B. The City will coordinate the location of major utility and transportation corridors wherever practical.

C. The City will strongly encourage the preservation of rail rights-of-way for future rail uses, and will work with appropriate agencies to ensure the availability of rail services to its industrial lands.

D. The City will maintain the existing and expanded transportation network.

E. The City will identify and prioritize transportation system needs citywide to meet current and future demand.

F. The City will establish a program to upgrade its existing signal system to improve traffic flow, progression, and safety.

G. The City will seek to integrate appropriate facility design with compatible land use types to reduce environmental and livability impacts.

H. The City will balance the equitable distribution of transportation projects with needs, based on 1) safety issues 2) growth-related improvements and 3) available funding.

I. The City of Ferndale will seek to maintain a coordinated and consistent strategy of development of land use, together with Whatcom County, for those unincorporated areas surrounding Ferndale which are within the boundaries of the City's Urban Growth Area, or which generate substantial traffic volumes to and through Ferndale.

J. The City of Ferndale will seek to maintain a coordinated and consistent strategy of development of land use, together with the Lummi Nation, for those tribal lands south of Ferndale which are outside of the boundaries of the City's Urban Growth Area, but which generate substantial traffic volumes to and through Ferndale.

K. The Main Street Corridor within the Planned Action area acts as the primary route of travel for both Ferndale residents and the shopping public. Along the Main Street Corridor within the Planned Action area, roundabouts are the preferred approach to provide for improved traffic flow, progression and safety. As development occurs, roundabouts will be installed as described in the Main Street Corridor Master Plan, following acceptance by the Washington State Department of Transportation. Roundabouts will also be considered as the preferred intersection improvement at intersections outside of the Main Street corridor, as identified in the Transportation Element. However the City may consider modification of existing signalized intersections or the installation of new traffic signals based on availability of funding, timing of the identified improvements, and costs associated with right of way acquisition at these locations, provided Level of Service standards are met.

2 The City will maximize the operating efficiency of its transportation system.

Policies:

A. The City will develop its roadway functional classification system in accordance with the regional functional classification system developed by the Whatcom Council of Governments and the City's road standards.

B. The City will maximize the operating efficiency of its transportation system through the use of Transportation Demand Management strategies.

C. The City will actively coordinate the planning, construction, and operation of transportation facilities and programs that may impact the City with local, tribal, regional and state jurisdictions and their associated comprehensive plans. These agencies and plans include, but are not limited to, Whatcom County (Comprehensive Plan and related updates), the Whatcom County Council of Governments, and the Washington State Department of Transportation (State Highway Systems Plan 2007-2026).

D. When considering proposals to revise the land use and zoning plans, the City will seek to minimize future increases in vehicular travel or, where possible, to increase the efficiency of the transportation infrastructure.

E. The City shall coordinate transportation planning and land use planning to reduce the distance between work, home, shopping, and recreation opportunities, and to provide facilities and services to support alternative methods of transportation to travel between each.

F. The City shall identify land use requirements which result in densities capable of supporting transit opportunities, particularly within the Downtown Core, High Density

Residential land use classifications, and within the primary shopping and employment districts of the City.

G. The City shall coordinate with the Washington State Department of Transportation for the purpose of developing a Memorandum of Understanding that will lead to a comprehensive review of potential transportation improvements along the I-5 corridor, including the Main Street Master Plan area, and also including potential improvements at other interchanges within the City limits as well as at Smith Road. This Memorandum may also include an agreement to jointly monitor the Level of Service in and around Exit 262 at defined points within the planning period of the Master Plan.

3 The City will encourage public/private partnerships for financing transportation projects that foster economic growth and address the transportation needs to support planned growth and development.

Policies:

A. The City will reserve property for needed rights-of-way, including trail rights of way, as quickly as possible by requiring dedication of right-of-way as a condition for development.

B. The City will only approve land use changes (such as planned unit developments, master planned projects, rezones and plats) when existing and proposed transportation system needs are adequately met.

C. The City will route major and secondary arterials around, rather than through, neighborhoods and communities so as to minimize traffic impacts on residential neighborhoods.

i. New residential collector street corridors should be designed and constructed through areas that are not already substantially developed with single family housing.

ii. Existing local residential streets should not be converted into collector street routes. In instances where existing streets must be converted to collector roads, these streets shall be brought up to the minimum design standards for collector roads.

iii. In those cases where collector street corridors must be built in close proximity to existing residential neighborhoods, the collector street must be designed in such a way as to minimize the impact to adjoining residents through the use of landscape buffers, sound barriers or similar measures.

iv. In order for arterial collector streets to function effectively, access restrictions shall be imposed on new arterial collector streets. Such access restrictions may permit commercial businesses from accessing directly onto an arterial collector street, only if no reasonable alternative is available. Further, residential access may be allowed in specific instances where such access can be demonstrated to have no negative impacts on traffic safety, road function and/or circulation.

v. The City will work with property owners and developers to establish collector road systems in developing areas to minimize the number of access locations on arterials and collectors and to promote connectivity for motorized and non-motorized travel within residential neighborhoods, as well as commercial and industrial area.

D. The City will consider sharing costs with other jurisdictions for needed improvements that solve regional transportation problems.

E. The City will encourage the development community to site and construct transportation facilities that are compatible with adjacent land uses to minimize potential conflicts.

F. The City will utilize all general taxation and user-fee options available to it under state law.

G. The City will seek to maximize support from county, state, and federal sources for those improvements needed to provide facilities and services necessary for safe and efficient operations and the economic health of the region.

H. The City will only approve developments that adequately mitigate their impacts on the transportation system as required under Transportation Concurrency Management, the State Environmental Policy Act, the Ferndale Development Standards, Commute Trip Reduction, and other applicable development regulations.

I. The City will encourage state lawmakers to recognize the financial pressure upon the City of Ferndale that is imposed by growth and request legislative action to provide greater relief to the City than is afforded by existing revenue sources.

J. The City will explore the feasibility of partnering with individual property owners and neighborhood associations to share the cost of sidewalk installation in established neighborhoods.

4 The City will work to secure adequate funding sources for transportation.

Policies:

A. The City will update its Transportation Impact Mitigation Policy ordinance on a regular basis.

B. The City will encourage public/private partnerships and grants for financing transportation projects.

C. The City will work to establish local improvement districts and transportation improvement districts in designated areas for economic development.

D. The City will work to establish on and off-site storm sewer systems which combine storm detention for road projects and private developments.

E. The City will consider asking voters to enact new taxes or fees to help fund transportation improvements.

F. The City will seek to fund a minimum average of thirty percent of capital project costs through grants.

G. The City will continue to fund transportation system maintenance using property and/or sales tax.

H. The City will continue the historical practice of generally not using property and/or sales tax to fund transportation capital projects.

5. The City will encourage the use of transportation modes that maximize energy conservation, circulation efficiency, and economy.

Policies:

A. The City will support increased use of multimodal transportation. This includes, but is not limited to, high occupancy vehicle lanes, bicycle trails, park-and-ride facilities, carpools, vanpools, buses and mass transit.

B. The City will coordinate planning efforts for non-motorized modes of travel with other jurisdictions and develop an integrated area-wide plan for non-motorized travel modes that ensures continuity of routes.

C. The City will encourage sidewalks, improved shoulders, and/or off-street trails within new developments concurrent with the project in order to accommodate internal and external circulation.

D. The City will encourage new development to be pedestrian friendly and compatible with the public transportation system by ensuring that such development reflects all related infrastructure master plans such as trails or utility plans.

E. The City will seek to receive formal recognition as a "Bicycle Friendly Community."

F. The City will coordinate site development guidelines to encourage and enable use of alternative transportation modes.

G. The City will seek to ensure that new road construction shall, wherever possible, include sidewalks or other pedestrian service amenities, and special provisions for bicycle and/or transit connectivity as may be economically and/or environmentally justifiable, based on existing and potential connection opportunities, including establishing new connector roads, collector roads, and arterial roads.

H. Improvements to existing roads shall be prioritized to remove deficient conditions for pedestrian, bicycle, and transit circulation as well as improve vehicular mobility.

I. The City will seek to cooperate with Whatcom County, the Washington State Department of Transportation, the Whatcom Transportation Authority, and any private entity for implementation of regionally significant transportation projects and programs for Ferndale and its environs.

J. The City of Ferndale recognizes and supports the continued operation of the Burlington Northern Railroad as an important part of the region's transportation system for the movement of freight and passengers, and shall seek to increase the availability of those services within the City.

K. The City of Ferndale shall seek to conduct a thorough inventory of city sidewalks, in order to identify deficiencies in the system and opportunities for expansion, based on existing and potential connection opportunities. The City will systematically implement the improvements through its Sidewalk Program.

L. The City of Ferndale recognizes and supports the continued operation of the Bellingham International Airport as an important part of the region's transportation system as an alternative to major regional airports such as the Vancouver International Airport and Seattle-Tacoma International Airport. The City shall seek to increase transportation connections between the City and the airport.

M. The City of Ferndale will seek to provide incentives to developments which incorporate multi-modal transportation options into their projects, and will continue to re-evaluate such incentives as multi-modal opportunities increase over time.

N. The City shall provide written justification for including capital projects which are designated as "low" priority within this plan prior to placing such projects on the Six-Year Transportation Improvement Plan.

6. The City will work to ensure efficient and effective freight transportation needed to support local and regional economic expansion and diversification.

Policies:

A. The City will collaborate with federal, state and neighboring local governments and private business to ensure the provision of transportation infrastructure investments and services deemed necessary by the City to meet current and future demand for industrial and commercial freight movement by way of roadway and truck, rail, air and marine transport.

B. The City will work with the Whatcom Council of Governments, Port of Bellingham, Whatcom County, and other agencies to develop intermodal connectivity facilities deemed by the City to be needed to facilitate seamless freight transfer between all transport modes.

C. The City will ensure that Transportation Element goals and policies are implemented in a manner that reinforces the goals and policies of adopted economic development strategies.

D. The City will work with the Port of Bellingham to identify connectivity opportunities between the City of Ferndale and the Bellingham International Airport.

7. The City will establish level of service standards and implement concurrency management programs to assure the adequacy of its transportation system.

Policies:

A. For concurrency review, the City has adopted roadway minimum travel speed standards for the weekday PM peak hour as documented in **Table 2** of the Transportation Element.

B. The City has established the following levels of service (LOS) for intersection operations along arterial and collector roads based on methodologies in the latest edition of the *Highway Capacity Manual (HCM)*:

i. **LOS C** or better for traffic signal, roundabouts, or all-way stop controlled intersections based on overall average delay per vehicle.

ii The LOS standard for all two-way, stop controlled, unsignalized intersections within the City limits shall be **LOS C** and be applied to each approach or separate traffic movement at an intersection. On a case-by-case basis the City may allow the level of service for traffic movements from the minor street at a two-way, stop controlled intersection to operate below the adopted standard if the Public Works Director (or designee) determines that no significant safety or operational impact will result. As appropriate, mitigation will be identified and required to address potential impacts to safety or operations. Potential installation of traffic signals or other traffic control devices at these locations shall be based on the Manual on Uniform Traffic Control Devices, the Transportation Element, and sound engineering practices.

iii. The City will generally apply the intersection level of service standards based on the weekday PM peak hour, but may choose to require evaluation of other time periods in order to identify potential deficiencies and project impacts.

C. The City will apply Washington State Department of Transportation's level of service standards to intersections of state highways within the Ferndale area:

i. LOS D or better within urban areas.

ii. LOS C or better within rural areas.

D. The City will work with Whatcom County to coordinate level of service standards for roadways and intersections within the City's unincorporated Urban Growth Area.

E. The City will implement a Transportation Concurrency Management program to ensure adequate transportation facilities are available concurrent with development.

F. The City will not apply concurrency to the interchange ramps with Interstate 5 which is designated as a Highway of Statewide Significance (HSS).

G. As appropriate, the City will reassess its level of service standards, Transportation Concurrency Management program, and other development regulations based on growth and funding levels.

H. The City shall review development applications based in part on the existing level of service, and will identify responsible mitigation measures necessary to preserve existing level of service where appropriate.

I. The City will consider incorporating mechanisms into the Main Street Planned Action Ordinance and concurrency regulations that may fully utilize the concurrency time limits allowed by State law.

5. City of Lynden Goals and Policies

The City of Lynden Transportation Plan is comprised of several components. In order to effectively implement the Plan, the City has identified an overall goal and more specific policies for transportation. The goal and policies provide a framework for decision making related to transportation projects and programs. The transportation goal and policies will be used to implement plan projects and programs, review new land use development applications, and coordinate with other City planning processes.

Overall Transportation Goal

The overall transportation goal for the City is as follows:

To develop a transportation system for the City of Lynden that maintains the livability of the community by encouraging the use of alternative modes of transportation; promoting economic well being; ensuring environmental protection; and the safety of the residents, employees, and visitors of the City.

Policies

1. Public Participation and Agency Coordination

A. Encourage and solicit public participation in transportation-related decisions to help ensure that planning and implementation have public support.

B. Provide programs and forums to help the public and stakeholders understand transportation issues, requirements, planning concepts, and funding programs.

C. Coordinate the preparation of the Lynden Transportation Plan and updates with the State Highway Systems Plan, the Whatcom Transportation Plan (Whatcom Council of Governments [WCOG]), Whatcom County, and the Whatcom Transportation Authority (WTA).

D. Coordinate with the Washington State Department of Transportation (WSDOT) regarding improvements and funding for Badger Road (as SR 546 is called) between Guide Meridian and Northwood Road.

E. Coordinate with Whatcom County to preserve options for future collector roads and grid systems in the City's unincorporated UGA.

F. Coordinate with WSDOT to identify possible locations for future collector roads intersecting with Guide Meridian between Badger Road and Main Street. The collector roads will provide for access and circulation to help reduce the impact of future development on the state highways.

2. Land Use Planning, Development Review, and Standards

A. Review land use policies and implementing regulations, standards, and incentives to ensure they support and encourage alternative transportation modes such as bicycling, walking, transit, and transportation demand management programs.

B. Ensure that transportation policies, projects, and programs are coordinated and consistent with land use plans and further the City's land use and environmental goals. Ensure that land use plans are consistent with the City's mobility goals.

C. Ensure that public and private projects systematically implement the policy objectives of the Transportation Plan through the development review process.

D. Require new development projects to comply with the City's transportation concurrency program (see Policy 3B)

3. Streets and Highways

A. Maintain a level of service (LOS) C or better for City street intersections and LOS D or better for state highway intersections. Apply Whatcom County's LOS D standard for county roads in the unincorporated part of the City's UGA, if requested by the County.

B. Require transportation improvements to be constructed or funding strategies approved to ensure that the highway, arterial, and collector road system is adequate to serve increased travel demands concurrent with new development. Concurrency shall be defined as having a financial commitment in place to resolve the deficiency within six years. New developments will not be approved by the City unless this concurrency requirement is met. The concurrency requirement will not apply to SR 539 and SR 546 serving Lynden, since both are designated as Highways of Statewide Significance (HSS). Mitigation of impacts where LOS standards are not met along HSS should be coordinated with WSDOT.

C. Require urban street standards on roadways serving urban development within the City. The urban street standards will be defined based on street classification.

D. Classify streets to reflect their desired use.

E. Street standards for arterials, collectors, and access streets will be adopted that provide guidance on number and width of lanes, intersection spacing, driveway access, right-of-way width, setbacks, lighting, landscaping, and other appurtenances. The street standards should identify design needs for accommodating transit, pedestrians, and bicyclists as appropriate for each roadway classification and consistent with the design policies in adopted sub-area plans.

F. Develop the arterial, collector, and access street system based on the Transportation Systems Plan, subarea plans, expansion of the existing grid system, or other means of assuring adequate connectivity of adjacent developments and minimizing impacts to arterials and state highways.

G. Maintain the existing and future arterial, collector, and access street system and associated facilities (e.g., sidewalks, traffic signs) through a systematic Pavement Management System and operations program.

H. Maximize the efficiency of the arterial street system through use of suitable traffic control, including signs, signals, lane markings, and coordination of signals, as appropriate.

I. Increase capacity of arterial streets through the elimination of on-street parking or the provision of turn lanes in preference to adding capacity through major street widening projects.

J. Provide adequate system-wide capacity on arterial streets to avoid diversion of excess traffic from congested arterials to local streets and through neighborhoods.

K. Limit and provide access to the street network in a manner consistent with the function and purpose of each road. The street standards should define driveway spacing standards and encourage use of shared driveways, where practical.

L. New access points to Guide Meridian or Badger Road will be discouraged. Potential new collector roads connecting to Guide Meridian between Badger Road and Main Street, as identified in the Transportation Plan, will be coordinated with WSDOT and Whatcom County. All new accesses to the state highways in the City planning area must be approved by WSDOT.

M. Establish truck routes to encourage through trucks to use the most appropriate routes.

N. Only allow cul-de-sacs where topography, parcel size, or location do not provide a practical alternative.

O. As appropriate, the City will consider traffic calming measures to discourage through traffic in residential areas, while maintaining the street grid for access and circulation.

4. Pedestrians and Bicyclists

A. All new streets shall require installation of sidewalks, in accordance with City standards.

B. Implement an annual program that works to construct missing sidewalk links, repair existing sidewalks, improve crosswalk markings, and install curb ramps at intersections to improve safety and connectivity. Arterial streets and highways should be a high priority.

C. Encourage pedestrian and bicycle connections between adjacent developments even when topographic or other constraints prevent connections for motorized vehicles. Where cul-de-sacs are allowed, they should be designed to encourage or support pedestrian connectivity.

D. Develop both street-oriented and separate pedestrian and bicyclist connections to encourage non-automobile access from residential areas to schools, sports facilities, and commercial areas.

E. Ensure that new sidewalks meet ADA requirements and that existing ones are upgraded (e.g., ramps at intersections).

F. Design and construct arterials to support safe use by bicyclists.

G. Require an appropriate amount of bicycle parking at commercial and institutional facilities along with automobile parking.

5. Parking

A. Encourage shared use of parking lots in the downtown area and other areas of high use.

B. Minimize curb cuts, including limiting the number of driveways permitted for each parcel, and encourage shared driveways to maximize the amount of curb space that could be used for parking, if roadway width and volumes allow on-street parking.

C. Evaluate establishing minimum and maximum parking requirements based on zoning, land use plans, and location within the City.

6. Public Transit and Transportation Demand Management

A. Encourage WTA to provide service to/from and within the City of Lynden at a service frequency and route coverage that supports convenient use of transit to meet more of the local area travel demands.

B. Incorporate design features to support transit service in the street standards, as appropriate for each roadway classification.

C. Provide transit shelters along arterial streets where the number of transit users warrant their use.

D. Promote the use of alternatives to the single-occupant automobile as a means of reducing the demand for construction of new streets and highways.

7. Implementation and Financing

A. Prioritize City transportation improvement projects, programs, and participation with other agencies to reflect the City's vision and Comprehensive Plan goals. As a minimum, the City will consider the following objectives:

- Transportation safety of all modes
- Maintenance and preservation of the existing transportation system
- Upgrade or expand the transportation system to support growth within the City and maintain concurrency
- Expand facilities and services to improve connectivity of the transportation system

B. Fund and implement the Transportation Plan based on the relative benefits to various user groups. Funding of transportation improvements and programs will include state and federal grants, City transportation and general funds, developer improvements, developer mitigation, and other traditional or non-traditional funding programs.

C. Continue to partner with WSDOT, Whatcom County, WCOG, and WTA to fund improvement projects and programs that serve the City.

D. Work with the state to fund safety and operational improvements along Badger Road.

E. Ensure that new growth pays a proportionate share of the transportation improvements needed to support growth and adequately mitigate its impacts to the transportation system.

F. Require that new developments be financially responsible for street improvements adjacent to and internal to the development.

G. Develop the annual Six-Year Transportation Improvement Program so it is financially feasible, leverages available City funds, and is consistent with the overall priorities of the Comprehensive and Transportation Plans.

H. If probable funding falls short of meeting the needs identified in the Transportation Plan, the City will review and reassess the improvement needs, priorities, and LOS standards in the Plan, as needed. As a final measure, the City will reassess land use plans to ensure that new development will be supported by adequate infrastructure.

6. City of Nooksack Goals and Policies

GOAL 1: Provide for safe and efficient movement of people and goods.

GOAL 2: Encourage energy conservation and minimize impacts on the environment.

GOAL 3: Provide a transportation system that maintains the city's high quality of life for its citizens.

GOAL 4: Cooperate and coordinate among federal, state and other local jurisdictions in transportation planning to ensure a seamless, effective system.

GOAL 5: Coordinate with other jurisdictions, such as the state, in planning transportation improvements to make the best use of financial resources available for transportation improvements.

GOAL 6: Provide for safe and convenient pedestrian and bicycle routes where feasible.

GOAL 7: Where practical, provide for intermodal connections, such as truck/rail facilities.

GOAL 8: Evaluate any new land use regulations for opportunities to improve or maintain the city's transportation system.

GOAL 9: Re-evaluate traffic impacts to city streets from any substantial external change or shift, such as changes in trade and tariff laws, significant shifts in the Canadian economy, or any development with regional transportation implications.

GOAL 10: Coordinate transportation planning and construction with neighboring jurisdictions and with the state.

Policy: Set LOS "D" (V/C ratio of 0.8 during p.m. peak hours) for non-HSS state routes within city limits.

Policy: Set LOS "D" for city designated principal arterial streets.

Policy: Coordinate with the Washington State Department of Transportation (WSDOT) with regard to state routes.

Policy: Participate in the regional planning processes coordinated by WCCOG.

Policy: Coordinate with Whatcom County with regard to county arterials and collectors.

7. City of Sumas Goals and Policies

Goal 1: Provide transportation systems that provide convenient and safe access to employment, educational and recreational opportunities for citizens and visitors, and that provide for the movement of goods and services.

Policy: Control access to arterials and connectors in order to minimize disruption of traffic.

Policy: Front new subdivisions on connectors and arterials rather than state routes.

Policy: Establish connectivity between new subdivisions, benefiting pedestrians, automobiles, utilities, and emergency services.

Policy: Keep industrial / commercial truck traffic off residential and local streets.

Policy: Within the city's financial ability to do so, bring poor roads up to standard.

Policy: Consider Intelligent Transportation Systems, when cost effective, to increase the capacity and safety of the transportation system.

Goal 2: Coordinate transportation planning and construction with neighboring jurisdictions and with the state.

Policy: Set LOS "D" (V/C ratio of 0.8 during p.m. peak hours) for non-HSS state routes within city limits.

Policy: Set LOS "D" for city-designated principal arterial streets.

Policy: Participate in the regional planning processes coordinated by WCCOG, including the IMTC process.

Policy: Coordinate with the Washington State Department of Transportation (WSDOT) with regard to state routes.

Policy: Coordinate with Whatcom County with regard to county arterials and collectors.

Policy: Coordinate with WTA with regard to transit.

Policy: Coordinate closely with Whatcom County during annexations and work toward solutions providing long-term benefit to citizens of both the city and the region.

Policy: Incorporate all Intelligent Transportation Systems initiatives and project with the Whatcom Regional ITS Architecture.

Goal 3: Build and operate facilities as efficiently as possible.

Policy: Maintain and preserve the existing system.

Policy: Aggressively pursue low-cost funds such as grants and subsidized loans.

Policy: Undertake effective planning and build only what is planned.

Policy: Coordinate road projects with utility projects.

Policy: Adopt road design standards that are sensible and that do not needlessly impose cost.

Goal 4: Allocate costs fairly among those that benefit.

Policy: Use SEPA to mitigate off-site impacts associated with new development and redevelopment.

Policy: Use "no-protest" agreements, when appropriate, as a means of allowing approval of individual small-scale projects, while still providing for eventual construction of necessary improvements through formation of LIDs.

Policy: Facilities providing benefit to both newcomers and existing residents should be paid for by both groups, with each group paying a share proportional to their corresponding benefit.

Goal 5: Encourage energy conservation and minimize impacts to the environment.

Policy: Develop park-and-ride facilities when feasible.

Policy: Control stormwater run-off in order to reduce impacts to ground and surface waters.

Policy: Consider Intelligent Transportation Systems that will reduce the need for construction, decrease emissions through reduced delays and idling times, and enhance the transportation network in a way that minimizes noise, environmental impacts, and preserves open space.

8. Whatcom County Goals and Policy

ISSUES, GOALS, AND POLICIES

Whatcom County's transportation system is a network of structures--highways, arterial streets, rural roads, rail, marine, airport, bikeways, ferries, and many other facilities. At the same time, the transportation system is a link among land use patterns, population growth, economic opportunities, energy consumption, environmental stress, and other facets of Whatcom County growth. The Growth Management Act requires the county to plan for the future of both network and linkage aspects of the transportation system.

To be sure of providing adequate facilities, Whatcom County must prepare to meet future demand. Population projections, land use plans, and traffic patterns suggest that the county will need to upgrade or expand some of its facilities, in addition to maintaining the current network. Since funding is limited, Whatcom County must prioritize the improvements it would like to make. The criteria for those choices include traffic congestion; safety; mobility; use by transit, bicycles, and pedestrians; and access to modes of transport such as airplanes, railways, and ferries. Additionally, the impact to endangered species, along with mitigation costs and delays associated with gaining approval for transportation projects that affect such species, must be considered.

To manage transportation systems, including their economic, social and environmental impacts, Whatcom County must be aware of the ways transportation influences--and is influenced by--other aspects of growth. Identifying the relationships allows the county to dovetail its plans for the various aspects so all the plans work toward compatible goals.

Overall County Transportation

Over the next two decades Whatcom County will be shaping its transportation network with several fundamental goals in mind. The system must be cost-effective; it must be compatible with subarea, county and regional plans; it must be properly maintained and upgraded; it must provide access for transit and non-motorized travel; and it must offer acceptable levels of service and safety.

The LOS standards adopted for county-owned transportation facilities in Policy 6A-3 are measures of traffic congestion on arterial and collector roadway segments, expressed as a ratio of estimated volume in weekday afternoon peak hours to roadway capacity. Levels of service range from completely unrestricted flow of traffic (LOS A) to stop-and-go traffic jams (LOS F). At LOS C or better the road segment is less than or equal to 80% full (or a volume-to-capacity ratio of less than or equal to 0.80). The flow of traffic is generally stable, though individual users are significantly affected by the presence of other vehicles. At LOS D the volume-to-capacity ratio is greater than 0.80 but less than or equal to 0.9. At LOS D small increases in flow may cause some delays and decreases in speed during the afternoon peak hour.

The Washington State Department of Transportation (WSDOT) has adopted levels of service for highways of statewide significance and the Regional Transportation Planning Organization, in consultation with WSDOT, has adopted levels of service for other state highways. For state highways in Whatcom County the standards are LOS D in urban areas and LOS C in rural areas. Similar to the LOS adopted on state highways, Whatcom County generally adopts for its roadways a LOS D in urban areas and LOS C in rural areas, though for some of the rural roads that function as primary routes connecting major activity centers (as designated in the regional Whatcom Transportation Plan), the county adopts a LOS D to reflect higher peak-hour volumes.

GOAL 6A: Provide for the safe and efficient movement of people and goods.

Policy 6A-1: Make safety and mobility the primary considerations in ranking transportation improvements.

Policy 6A-2: Use the transportation planning process to identify transportation system needs throughout the county in order to provide adequate transportation facilities and services to meet current and future travel needs; identify and protect specific transportation corridors and alignments where transportation facilities including auto, commercial, bicycle, transit and rail are needed.

Policy 6A-3: Establish the following levels of service (LOS) for purposes of maintaining transportation concurrency:

A volume-to-capacity ratio less than 0.75 during weekday p.m. peak hours for county arterials and collectors located outside of urban growth areas, except for specified primary routes as shown on Map 14A, which shall have a volume-to-capacity ratio less than or equal to 0.90 (LOS D).

A volume-to-capacity ratio less than or equal to 0.90 (LOS D or better) during weekday p.m. peak hours for county arterials and collectors within urban growth areas not associated with cities, which may be reduced for concurrency evaluation purposes in accordance with Policy 6A-4.

A volume-to-capacity ratio less than or equal to 0.9 during weekday p.m. peak hours (equivalent to LOS D) for county arterials and collectors within city urban growth areas, which may be reduced for concurrency evaluation purposes in accordance with Policy 6A-4.

Coordinate with Whatcom Transit Authority to ensure adequate transit service in urban areas.

513 ferry passenger trips annually per capita Lummi Island population.

Policy 6A-4: For proposed developments in designated urban growth areas, increase the volume-to-capacity ratio standard for impacted transportation facilities by 0.05 if at least one of the following amenities is existing or is committed to being provided as part of the development:

Transit service and stop within one quarter mile walking distance accessible from the development using non-motorized facilities that meet or are functionally equivalent to Whatcom County Road Standards

Non-motorized facilities that meet or are functionally equivalent to Whatcom County Road Standards along the impacted facility

Policy 6A-5: Encourage extension of city concurrency review authority and LOS standards into their respective UGAs to provide for greater consistency in concurrency review for urban areas.

Policy 6A-6: Identify and mitigate safety and other impacts to transportation facilities caused by development during SEPA review, using standards adopted for intersections and other minimum standards established by WCC Development Standards.

Policy 6A-7: Consider implementation of Intelligent Transportation Systems (ITS) technology to increase safety, reduce traffic congestion, decrease delays, expedite commercial vehicle travel, and provide appropriate traveler information.

Financing

The Growth Management Act is very specific in its requirement that transportation improvements must be based on financial capability. Furthermore the Act requires that improvements must occur concurrent with developments. It is therefore very important to coordinate funding and land-use-driven transportation improvements.

The majority of county transportation dollars are spent on upkeep and maintenance of the existing road system with a much smaller amount available for major improvements and even less for actual capacity improvements. Potential additional revenue sources include a greater share of gas tax revenues and impact and/or mitigation fees. Gas tax revenues can only be imposed through a vote of the people. Impact and/or mitigation fees are enforced through a county ordinance and are intended to pay for improvements required as result of additional traffic generated by development.

GMA authorizes counties to impose impact fees that fund a proportionate share of transportation system improvements made necessary by planned growth. Whatcom County has identified future system improvements eligible for impact fee funding and has enacted a transportation impact fee system to fund a portion of those projects that are reasonably related to and reasonably benefit the planned growth.

GOAL 6B: Create a cost-effective transportation system that optimizes public investment.

Policy 6B-1: Funding of transportation programs and improvements should prioritize preservation and maintenance of the existing transportation system and upgrading of unsafe and/or structurally deficient facilities over new capital improvements. Exception to this policy should be allowed when a cost/benefit analysis indicates that the public interest is better served by new capital expenditures over rehabilitation of existing infrastructure.

Policy 6B-2: Develop a fair and equitable formula to assess development for transportation improvements, including but not limited to transit, pedestrian facilities, bikeways and roadways that are considered reasonably necessary as a direct result of proposed developments in Whatcom County.

Policy 6B-3: Consider incorporating the impact of additional traffic on existing substandard roads as part of defining level of service for county roads, in order to better define and prioritize transportation improvements and assess new development for its share of impact on existing roads.

Policy 6B-4: Adopt a prioritized bicycle capital facilities improvement plan.

Policy 6B-5: Identify and pursue funding sources for the proposed projects and improvements contained in the *Whatcom County Comprehensive Plan and the six-year transportation improvement program.*

Policy 6B-6 Utilize impact fees to fund a proportionate share of the costs of transportation system improvements that benefit and are reasonably related to new development.

Policy 6B-7: Identify and pursue funding sources for activities and improvements which encourage the use of transportation modes other than the single-occupant vehicle.

Policy 6B-8: Use the financial resources available for transportation improvements to support a program of capital facilities needed for a multi-modal transportation system. The priority ranking system should balance the overall system and individual improvement needs.

Policy 6B-9: Consider and address any major fluctuations between expected revenues and needed improvement costs during the annual review process of the comprehensive plan. Such resolution could result in a reassessment of land use allocation, level of service standards and/or revenue availability.

Policy 6B-10: Implement a methodology for public-private partnerships when it would result in a more efficient use of public resources.

Policy 6B-11: Explore the possibility of encouraging cooperative funding for bicycle trails.

Intergovernmental Coordination and Implementation

Responsibility for planning and providing transportation facilities in Whatcom County is spread among a variety of governments and agencies. Consider a few examples: the federal government is in charge of the facilities at the Canadian border; state highways are the responsibility of Washington State; the Port of Bellingham manages air, shipping and the Alaska ferry connection; and Whatcom County and its cities operate local roads, ferries, and bikeways. These and many other pieces have to be integrated. In addition, transportation facilities which cross Whatcom County's boundaries must mesh with the facilities of neighboring counties and Canada.

Cooperation among jurisdictions is necessary in transportation planning. The Growth Management Act reflects this need; it calls for a regional transportation plan, and all the local jurisdictions' plans must be consistent with it. Working collaboratively can also lead to more effective use of the available funding. "Collaboration" with users to reduce traffic congestion--by getting more people to use alternative modes of transportation--is a useful strategy as well.

GOAL 6C: Coordinate with international, federal, state, regional (including Skagit and Okanogan Counties), and local transportation laws, policies, and plans that relate to the *Whatcom County Transportation Plan-A Combined Metropolitan and Regional Plan*, in order to be consistent and compatible with regional priorities.

Policy 6C-1: Support the Regional Transportation Planning Organization (RTPO) to coordinate transportation planning that affects Whatcom County.

Policy 6C-2: Support federal government efforts to improve border crossing facilities to minimize traffic congestion and safety hazards.

Policy 6C-3: Coordinate Whatcom County transportation planning with the Washington State Department of Transportation.

Policy 6C-4: Work with state and other jurisdictions to identify bridge deficiencies and to address bridge maintenance and reconstruction requirements.

Policy 6C-5: Coordinate with neighboring counties' and Canada's transportation planners to ensure compatible transportation recommendations.

Policy 6C-6: Participate in the Whatcom Council of Governments (WCCOG) Transportation Technical Advisory Committee as a mechanism to coordinate with the cities of Whatcom County, the Whatcom Transportation Authority, as well as other jurisdictions.

Policy 6C-7: Work with the Whatcom Council of Governments to develop effective, ongoing mechanisms for city and county public works engineers and planners to coordinate with transit and bicycle planning.

Policy 6C-8: Coordinate county efforts with state activities toward compliance with the Americans with Disabilities Act.

Policy 6C-9: Consistent with county land use planning, coordinate identification of new arterial routes with adjacent city jurisdictions.

Policy 6C-10: Develop a policy and agreement with the Washington State Department of Transportation to implement a locally managed improvement program for state highways based on local impacts.

Policy 6C-11: Identify areas and mechanisms for potentially collaborative projects so that multiple jurisdictions can share costs and efficiencies.

Coordination with Land Use

The way land is developed affects the need for transportation facilities; conversely, the availability of transportation can influence development. This two-way relationship needs to be taken into account in both land-use and transportation planning. The Growth Management Act requires Whatcom County to link the two processes.

GOAL 6D: Support land use planning efforts in Whatcom County which include land use types and densities that reduce reliance on single-occupant vehicles.

Policy 6D-1: Allow densities and mixed uses in land use planning to reduce the number and length of vehicle trips, increase opportunity to use public transportation, and encourage pedestrian and bicycle trips.

Policy 6D-2: Discourage transportation improvements that would trigger development that is premature or not consistent with applicable comprehensive plans, policies, or zoning.

Policy 6D-3: Support continual education of the public regarding the relationship between transportation and land use issues and ways to reduce traffic congestion.

Policy 6D-4: Direct transportation planners to evaluate positive and negative impacts to the productivity of resource based industries when creating new, or expanding existing, transportation corridors. Transportation improvements in areas designated "Resource Lands" should be constructed to facilitate the operations of those affected areas and industries.

Policy 6D-5: Ensure that new developments provide safe and efficient infrastructure for pedestrians and bicyclists.

Policy 6D-6: Encourage new housing developments to be located in urban growth areas and small towns to help provide a sense of community and safe, non-motorized transportation to community facilities and public transit nodes.

Environment and Energy

The transportation network is a benefit to the community, but it can have unwanted side effects. Vehicles on the roads are noisy, and they contribute to air pollution and con-taminated water run-off. They also use up irreplaceable fossil fuel. Road construction can damage fragile wildlife habitats or intrude on scenic views. These effects can be mitigated through careful siting and design. Even more fundamentally, the effects can be minimized by reducing the amount of travel on the roads. Such "demand management" can include expanded public transit, ride-sharing, bicycling, and telecommuting, to reduce the number of trips people make in single-occupant vehicles.

GOAL 6E: Provide a transportation system that minimizes environmental and social impacts, reduces reliance on fossil fuels.

Policy 6E-1: Promote designs to preserve mature trees, unique wildlife habitats, water quality and other elements of the natural environment, including environmentally sensitive areas and shorelines, during the design and construction of road improvement projects.

Policy 6E-2: Support the use of natural noise reduction techniques and visual screens between high-volume transportation routes and other facilities adjacent to residential uses, wherever possible.

Policy 6E-3: Minimize the amount of impervious surface whenever practicable by using natural engineering design methods such as the use of open, shallow, grassed street swales instead of curbs and gutters and, where feasible, encouraging alternate surfacing options.

Policy 6E-4: Engineer, construct, and maintain road improvements to control pollutants affecting water quality and reduce run-off entering surface or groundwater consistent with water quality standards.

GOAL 6F: Promote energy conservation by implementing demand management policies and encouraging the reduction of single-occupant vehicles on county roads and highways.

Policy 6F-1: Develop programs that reduce single-occupant vehicle use and vehicle miles traveled, minimizing trip length and reducing travel during peak periods.

State Highway Improvements

A number of state highways cross Whatcom County, forming an important part of the transportation network for county residents. Although state highways are not Whatcom County's direct responsibility, the county can be a voice for its citizens' interests with regard to those highways, working cooperatively with the Whatcom Council of Governments and the Washington State Department of Transportation.

GOAL 6G: Ensure an efficient regional system of state highways that is functional and safe, and is consistent with regional priorities and city and county comprehensive plans.

Policy 6G-1: In cooperation with the Whatcom Council of Governments, identify a regional transportation network.

Policy 6G-2: Recommend access management classifications for all the state highways in the county in order to minimize the number of access points and maximize public safety and highway capacity.

Policy 6G-3: In cooperation with the Washington State Department of Transportation and other jurisdictions, adopt access management classes and designations for state highways.

Policy 6G-4: In cooperation with the Washington State Department of Transportation, investigate the feasibility of frontage roads along the Guide Meridian (SR 539) and other facilities, where appropriate, to consolidate and minimize necessary access points as development proposals are made.

Local Arterial and Collector Improvements

The Citizens' Transportation Advisory Committee and Technical Transportation Advisory Committee worked out a list of criteria for judging the effectiveness of a transportation network. The elements include uncongested traffic flow; sound engineering

and construction; safety; mobility; facilities for public transit, bicycles, and pedestrians; access to air, rail, and other forms of transportation; and cost effectiveness. Whatcom County's program of local arterial improvements has to address all these aspects.

GOAL 6H: Ensure an efficient regional system of arterials that is functional, safe, and consistent with regional priorities and city and county comprehensive plans.

Policy 6H-1: Develop access control plans, which may include joint driveways, for classifications higher than neighborhood collector roads; and require new developments to minimize the number of access points to road classifications higher than neighborhood collector roads.

Policy 6H-2: Where new arterials or collectors are necessary, such routes should follow topographic or land use patterns which minimize disruption to residential neighborhoods and the environment.

Policy 6H-3: Support the use of shared access roads from commercial and residential developments to limit intersections with arterials.

Policy 6H-4: Review design and maintenance standards for arterials for consistency between jurisdictions and develop continuity where appropriate.

Policy 6H-5: Identify a regional system of all-weather roads and develop emergency maintenance plans for adverse weather conditions.

Policy 6H-6: Work towards making all county-designated arterials all-weather roads.

Policy 6H-7: Set proper speed limits.

Policy 6H-8: Minimize delay at all intersections by timely provision of warranted traffic controls and other improvements.

East/West Mobility

The rectangular shape of Whatcom County, the Nooksack River and Interstate-5 create a problem with access between the eastern and western parts of the county. Suggestions for correcting this problem are expensive including such options as freeway interchanges and overpasses and major bridge crossings.

GOAL 6J: Improve mobility between the eastern and western regions of Whatcom County.

Policy 6J-1: Prioritize for improvements the east/west routes that have been identified in the preferred alternative for improvements and weatherization.

Policy 6J-2: Support the possibility of transit and/or other alternative modes for east/west mobility.

Non-Motorized and Public Transportation Improvements

Whatcom County's transportation network serves other users besides automobiles and trucks. Railways, public transit, carpools, bicycles, and pedestrians place lower demands on the transportation system, so encouraging these kinds of uses--"demand management"--can reduce the need for new or expanded facilities. Demand management can also help minimize transportation's negative side effects. The Growth Management Act requires Whatcom County to include demand management strategies in its comprehensive plan.

GOAL 6K: Support the development and use of new technologies (e.g., fiber optics, other communication improvements) and approaches to planning in Whatcom County, so as to minimize the reliance on vehicular travel.

Policy 6K-1: Monitor new technologies and approaches and incorporate changes into transportation planning efforts.

Policy 6K-2: Incorporate alternatives to conventional petroleum-based technology systems into transportation planning.

Policy 6K-3: Support multi-modal use by encouraging, for example, provision of secure bicycle storage facilities at park-and-ride lots and other transit facilities, and allowing for the transporting of bicycles on public transit vehicles.

Policy 6K-4: Support a regional public transit system with various modes of transportation including auto, bicycle, and pedestrian travel and with the intercity bus, rail, ferries and airline facilities.

GOAL 6L: Support commuter use and employer promotion of alternative modes of transportation (i.e., carpools, vanpools, transit, bicycles and pedestrian travel) where feasible and discourage reliance on the single-occupant vehicle.

Policy 6L-1: Facilitate the implementation of the Commute Trip Reduction Program.

Policy 6L-2: Assess the need and feasibility for preferential treatment for transit vehicles, vanpools, and carpools to improve competitive transit time with the single-occupant vehicle.

Policy 6L-3: Support educational efforts that emphasize non-motorized transportation alternatives.

Policy 6L-4: Support passenger rail service.

GOAL 6M: Promote bicycle and pedestrian travel by systematically providing safe and convenient routes and facilities where feasible.

Policy 6M-1: Encourage safe and efficient bikeways that link populated areas of the county with travel destinations.

Policy 6M-2: Recognize public safety, education and law enforcement as integral to the development of bicycle transportation opportunities in Whatcom County.

Policy 6M-3: Where practical, identify site-specific on-street/road improvements needed for bicycle/pedestrian facilities along arterials and provide for regular shoulder sweeping and other maintenance as needed.

Policy 6M-4: Identify needed rights-of-way for bicycles.

Policy 6M-5: Include internal pedestrian circulation systems as well as links to external systems in development projects.

Policy 6M-6: Develop a system of off-road trail networks for non-motorized transportation to link population centers, employment centers and recreation areas.

Policy 6M-7: Implement a policy of providing safe pedestrian and bicycle access on county roads that have significant pedestrian and bicycle traffic as these roads are reconstructed, preferably by adding separated facilities or alternately by providing 4 foot minimum shoulders.

Specifically, safe pedestrian facilities should be_provided_within a one mile radius of community places such as schools, markets and libraries if there is residential or other development that would generate significant foot-traffic within the one mile radius.

Policy 6M-8: Implement as a priority the goals, policies and recommendations of the latest Whatcom County Bicycle Plan.

GOAL 6N: Support Whatcom Transportation Authority in providing high-quality, safe, convenient, accessible public transportation, where cost effective, for the public as an attractive alternative to single-occupant vehicles.

Policy 6N-1: Support public transit system design that encourages frequent and convenient access points, and that integrates various transportation modes into the transit services, such as bus systems, park-and-ride lots for cars and bicycles, and bus, railroad and airline terminal facilities.

Policy 6N-2: Assist Whatcom Transportation Authority in developing transportation plans that meet the specific operational and personnel needs of individual employers.

Policy 6N-3: Incorporate adopted plans and policies for non-motorized and public transportation in the permitting process for all development or land use proposals, including provisions for efficient access and mobility, and convenient links between pedestrian, bicycle and transit facilities.

Policy 6N-4: Participate in investigating the potential for expanding express bus service and other forms of high-capacity transit.

Policy 6N-5: Coordinate with Whatcom Transportation Authority to establish rural transit service in unincorporated areas, including Small Towns and Crossroads Commercial areas, consistent with county land use plans, based on cost effectiveness, location of major trip generators, distance between generators, and the needs of transit-dependent individuals.

Policy 6N-6: Encourage Whatcom Transportation Authority to work with major employers to coordinate bus service with shift changes.

Policy 6N-7: Establish development regulations which offer incentives for projects which are transit compatible, considering density of development, location relative to transit stops, design of project, and circulation to accommodate transit.

Policy 6N-8: In cooperation with Whatcom Transportation Authority and Washington State Department of Transportation, provide park-and-ride lots along major corridors and provide necessary services to encourage their use.

Policy 6N-9: Encourage provision of transit from the Canadian border to retail facilities in Whatcom County.

Policy 6N-10: Consider, where needed, bus pull-outs on street/road improvements.

Commercial Transportation

In addition to the commercial traffic that serves Whatcom County industries and residents themselves, the county's transportation system carries heavy cross-border truck traffic between the United States and Canada. Freight vehicles' access to industrial and commercial areas, safety on roads shared with private vehicles, efficient long-distance movement of goods, and coordination of commercial transportation with rural land uses are all issues for Whatcom County. Trucks make up the bulk of the commercial traffic, but rail, air, and ship transportation are involved as well.

GOAL 6P: Provide for safe, efficient movement of commercial vehicles in Whatcom County.

Policy 6P-1: Support and participate in studies to evaluate freight movement which supports economic development.

Policy 6P-2: Consider proposals for an east/west rail freight corridor.

Policy 6P-3: Develop and implement a program of incentives such as fast-track permitting for truck/rail transfer facilities when they contribute to achievement of other transportation goals in this chapter and it can be shown that negative impacts from the facilities can be mitigated.

Policy 6P-4: Support commercial and industrial development adjacent to existing transportation corridors, including I-5 and rail and air facilities as long as such facilities do not reduce safe, efficient movement of vehicles in Whatcom County.

Policy 6P-5: To better facilitate dispersal of commercial truck traffic, support the Lynden border crossing to open 24 hours a day

GOAL 6Q: Support intermodal connections (i.e., truck/rail facilities) that promote use of air, water, and/or rail freight where feasible.

Policy 6Q-1: Encourage the location and design of intermodal facilities for efficient freight transfer and access to the state and interstate highway, rail and ferry systems.

Policy 6Q-2: Support convenient access to ports, airports, other intermodal freight facilities, and international border crossings to enhance freight mobility.

Policy 6Q-3: Incorporate needs for access to ports and other intermodal freight facilities into capital facilities planning.

GOAL 6R: Emphasize the importance of economically competitive and high-quality inland transportation services; foster the preservation, development and full implementation of freight rail; and plan intermodal linkage for long-distance movement of goods.

Policy 6R-1: Support efficient movement and access of freight vehicles within and through the county.

Policy 6R-2: Support efficient movement of goods and people with regard to land use regulation and environmental and community impacts.

Policy 6R-3: Identify a recognized route system for trucks giving access to major commercial and industrial land uses which will minimize disruption of existing/projected rural land use patterns.

Policy 6R-4: Facilitate the movement of trucks between industrial/commercial areas and I-5 and through the county by providing all-weather roads, adequate turning radii and signage.

Agricultural Vehicles

Agriculture is one of the largest industries in Whatcom County. Agricultural vehicles need to use county roads, but slow-moving equipment can become a safety problem when it shares the road with other vehicles.

GOAL 6S: Allow for safe movement of farm equipment on county roads where necessary, and reduce conflicts with other vehicles.

Policy 6S-1: Provide signage, where appropriate, warning of slow-moving agricultural equipment.

Policy 6S-2: Provide for marked access points, wider shoulders and/or slow vehicle turnouts on routes where warranted to allow passenger vehicles to safely pass wide agricultural vehicles.

GOAL 6T: Transportation systems, including roads, should avoid adverse impacts to habitat of threatened and endangered fish and wildlife species, and restore such habitat when possible. For County transportation projects, the County Council will determine when such restoration is financially feasible through adoption of the six-year transportation improvement program, the annual road construction program and the County budget.

Policy 6T-1: Maintain and restore fish passage when constructing new transportation systems. Where existing transportation systems have fragmented habitat, such as where culverts prevent fish from migrating upstream, strive to restore fish passage at every opportunity. For County transportation projects, the County Council will determine when such restoration is financially feasible through adoption of the six-year transportation improvement program, the annual road construction program and the County budget.

Policy 6T-2: When constructing new transportation systems, ensure that stormwater generated by the transportation system is treated prior to discharge to waterways utilized by salmonid fish

populations or which flow directly into such waterways. Provide for regular, systematic maintenance of transportation system related stormwater control and treatment facilities.

Policy 6T-3: Avoid or mitigate future wetland impacts from transportation system construction and maintenance.

Policy 6T-4: When constructing new or maintaining existing transportation systems, retain or restore native riparian vegetation along streams and rivers to the greatest extent possible.

Policy 6T-5: Avoid or mitigate future impacts to feeder bluffs, accretion shoreforms, driftways, eelgrass, kelp beds and other elements of marine shoreline habitat when constructing or maintaining transportation systems.

Policy 6T-6: Allow natural stream processes to continue by minimizing bank hardening and streambed disturbances to the greatest extent possible, while meeting transportation objectives.

Policy 6T-7: Implement best management practices for erosion control to prevent sedimentation during transportation system construction or maintenance. Maintain such erosion control devices until no longer necessary to protect water quality.

9. Washington State Department of Transportation Objectives and Strategies

I. SAFETY Objectives and Strategies

Objective 1.1 Highway Safety: Reduce fatal and serious injury collisions by 50% over the next 10 years, moving towards the Strategic Highway Safety Plan's "Target Zero" goal of zero fatalities by year 2030.

a) Complete safety capital projects funded by the Nickel and Transportation Partnership Accounts.

b) Work with federal, state, local and other external partners to identify and address high priority highway safety needs.

c) Continue to use and refine safety analysis and design tools to identify, prioritize, and address safety activities and projects on state highways and local roads.

d) Identify, prioritize and implement low-cost, short-term projects to address risks contributing to collisions.

e) Develop a long-term highway safety capital improvement program.

Objective 1.2 Ferries Safety: Improve safety on state ferry vessels and terminals.

a) Expand and improve Ferries' Safety Management System.

Objective 1.3 Airport Safety: Improve safety at 17 statemanaged airports.

a) Improve safety of aviation users by prohibiting airspace intrusion around airports and runway approach paths.

Objective 1.4 Rail Safety: Improve the safety and security of rail transit systems.

a) Administer federal rail transit safety oversight requirements for rail transit systems, including light rail, street cars, and monorails.

Objective 1.5 Worker Safety: Continue to advance WSDOT's worker safety program to attain injury and illness reduction targets with the goal of zero work-related injuries and illnesses by 2019.

a) Prevent the most frequent accidents and injuries to workers.

b) Improve traffic control and driver behavior in highway work zones.

c) Continue to improve the return-to-work program.

d) Enhance crew endurance and worker safety on ferry vessels.

e) Enhance communication of worker safety expectations and goals within WSDOT and to partners.

Objective 1.6 Bridge Risk Reduction: Reduce the risk of bridge collapse due to earthquakes, and foundation scour caused by high water flows.

a) Implement the I-5 lifeline corridor plan to provide for safety and mobility during catastrophic events.

b) Secure funding for and implement seismic retrofit of all bridges in high and moderate risk seismic zones.

c) Reduce scour impacts on bridges.

Objective 1.7 System and Facility Security: Improve WSDOT's ability to prevent, mitigate, and respond to acts of terrorism on transportation systems and facilities.

a) Implement high-priority infrastructure "hardening" capital projects identified in vulnerability assessments.

b) Improve ferry vessel security.

Objective 1.8 Continuity of Operations and Emergency Management and Response: Increase WSDOT's ability to respond to, recover from, and deliver vital services during emergencies and disasters.

a) Improve planning and coordination with local and regional partners.

b) Integrate WSDOT's emergency response and continuity of operations planning and implementation.

c) Improve information technology disaster recovery planning and capacity.

II. PRESERVATION Objectives and Strategies

Objective 2.1 Highways and Bridges Maintenance: Maintain highway and bridge systems to optimize their short and long-term usefulness and minimize life-cycle costs.

a) Identify, track, and reduce maintenance backlogs and Maintenance Accountability Program (MAP) performance gaps.

b) Deliver appropriate levels of maintenance in alignment with MAP targets and budgeted priorities.

c) Coordinate maintenance and preservation investments to minimize life-cycle costs.

d) Identify and resolve maintenance needs resulting from system additions and delivery cost increases.

Objective 2.2 Highway Pavement Preservation: Preserve highway pavements at the lowest life-cycle cost.

a) Reduce pavement preservation backlogs.

b) Prioritize and reconstruct critical sections of concrete pavement that are approaching failure.

Objective 2.3 Bridge Preservation, Rehabilitation, and Replacement: Preserve and replace state bridges to provide safety and operability.

a) Paint steel bridges to preserve structural integrity.

b) Repair or replace critical bridge components to provide continued service and prevent load restrictions.

c) Replace or rehabilitate bridges as programmed.

Objective 2.4 Ferry Vessel Maintenance and Preservation: Preserve and improve vessel conditions to ensure safety, support operational needs, and minimize lifecycle costs.

a) Implement critical vessel maintenance and preservation projects to reduce backlogs.

b) Improve accountability and communication with the public.

Objective 2.5 Ferry Terminal Maintenance and Preservation: Improve terminal conditions to ensure safety, support operational needs, and minimize life-cycle costs.

a) Implement critical terminal maintenance and preservation projects to reduce backlogs.

b) Improve accountability and communication with the public.

Objective 2.6 Airport Runway Preservation: Preserve and improve runway surface conditions at state-managed airports to increase access.

a) Preserve and improve runway surfaces at 17 state-managed airports.

Objective 2.7 Local Pavement and Bridge Preservation: Assist cities and counties in preserving local roads and bridges.

a) Assist local agencies in collecting data and analyzing pavement conditions and bridge conditions.

b) Allocate federal bridge funding to maximize long-term return on investment.

Objective 2.8 Safety Rest Area Maintenance, Preservation, and Improvements: Reduce rest area maintenance and preservation backlogs, and improve facilities to keep rest area facilities safe and open to the public.

a) Preserve safety rest areas through regular maintenance and replacement of aged or functionally deficient buildings.

Objective 2.9 Traffic Operations Equipment Preservation and Upgrades: Preserve and upgrade traffic operations equipment to meet existing and future highway operations needs.

a) Preserve or replace traffic operations and associated information technology and communications equipment at lowest life-cycle costs.

b) Provide traffic operations equipment that is functional and adequate to support congestion management goals.

Objective 2.10 Facilities Maintenance and Preservation: Maintain, operate, and preserve agency facilities and building systems.

a) Reduce maintenance and preservation backlogs, and replace aged and functionally deficient facilities.

b) Identify and resolve the highest priority facility needs resulting from highway system additions and related operating cost increases.

Objective 2.11 Legacy Computer Systems Preservation and Replacement: Preserve existing core, critical application computer services and systems (i.e., "legacy systems") and prepare for migration to replacement systems.

a) Partner with other state agencies to ensure that WSDOT systems are integrated and compatible with other state systems.

b) Implement and refine plans for replacing priority legacy systems, as identified by the 2005 Critical Applications Assessment.

c) Replace information technology infrastructure and hardware operating beyond normal life-cycles.

III. MOBILITY Objectives and Strategies

Objective 3.1 Strategic Highway Capacity (Adding Capacity Strategically): Identify and implement the most critical and cost effective new capacity investments in highways and ferries to reduce bottlenecks and chokepoints and improve system throughput and reliability in conjunction with corridor management plans.

a) Deliver mobility projects funded by the 2003 and 2005 state funding packages and 2009 federal American Recovery and Reinvestment Act funding.

b) Develop plan for future capacity investments that will support a productive transportation system.

Objective 3.2 Traffic Management (Operating Efficiently): Optimize efficiency of the existing system by improving and expanding traffic management to increase the operating capacity of highways and reduce the causes and severity of congestion.

a) Implement Active Traffic Management (ATM) on the highest priority corridors based on corridor system management plans.

b) Integrate ferry operations information into ATM systems surrounding ferry terminals.

c) Reduce the amount of time necessary to clear major incidents.

d) Improve and integrate management of construction projects, special events, and incident response.

e) Expand and optimize core traffic management systems.

f) Update and improve wireless communications capabilities to provide better operational support capabilities and coordination with the Washington State Patrol (WSP) and other agencies.

Objective 3.3 Traveler Information (Operating Efficiently): Provide user-focused information so the public can make informed decisions about when, where and how to travel – "all roads, all modes, all the time."

a) Improve access to traffic flow and mobility information as identified in the WSDOT intelligent transportation systems and travel information plans.

b) Develop and enhance social media, internet and 5-1-1 tools to assist the public and freight carriers in making travel decisions.

Objective 3.4 Variable Tolling (Operating Efficiently): Provide funding for highway and bridge improvements, and make more efficient use of available roadway capacity through the use of high occupancy toll (HOT) lanes and express lanes.

a) Secure authority to expand variable tolling.

b) Develop and implement finance and tolling plans for key corridors.

Objective 3.5 Demand Management (Managing Demand): Increase vehicle occupancy and use of transportation services and commute choices.

a) Expand the availability of demand management programs and tools on available to the public in key congested corridors.

b) Improve the effectiveness of demand management programs and tools.

c) Work with local and regional governments and planning organizations to improve the availability of multi-modal travel options and adopt transportation-efficient land use policies and regulations.

Objective 3.6 Highways and Ferries Operations (Operating Efficiently): Monitor, analyze, and report performance of highways and ferries system operations. Expand "real time" monitoring and analysis of highways and ferries to support travel decisions made by the public, better manage operations, and improve system performance.

a) Ensure reliable and efficient ferry operations service.

b) Integrate reservation systems into ferry operations in order to manage demand during peak periods.

c) Construct, maintain, and operate robust ferries monitoring and communications systems.

d) Expand and enhance tools for tracking, analyzing, and reporting of highway and ferry system performance.

e) Construct, maintain, and operate robust highways monitoring and communications systems.

f) Expand the traffic flow and mobility data infrastructure.

Objective 3.7 Airport and Passenger Rail Capacity (Adding Capacity Strategically): Ensure that passenger rail service and state airport capacity are adequate to meet transportation demands.

a) Deliver high-speed rail capital investments.

b) Improve understanding of passenger rail demand dynamics and distribution to help plan and prioritize investments.

c) Develop capital improvement programs and identify future capacity investments.

d) Improve multi-modal connections to airports and passenger rail facilities.

IV. ENVIRONMENT Objectives and Strategies

Objective 4.1 Stormwater and Puget Sound: Reduce environmental impacts from stormwater discharged from WSDOT facilities.

a) Implement requirements of the new WSDOT stormwater permit, including the development of a stormwater information management (SWIM) system.

b) Ensure that WSDOT's review of local government development permits cover potential connections and discharges to WSDOTowned stormwater drainage systems for projects adjacent to or near state ROW.

c) Identify and begin constructing stormwater retrofit capital projects in Puget Sound to improve water quality.

Objective 4.2 Species and Habitat Protection: Protect and restore fish and wildlife habitat.

a) Remove fish passage barriers.

b) Improve habitat connectivity.

c) Protect wildlife from noise and other transportation impacts.

Objective 4.3 Cultural Resources: Improve WSDOT's cultural resources surveys.

a) Conduct an independent review of WSDOT cultural resource investigation practices.

Objective 4.4 Ferries Environmental Management: Improve environmental management at State Ferries.

a) Improve alignment and coordination with other WSDOT environmental programs.

V. STEWARDSHIP Objectives and Strategies

Objective 5.1 Capital Project Management and Delivery: Deliver high quality capital projects on time, within scope, and within budget.

a) Employ state-of-the-art project management across all regions and projects.

b) Deliver prioritized infrastructure projects, including the SR 99 Alaskan Way Viaduct, SR 520 Floating Bridge, I-5 Columbia River Crossing project, 64-car ferries, North Spokane Corridor, and Snoqualmie Pass.

c) Improve internal project tracking and external project reporting.

Objective 5.2 Identify and Articulate System Needs: Identify and recommend transportation system investments to meet priority needs.

a) Identify and recommend needed strategic investments in the transportation system based on performance, economic, and environmental benefits.

b) Work with partners to understand investment outcomes and explore potential new funding sources.

c) Identify the costs and benefits of maintaining, repairing, and rehabilitating the existing transportation system.

d) Maximize potential Ferries non-fare revenues.

Objective 5.3 Information Technology and Decision Support Systems: Ensure that information technology and decision support systems support WSDOT's key business functions.

a) Provide technology services and solutions that support and maintain WSDOT project, program and operational delivery goals.

b) Develop and maintain information technology that is reliable, adaptable, scalable and driven by WSDOT's business requirements.

Objective 5.4 Accountability and Communication: Ensure that WSDOT's performance management and communication programs continue to demonstrate agency accountability, performance, and stewardship in order to maximize the return on and value of taxpayer dollars.

a) Strengthen analyses and "no surprises" reporting protocols for project and program oversight and delivery.

b) Communicate and publish consistent, credible, and accurate performance information through the *Gray Notebook*, WSDOT's website and other tools.

c) Enhance agency capacity and ability to track, analyze, and communicate performance results.

Objective 5.5 Workforce: Enhance workforce recruitment, performance management, and leadership throughout WSDOT.

a) Improve recruitment processes and techniques to meet workforce level needs.

b) Improve training programs to maintain work force excellence and address staff turnover, retirement, and technology changes.

c) Create target support activities to increase workforce diversity and provide technical assistance to retain it.

d) Right-size our engineering, operations and administrative workforce in order to remain efficient while meeting our current and projected program delivery levels.

Objective 5.6 Enterprise Risk Management: Integrate enterprise risk analysis into agency decision-making processes.

a) Minimize risks and liabilities by improving risk identification, analysis, mitigation and management.

Objective 5.7 Planning and Prioritization: Provide longterm plans and investment programs that are strategic, databased, multimodal, integrated, prioritized, and supported by the Legislature and the public.

a) Create and update, in conformance with state and federal requirements, long-term, state transportation plans and investment programs that are performance-based and support state policy goals.

b) Expand corridor-based planning to improve demand management, operating efficiency, and strategic capacity additions in key *Moving Washington* corridors.

Objective 5.8 Equitable Access and the Americans with Disabilities Act (ADA): Provide state and local transportation facilities, programs, services, and related agency

communications that are accessible to persons with disabilities in accordance with state and federal law.

a) Develop and implement plans and project designs to bring transportation facilities into compliance with national and state accessibility guidelines and standards.

b) Provide technical assistance to local agencies on improving transportation accessibility.

c) Improve multi-modal transportation accessibility.

d) Develop a comprehensive communication plan for disseminating transportation-related disability and accessibility information to the public in accordance with Section 508 of the

Rehabilitation Act.

Objective 5.9 Tribal Relations: Maintain and strengthen working relationships with Tribal governments under Washington's Centennial Accord and the WSDOT Centennial

Accord Plan.

a) Ensure ongoing WSDOT awareness, particularly at the leadership team level, of key tribal interests affected by transportation programs and projects and how those interests can be factored into policy and project management decisions.

b) Consult meaningfully with tribes on transportation planning, project design, and operations.

Objective 5.10 Research and Knowledge Management: Support cutting-edge research and seek innovative solutions to transportation system issues. Retain key information and knowledge needed to support ongoing transportation system management within WSDOT.

a) Conduct short- and long-term research to support critical agency functions and emerging needs.

b) Improve retention and dissemination of key information and knowledge, particularly in areas at high risk of losing knowledge and agency expertise through retirements.

Objective 5.11 Sustainable Transportation: Manage and operate this transportation system using policies and strategies that preserves the environment, encourages livable communities and meets society's present needs without compromising the ability of future generations to meet their own needs.

a) Expand agency implementation of sustainable business practices.

b) Identify WSDOT facilities vulnerable to the effects of climate change; evaluate risks and identify possible strategies to reduce risk.

c) Meet legislative requirements while advancing sustainable transportation practices statewide.

d) Continue to coordinate with multiple state agencies in creating a statewide energy plan that supports our transportation goals.

Objective 5.12 Administrative Efficiency and Consolidation of Services: Identify and pursue viable opportunities to streamline and improve the efficiency of WSDOT systems and services through consolidation within WSDOT and participation in state-wide centralization projects.

a) Identify opportunities to integrate and centralize functions across WSDOT divisions, programs and regions.

b) Participate in initiatives to develop multi-agency administrative systems and shared services that support WSDOT business requirements.

VII. ECONOMIC VITALITY Objectives and Strategies

Objective 6.1 Freight Mobility: Improve the ability of truck and freight rail systems to serve identified industry needs, support regional economies, and build competitive advantages for Washington State products in the global marketplace.

a) Develop a comprehensive state freight transportation plan in collaboration with public and private partners.

b) Expand the use of freight data and analytic tools, including corridor classification and benefit-cost analysis, to support policy and investment decisions.

c) Engage with Congress and federal agencies, in coordination with the Governor's Office and other state agencies, to promote development of national strategic plan for freight systems to support interstate commerce and international trade.

d) Improve and maintain operational freight permitting and enhance Washington State Patrol (WSP) truck enforcement capabilities.

Objective 6.2 Contracting and Purchasing: Promote business development by purchasing goods and services in a manner that maximizes competition, builds opportunities for disadvantaged businesses, creates family-wage jobs, and supports a green economy.

a) Promote business development and job creation through transportation investments.

b) Collaborate with private and public sector organizations to expand the base of qualified contractors, suppliers, and workers, and continue efforts to remove unqualified contractors

when necessary.

c) Purchase goods and services to support expansion of the green economy and development of new transportation technologies.

Objective 6.3 Rural Economic Vitality: Create transportation access in and among rural communities to support economic recovery and development goals.

a) Support achievement of rural economic development and mobility goals through the Rural Mobility local transit grants program.

b) Provide enhanced access to scenic, recreational, and cultural resources associated with Washington's scenic byways.

Objective 6.4 Public-Private and Public-Public Partnerships: Leverage the value of WSDOT's owned or managed properties and programs by partnering with the private sector and public agencies on mutually-beneficial projects and policies.

a) Advance the West Coast Green Highway Initiative.

b) Explore opportunities for public/private developments at ferry terminals, vessels and safety rest areas.

c) Provide opportunities for businesses to participate in the Traveler Oriented Directional Signing Program and explore other opportunities for contributing to economic recovery in rural communities and along designated scenic byways.

Objective 6.5 Economic Vitality Planning: Develop and implement transportation plans that maximize economic returns from transportation system investments.

a) Consider the effect of transportation investments on regional economic vitality when evaluating and prioritizing transportation projects.

b) Work with the Department of Commerce and transportation partners throughout the state to identify the specific transportation needs of Washington's economic sectors and industries.

APPENDIX G:
Transportation and health

The United States currently faces an obesity crisis, with 35.7% of adults being obese in 2009-2010; in addition, 17% of all children and adolescents are obese, according to the CDC. In 2007, only 53.6% of Washington residents met the recommended physical activity guidelines of moderate-intense activity 30 minutes a day, five days a week[1]. Using a bicycle or walking for transportation trips is a good way to incorporate physical activity into one's day. A 150 pound person will burn 500 calories per hour when bicycling at a speed of 10-12 mph; they will also burn 230 calories while walking at a moderate pace of 3 miles per hour. Studies have shown that a new bicycle commuter will lose an average of 10 pounds in their first year of commuting.

The transportation system can affect resident's health through pollution and mobility.

Mobility

The built environment can determine whether or not a person is able to safely walk or bike for transportation trips. If there are no sidewalks or trails present, there will be fewer people outside walking. Likewise, if adequate bicycle facilities such as trails or bike lanes are not present, an inexperienced or young cyclist may not feel safe riding on the street, and may not ride at all. Access to transit also plays an important role in health and physical fitness, nearly 1/3 of transit users met the Surgeon General's recommend daily physical activity guidelines.

Pollution

Motor vehicles emit pollutants such as carbon dioxide and hydrocarbons; these degrade air and water quality. Residents who live within 330 feet of a major highway are exposed to higher levels of air and noise pollution, compared to those who do not live within this boundary. For every car trip that is replaced by an active transportation trip, there will be less pollution emitted into the environment.

[1] http://apps.nccd.cdc.gov/PASurveillance/StateSumResultV.asp?CI=&Year=2007&State=52#data

APPENDIX H:
Fiscally constrained projects

Note: Project Type: 1 = Safety, 2 = Construction, 3 = New Capacity, 4 = Adds Capacity, 5 = Adds Multi-Modal Facility, Policy Goals: 1 = Economic Vitality, 2 = Preservation, 3 = Safety, 4 = Mobility, 5 = Environment, 6 = Stewardship.

Appendix H: Fiscally Constrained Projects

Project Identification	Agency	Location	Description	Project Type	State Legislative Transportation Goals	Completion Year	Cost Estimate (YOE)
Central Avenue Bridge Reconstruction	Bellingham	N side of Granary Bldg	Seismic Retrofit of existing bridge to two industrial travel lanes	1, 2	1, 2, 3, 4, 5, 6	2012	$2,934,000
McLeod/Northwest Roundabout	Bellingham	McLeod/Northwest	Construct roundabout at intersection serving as Interstate 5 southbound on/off-ramps	1, 2, 4, 5	2, 3, 4, 5, 6	2012	$2,640,000
McLeod Road Sidewalk	Bellingham	Northwest to E. Rusley	Construct new sidewalk along the north side of McLeod Road from new roundabout to East Rusley	1, 5	2, 3, 4, 5, 6	2012	$250,000
Northwest - Enhanced Pedestrian Crossing	Bellingham	Alderwood at Shuksan Middle School	New flashing crosswalk installed at Alderwood/Northwest to serve Shuksan Middle School students	1, 5	2, 3, 4, 5, 6	2012	$75,000
Northwest Avenue Bicycle Lanes	Bellingham	Whatcom Creek to Interstate 5	Remove on-street parking from 2- mile-long corridor; partial overlay; new 5' marked bicycle lanes	1, 5	1, 2, 3, 4, 5, 6	2012	$240,000
Barkley Blvd Secondary Arterial Improvements	Bellingham	Howe to Woburn	Widening southside of arterial to provide thru/right-turn lane; replace bicycle lane, street trees, and sidewalk	1, 3	2, 3, 4, 5, 6	2012	$400,000
Barkley/Howe - Traffic Signal	Bellingham	Barkley / Howe	New traffic signal	1, 5	2, 3, 4, 5, 6	2012	$250,000
Woburn/Rimland - Traffic Signal	Bellingham	Woburn / Rimland	New traffic signal	1, 5	2, 3, 4, 5, 6	2012	$250,000
Eliza Avenue Collector Arterial Extension	Bellingham	Matanuska to E. Bellis Fair	New collector arterial to connect West Bakerview to East Bellis Fair Pkwy; bike lanes, sidewalks	3, 5	2, 3, 4, 5, 6	2012	$250,000
Yew Street Pedestrian Improvements	Bellingham	Alabama to Texas	Construct new sidewalk along south side of Yew St with new ADA ramps and crossings at Alabama and Texas	1, 5	2, 3, 4, 5, 6	2012	$200,000
Indian Street Bicycle and Pedestrian Improvements	Bellingham	Chestnut to Oak	Construct pedestrian bulb-outs, new street lights, improve sight-distance, possible shared-lane markings	1, 5	2, 3, 4, 5, 6	2012	$478,000
North Samish Way Pedestrian Improvements	Bellingham	Abbott and Consolidation	Construct flashing pedestrian crossings at both Abbott and Consolidation with turn lanes and median	1, 5	2, 3, 4, 5, 6	2012	$500,000
West Bakerview Overpass	Bellingham	Dover St to Bennett Dr	Construct dual left-turn lanes at Dover, add westbound travel lane to I 5 overpass, re-channelization	1, 2, 4, 5	2, 3, 4, 5, 6	2013	$3,200,000
James Street Phase 1 Secondary Arterial Extension	Bellingham	Woodstock to E. Orchard	Multimodal improvements; reconstruction of road, new bike lanes, sidewalk east side	1, 2, 4, 5	2, 3, 4, 5, 6	2013	$3,393,852
James Street Bridge Replacement	Bellingham	Squalicum Creek	Replace dilapidated wood bridges with one new bridge spanning future Squalicum Creek Re-Route	1, 2, 5	1, 2, 3, 4, 5, 6	2013	$3,311,577
Wharf Street Roundabout	Bellingham	State/Forest/Wharf	Consolidate two confusing intersections into one multimodal roundabout with ped & bike crossings	1, 2, 4, 5	2, 3, 4, 5, 6	2014	$3,200,000
Roeder Avenue Bridge Reconstruction	Bellingham	Squalicum Creek	Add sidewalks and bike lanes to existing bridge	1, 2, 5	1, 2, 3, 4, 5, 6	2014	$2,035,000
Northwest/Bakerview Intersection Safety Improve	Bellingham	Northwest/W. Bakerview	Remove portion of existing traffic island, add northbound thru/right drop turn lane to Aldrich	1, 2, 4	2, 3, 4, 5, 6	2015	$273,698
Stuart/Cordata Roundabout	Bellingham	Stuart/Cordata	Construct roundabout at busy intersection in high-growth area/Whatcom Community College	1, 2, 4, 5	2, 3, 4, 5, 6	2015	$2,518,022
West Horton Secondary Arterial Extension, Phase 1	Bellingham	Terminus to Aldrich	New secondary arterial to connect Cordata to Aldrich; bike lanes plus off-street boardwalk northside	3, 5	2, 3, 4, 5, 6	2016	$5,607,142
West Horton/Aldrich - Traffic Signal	Bellingham	W Horton/Aldrich	New traffic signal	1, 3, 5	2, 3, 4, 5, 6	2016	$448,571
Granary Avenue Collector Arterial	Bellingham	Roeder to Bloedel	New arterial access to Waterfront. Two travel lanes, 5' bike lanes. 5' sidewalks.	3, 5	2, 3, 4, 5, 6	2017	$6,251,429
Granary/Roeder - Traffic Signal	Bellingham	Granary/Roeder	New traffic signal	1, 3, 5	2, 3, 6	2017	$448,571
Central Avenue/Roeder - Traffic Signal	Bellingham	Central/Roeder	New traffic signal	1, 3, 5	2, 3, 6	2017	$448,571

Appendix H: Fiscally Constrained Projects							
Project Identification	**Agency**	**Location**	**Description**	**Project Type**	**State Legislative Transportation Goals**	**Completion Year**	**Cost Estimate (YOE)**
Orchard Street Secondary Arterial Extension	Bellingham	Birchwood to I-5 to James	Grade separated crossing of Interstate 5 along former railbed; auto & transit lanes, bike lanes, sidewalk north side	1, 3, 5	2, 3, 4, 5, 6	2018	$9,318,503
James Street Phase 2 Secondary Arterial Improve	Bellingham	E. Orchard to Telegraph	Multimodal improvements; reconstruction of road, new bike lanes, sidewalk east side	1, 2, 4, 5	2, 3, 4, 5, 6	2019	$8,296,706
James/Telegraph - Traffic Signal	Bellingham	James/Telegraph	New traffic signal	1, 3, 5	2, 3, 4, 5, 6	2019	$474,097
James/E. Bakerview - Traffic Signal Reconstruction	Bellingham	James/E. Bakerview	Reconstruct traffic signal to add dedicated left-turns lanes on all legs of intersection	1, 2, 3, 5	2, 3, 4, 5, 6	2019	$474,097
C Street Phase 1 Collector Arterial Improvements	Bellingham	Roeder to W terminus	Industrial collector arterial to include two 14-foot shared auto & bicycle travel lanes and 5' sidewalks	2, 5	2, 3, 4, 5, 6	2021	$2,448,332
C Street Phase 2 Collector Arterial Improvements	Bellingham	Roeder to Holly	Collector arterial to include two 14-foot shared auto & bicycle travel lanes, planter strips, and 5' sidewalks	2, 5	2, 3, 4, 5, 6	2022	$747,053
C Street/Roeder - Traffic Signal + Railroad Xing	Bellingham	C Street/Roeder	New traffic signal and new "Quiet Zone" BNSF Railroad Crossing	1, 2, 5	2, 3, 4, 5, 6	2022	$1,245,089
C Street Phase 3 Collector Arterial Improvements	Bellingham	Holly to Bancroft	Collector arterial to include two 14-foot shared auto & bicycle travel lanes, planter strips, and 5' sidewalks	2, 5	2, 3, 4, 5, 6	2023	$1,643,673
C Street/Holly - Traffic Signal	Bellingham	C Street/Holly	New traffic signal	1, 2, 5	2, 3, 4, 5, 6	2023	$505,746
West F Street Collector Arterial	Bellingham	Roeder to Maple	Industrial collector arterial to include two 14-foot shared auto & bicycle travel lanes and 5' sidewalks	1, 2, 5	2, 3, 4, 5, 6	2024	$2,568,339
Bloedel Avenue, Phase 2	Bellingham	Granary to Cornwall	New collector arterial to connect Granary to Cornwall through the Waterfront District	3, 5	2, 3, 4, 5, 6	2025	$10,000,000
Commercial Green Loop	Bellingham	Bloedel to Shoreline	New collector arterial to connect Bloedel to Commercial through the Waterfront District	3, 5	2, 3, 4, 5, 6	2026	$2,986,373
South Cornwall Avenue	Bellingham	Wharf to Cornwall Beach	New collector arterial to connect Cornwall to the soth end of the Waterfront District	3, 5	2, 3, 4, 5, 6	2027	$7,288,874
West Horton Secondary Arterial Extension, Phase 2	Bellingham	Aldrich to Northwest	New secondary arterial to connect Aldrich to Northwest; bike lanes, sidewalks	3, 5	2, 3, 4, 5, 6	2028	$5,488,973
West Horton / Northwest - Traffic Signal	Bellingham	W Horton/Northwest	New traffic signal	1, 3, 5	2, 3, 4, 5, 6	2028	$548,897
Cornwall Avenue Bridge Reconstruction	Bellingham	Over BNSF Railroad	Reconstruct existing bridge to three travel lanes, 5' bike lanes, 5' sidewalks	1, 2, 4, 5	1, 2, 3, 4, 5, 6	2029	$33,469,251
East Bakerview Phase 1 Principal Arterial Improve	Bellingham	Deemer to James	Multimodal improvements; widening to either 3 or 5 lanes, new bike lanes, sidewalks	1, 2, 4, 5	2, 3, 4, 5, 6	2030	$9,920,566
North Samish Way Principal Arterial	Bellingham	Bill McDonald Pkwy to East Maple	Planted Center Median, Turn lanes, On-Street Parking Between Abbott and Consolidation, Sharrows	1, 2, 4, 5	2, 3, 4, 5, 6	2032	$3,659,197
Pedestrian Master Plan Sidewalk Construction	Bellingham	Primary Ped Network Only	12 miles of Tier 1 sidewalk infill, widening, and crosswalks to be constructed on Primary Pedestrian Network	1, 3, 5	1, 2, 3, 4, 5, 6	2012-2032	$31,808,500
Bicycle Master Plan Bicycle Faciltiy Construction	Bellingham	Primary Bike Network Only	In 2012, 65 miles of marked bike lanes exist with Comprehensive Plan projects for 65 additional miles	1, 3, 5	2, 3, 4, 5, 6	2012-2032	$16,500,000
Future Aterial/Intersection Needs in Bham UGA	Bellingham	City and UGA Annex	Bellingham Comprehensive Plan includes aterial and intersection needs in UGS, if annexation occurs	1, 2, 3, 5	1,2,3,4,5,6	2012-2032	$5,651,507
I-5 Exit 274 Interchange/Environmental Review & PS&E	Blaine	I-5 Exit 274	PS&E design for full tight diamond interchange.	1,3,4,5	1,3,4,5,6	2014	$3,497,975
Boblett/SR 543 Signalization & Pedestrian Safety*	Blaine	Boblett and SR 543	Full signalization, chanalization, and sidewalk improvemetnts.	1,2,4,5	1,2,3,4,5,6	2014	$508,796

Appendix H: Fiscally Constrained Projects							
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D Street Reconstruction & Safety Improvements* -	Blaine	SR 543 to Allan	New street construction, sidwalks, & street lighting	1,2,4,5	1,3,4,5,6	2014	$1,388,590
Hughes Ave/Peace Portal Intersection Realignment*	Blaine	Hughes Ave/Peace Portal Intersection	Realign intersection to 80 degree approach and widen for truck movements	1,2,4,5	1,3,4,5,6	2014	$402,797
E Street Reconstruction	Blaine	6th to 12th	Street widening, sidewalks, parking, and street lighting	1,2,4,5	1,3,4,5,6	2015	$1,023,631
Marine Drive - Phase 3 -	Blaine	Lighthouse Park to Pier	Widen to 14 foot lanes, sidewalks, street lighting	1,2,4,5	1,3,4,5,6	2015	$2,408,543
H Street Reconstruction Phase 2* -	Blaine	Terrace to Ronald Dr	Widen to 3 lanes, sidewalks, 8" sewer extension, street lighting	1,2,4,5	1,3,4,5,6	2015	$1,116,688
I-5 Overpass Pedestrian Approach Ramps Retrofit H St/Mitchell	Blaine	300 feet on each side of over pass	Repair abuttment approaches - 12" settlement	1,2,4,5	2,3	2016	$89,714
H Street Pedestrian Overpass -	Blaine	H Street & SR 543	Construct new Pedestrian Overpass on SR 543	1,2,4,5	3,6	2016	$2,467,142
H Street Reconstruction Phase 3* -	Blaine	Ronald Dr to North Harvey	Widen to 3 lanes, sidewalks, 8" sewer extension, street lighting	1,2,4,5	1,3,4,5,6	2017	$1,256,491
Hughes Avenue Reconstruction* -	Blaine	Peace Portal to Odell	Reconstruct to heavy truck x-section and widen to 14 foot lanes, sidewalks	1,2,4,5	1,3,4,5,6	2017	$2,512,982
Yew Avenue Repairs & Overlay -	Blaine	Hughes to Boblett	Rehab pavement and 500 feet of new guardrail	1,2,4,5	2,3,4,6	2017	$531,153
Bayview Avenue Reconstruction	Blaine	Peace Portal to Mary Ave	Reconstruct to urban standard with sidewalks and street lighting	1,2,4,5	1,3,4,5,6	2018	$512,518
Peace Portal/H Street Signalization*	Blaine	Peace Portal/H Street Intersection	Signalization	1,2,4,5	1,3,4,5,6	2018	$524,166
Mitchell Ave/H Street Signalization*	Blaine	Mitchell Ave/H Street Intersection	Signalization	1,2,4,5	1,3,4,5,6	2019	$533,360
"Mott's Hill" Parkway (D/E St) Realignment* -	Blaine	Allan to Jerome	New parkway alignment with seperated bike/ped path, utilities	1,2,4,5	1,3,4,5,6	2020	$662,125
Grant Street Extension	Blaine	End of Grant St	New street construction, sidewalks, and street lighting.	1,2,4,5	3,5,6	2020	$240,773
Cedar St Reconstruction	Blaine	Peace Portal to Mitchell	New street construction, sidewalks, and street lighting.	1,2,4,5	3,5,6	2020	$1,252,018
SR 543 Grade Separated Pedestrian Crossing	Blaine	H St and Boblett	Construct new Pedestrian Overpass on SR 543	1,2,4,5	1,3,4,5,6	2021	$1,346,577
Semiahmoo Spit Shoreline Stabilization	Blaine	East side of Semiahmoo Spit	Shoreline stabilization and bike/ped path	1,2,4,5	5,6	2022	$622,545
Peace Portal/Bell Rd Signalization*	Blaine	Peace Portal/Bell Rd Intersection	Signalization	1,2,4,5	1,3,4,5,6	2023	$568,964
Blaine Rd/Drayton Harbor Rd Signalization*	Blaine	Blaine Rd/Drayton Harbor Rd Intersection	Signalization	1,2,4,5	1,3,4,5,6	2024	$385,251
Drayton Harbor Rd/Harbor View Rd Signalization*	Blaine	Drayton Harbor Rd/Harbor View Rd Intersection	Signalization	1,2,4,5	1,3,4,5,6	2025	$391,575
Mitchell Ave/Peace Portal Signalization*	Blaine	Mitchell Ave/Peace Portal Intersection	Signalization	1,2,4,5	1,3,4,5,6	2026	$597,275
H Street/Harrision Signalization*	Blaine	H Street/Harrision Intersection	Signalization	1,2,4,5	1,3,4,5,6	2027	$607,406
Hughes Rd/ Peace Portal Signalization*	Blaine	Hughes Rd/ Peace Portal Intersection	Signalization	1,2,4,5	1,3,4,5,6	2028	$617,509
BNSF Railroad ROW Acquisition	Everson	RR ROW from Chestnut to Mission	Acquire abandoned BNSF railroad ROW from Chestnut Street to Mission Road	1, 3	3, 4, 5	2013	$229,000

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Project Identification	**Agency**	**Location**	**Description**	**Project Type**	**State Legislative Transportation Goals**	**Completion Year**	**Cost Estimate (YOE)**
Lincoln Street, Phase 1	Everson	Lincoln St. from SR 544 to Kirsch Dr.	Reconstruct and extend Lincoln St. from State Route 544 to Kirsch Drive to provide access to commercial area. The extension will be two lanes from S. Washington St. to Kirsch Dr.	1, 2, 3	1, 2, 3, 4	2014	$850,000
Bay-to-Baker Trail Extension	Everson	BNSF ROW from Chestnut to Mission	Extend Bay-to-Baker Trail from Chestnut Street to Mission Rd.	1, 3	3, 4, 5	2016	$150,000
Everson Rd. Improvements	Everson	Everson Rd. from SF 544 to Robinson St.	Overlay Everson Rd. and add sidewalks on the west side from SR 544 to Robinson Street	1, 2	2, 3, 4	2017	$400,000
Lincoln Street, Phase 2	Everson	Lincoln St. from Kirsch Dr. to Blair Dr.	Construct 2-lane extension of Lincoln Street from Kirsch Dr. to Blair Drive to provide access to commercial area	1, 3	1, 3, 4	2018	$800,000
Mission Rd. Realignment	Everson	BNSF ROW from Chestnut to Mission	Construct realigned Mission Road from Chestnut Street to existing Mission Rd. Re-aligned roadway will include two lanes constructed to all-weather standards.	1, 3	3, 4	2022	$825,000
Fir Street Connector	Everson	Fir St. ROW from SR 544 to Mission	Construct new major connecting street (two lanes) from SR 544 to Mission Rd. approximately within alignment of Fir St. ROW	1, 3	1, 4	2023	$750,000
SR 544 Sidewalk Improvements	Everson	SR 544 from Robinson Street toEverson Rd.	Fill in major gaps in sidewalk system on State Route 544 between the Everson Elementary School and downtown Everson	1	1, 3, 4	2023	$500,000
Preservation Program	Everson	Designated Arterials	Preserve designated arterials through timely overlays and reconstruction	1, 2	2, 3	2023-2032	$608,754
Thornton Street	Ferndale	Maureen to Vista	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2013	$1,000,000
Main Street / Labounty Drive	Ferndale	Intersection	Construct 2 lane roundabout, including NB and EB slip lanes and two southbound approach lanes.	1,2,4,5	1,2,3,4,5,6	2014	$2,066,985
Labounty Drive / Nordic Way	Ferndale	Intersection	Construct 1 to 2 lane roundabout	1,2,4,5	1,2,3,4,5,6	2014	$1,377,990
Church Road	Ferndale	Main to Heather Drive	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2014	$5,066,764
Washington Street / Vista Drive	Ferndale	Intersection	Roundabout at Washington Street and Vista Drive	1,2,4,5	1,2,3,4,5,6	2015	$4,379,168
Washington Street	Ferndale	Vista to 2nd Ave	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2015	$1,000,000
Smith / Pacific Highway	Ferndale	Intersection	Construct 1 to 2 lane roundabout	1,2,4,5	1,2,3,4,5,6	2016	$1,457,857
Main Street / Hovander Drive	Ferndale	Intersection	Intersection operations improvement	1,4	1,2,3,4,5,6	2017	$342,679
Thornton Street	Ferndale	Church Road to Maureen	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2017	$1,142,265
Thornton Street	Ferndale	Vista Drive to Malloy	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2017	$1,302,182
Portal Way / I-5 NB Ramps	Ferndale	Intersection	Implement traffic control improvements	1,2,4,5	1,2,3,4,5,6	2018	$617,351
Portal Way / I-5 SB Ramps	Ferndale	Intersection	Intersection operations improvement	1,2,4,5	1,2,3,4,5,6	2018	$174,722
Walgreens Driveway / Main Street	Ferndale	Intersection	Construct 2 lane roundabout	1,2,4	1,2,3,4,5,6	2018	$1,747,219
Thornton Street / Malloy Avenue	Ferndale	Intersection	Construct single lane roundabout	1,2,4,5	1,2,3,4,5,6	2020	$2,696,655
Main Street	Ferndale	Barrett Road to east City limits	Reconstruct and widen to meet City standards, including utilities	1,2,4,5	1,2,3,4,5,6	2020	$3,611,591
Main Street / I-5 SB Ramps	Ferndale	Intersection	Construct 2 to 3 lane roundabout. Widen SB on and off ramps. Provide SB turn slip lane.	1,2,4,5	1,2,3,4,5,6	2020	$3,069,853
Smith Road / Labounty Drive	Ferndale	Intersection	Construct single lane roundabout	1,2,4,5	1,2,3,4,5,6	2022	$498,036
Smith Road / Barrett Road	Ferndale	Intersection	Construct 2 lane roundabout	1,2,4,5	1,2,3,4,5,6	2022	$2,116,651

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Project Identification	Agency	Location	Description	Project Type	State Legislative Transportation Goals	Completion Year	Cost Estimate (YOE)
Main Street / I-5 NB Ramps	Ferndale	Intersection	Realign and widen Barrett Road to develop 2 to 3 lane roundabout intersection with Main Street and I-5 NB ramps, with 2 NB from Barrett Road, 2 SB from I-5 off ramp, 2 NB, 3 EB and 3 WB approach lanes.	1,2,4,5	1,2,3,4,5,6	2022	$10,209,730
Pavement Rehabilitation Program	Ferndale	City-wide	City-wide program	1,2	1,2,3,4,5,6	2012-2022	$3,441,026
Thornton Street / Newkirk Road Grade Separation	Ferndale	Malloy Ave to Portal Way	Bridge over BNSF RR Tracks and I-5	1,2,3,4,5	1,2,3,4,5,6	2023-2032	$29,273,572
Main Street / I-5 Overpass Widening	Ferndale	Interchange	Widen to five lane section	1,2,3,5	1,2,3,4,5,6	2023-2032	$8,782,072
Main Street Culvert	Lynden	Main Street	Replace existing failing culvert for Fishtrap Creek with a bridge	1,2	1,3,4,5	2012	$2,000,000
Bradley and Line Roads	Lynden	Vinup to Badger	Design engineering of Bradley and Line Roads between Vinup and SR-546 (Badger Road)	1,4,5	1,2,3,4,5,6	2012	$150,000
Benson Road culvert	Lynden	Benson N/O Pine	Replace approximately 600 feet of failed culvert	1,2	2,3,4	2012	$750,000
Main Street culvert	Lynden	Main Street	Complete construction of bridge	1,2	1,3,4,5	2013	$1,000,000
Benson Road culvert	Lynden	Benson N/O Pine	Complete construction of culvert	1,2	2,3,4	2013	$450,000
Main St. E/O Berthusen	Lynden	East of Berthusen	Complete design to full City standard for the 0.5 mile gap east of Berthusen Road	1,2,4,5	1,2,3,4,5,6	2013	$200,000
Pedestrian Trail	Lynden	Depot to Benson	Design Engineering for next phase of City multi-modal trail system	1,3,5	1,2,3,4,5,6	2013	$150,000
Pepin Creek	Lynden	Main St to SR-546	Design Engineering for the Pepin Creek re-routing of Benson and Double Ditch Roads drainaing	1,3,4,5	1,2,3,4,5,6	2014	$600,000
Main Street E/O Berthusen	Lynden	East of Berthusen	Construction to full City standard for a half mile east of Berthusen	1,2,4,5	1,2,3,4,5,6	2014	$2,000,000
Pepin Creek	Lynden	Main Street to Sunrise	Complete construction of the first phase of the Pepin Creek re-routing of Benson and Double Ditch drainages	1,3,4,5	1,2,3,4,5,6	2015	$8,200,000
Bradley Road	Lynden	Vinup to Line Road	Complete reconstruction of Bradley Road	1,2,4,5	1,2,3,4,5,6	2015	$2,500,000
Benson Road	Lynden	Main Street to Sunrise	Complete design engineering for Benson reconstruction	1,2,4,5	1,2,3,4,5,6	2015	$400,000
Benson Road	Lynden	Main Street to Sunrise	Complete Constrcuction of phase 1	1,2,4,5	1,2,3,4,5,6	2016	$2,000,000
Line Road	Lynden	Bradley to SR-546	Complete Construction of Line Road	1,2,4,5	1,2,3,4,5,6	2016	$3,500,000
Kamm Road	Lynden	Line to Northwood	Complete design engineering for future construction to full City standard	1,2,4,5	1,2,3,4,5,6	2016	$200,000
Northwood Road	Lynden	South City limits to SR-546	Complete design engineering for future construction to full City standard	1,2,4,5	1,2,3,4,5,6	2016	$250,000
Pedestrian Trail	Lynden	Depot to Benson	Construct extention of City multi-modal trail system	1,3,5	1,2,3,4,5,6	2016	$1,000,000
Vinup Road	Lynden	E. Grover to SR-546	Strucutural Overlay/reconstruction	1,2,3	2,3,5,6	2017	1,00,000
Benson Road	Lynden	Sunrise to Badger	Complete Phase 2 reconstruction	1,2,4,5	1,2,3,4,5,6	2017	$2,000,000
17th Extension	Lynden	Village to Main	Design Engineering to full City standard	1,3,5	1,3,4,5,6	2017	$200,000
Drayton Street Extension	Lynden	2nd to 3rd	Design Engineering to full City standard	1,3,5	1,3,4,5,6	2017	$200,000
Pepin Creek	Lynden	Sunrise to Badger	Complete construction of the second phase of the Pepin Creek re-routing of Benson and Double Ditch drainages	1,3,4,5	1,2,3,4,5,6	2017	$6,000,000
Kamm Road	Lynden	Line to Northwood	Construct to full City standard	1,2,4,5	1,3,4,5,6	2018	$3,500,000
Birch Bay Lynden Road	Lynden	Tromp to Berthusen	Design engineering to full City standard	1,2,3,4,5	1,2,3,4,5,6	2018	$300,000
Northwood Road	Lynden	South City limits to SR-546 (Badger Road)	Construct to full City standard	1,2,4,5	1,2,3,4,5,6,	2019	$4,000,000
17th Street Reconstruction	Lynden	Kok Rd to Front St.	Structual Overlay/Reconstrution	1,2,3	2,3,4,5	2019	$1,000,000

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17th Street Extension	Lynden	Village to Main	Construct to full City standard	1,3,5	1,3,4,5,6	2020	$750,000
17th Stret reconstruction	Lynden	Front to Village	Structual Overlay/Reconstrution	1,2,3	2,34,5	2020	$1,000,000
Kok Road	Lynden	19th to SR-539 (Guide)	Structual Overlay/Reconstrution	1,2,3	2,3,5,6	2020	$750,000
Berthusen Road	Lynden	Birch Bay Lynden to Main Street	Design engineering to full City standard	1,2,3,4,5,	1,2,3,4,5,6	2020	$300,000
Drayton Street Extension	Lynden	2nd to 3rd	Construct to full City standard	1,3,5	1,3,4,5,6	2021	$1,000,000
Bender Road	Lynden	Drayton to Edgwatere	Structural Overlay/Reconstruction	1,2,3	2,3,5,6	2021	$1,000,000
Birch Bay Lynden Road	Lynden	Tromp to Berthusen	Construct to full City standard	1,2,3,4,5	1,2,3,4,5,,6	2022	$4,000,000
Berthusen	Lynden	Birch Bay Lynden to Main Street	Construct to full City standard	1,2,3,4,5	1,2,3,4,5,6	2023	$3,000,000
Double Ditch Road	Lynden	Main to north City limits	Design engineering to full City standard	1,2,3,4,5	1,2,3,4,5,6	2024	$300,000
E Madison St	Nooksack	E Madison St, E 4th St to City Limits	Repair of failed sections, grinding and repave	2	2	2013	$122,936
E Madison St	Nooksack	E Madison St, E 4th St to Nooksack Ave/SR9	Repair of failed sections, grinding and repave	2	2	2018	$410,955
So Pass Rd Sidewalk	Nooksack	So Pass Rd east of SR9	Sidewalk along north side of road, approximately 450 feet	1	3	2023	$152,322
Nooksack Ave Sidewalk	Nooksack	SR9 north of Lincoln St	Sidewalk and shoulder improvements along Nooksack Ave/SR9	1	3	2028	$404,925
Preservation Program	Nooksack	Multiple Arterials	Preservation Program	2	2	2023-2031	$257,758
Sumas Ave.	Sumas	Sumas Ave.	Rebuild with new curb and sidewalks	1,2	3,4,5	2016	$975,000
Barbo Road	Sumas	Barbo Road	Reconstruc to meet Heavy Haul Road Standards	2,4,5	1,4	2016	$260,000
Garfield Street	Sumas	Garfield Street	Rebuild with Bike Lane's	1,2	2,3,	2022	$225,000
Heavy Haul Road	Sumas	Industrial Area	Construct new 2-lane Heavy Haul Rd. from Bob Mitchell Ave. to Barbo Rd.	3,4,5	1,4,	2018	$1,120,000
West Front Street	Sumas	West Front Street/Industrial Zone	Reconstruct to meet Heavy Haul Road Standards	1,2,4,5	1,2,3,4,5	2021	$1,503,209
Bay Rd Fish Passage Culvert	Whatcom	Bay Rd. Fish Passage Culvert	Fish passage culvert	1,2,3	2,4,5,6	2012	$600,000
Lake Whatcom Boulevard	Whatcom	Strawberry Pt Rd to Lake Louise Rd	Structural overlay	1,2,3,4,5	1,2,3,4,5,6	2012	$1,000,000
Hannegan Road	Whatcom	Scott Ditch to Lynden City Limits	Structural overlay	1,2,3,4,5	1,2,3,4	2012	$500,000
West Bakerview Road	Whatcom	Bennett Drive to Bellingham City	Re-channelization and pedestrian improvements	1,2,3,4,5	1,2,3	2012	$100,000
E. Smith Rd/Everson Goshen Rd	Whatcom	E. Smith Rd/ Everson Goshen Rd.	Pavement rehabilitation	1,2,3,4	1,2,3	2012	$500,000
Birch Bay Lynden Rd/Portal Wy	Whatcom	Birch Bay Lynden Rd/Portal Way	Signalization	1,2,3,4,5	1,3,4	2013	$3,500,000
Potter Rd/South Fork Nooksack Bridge #148	Whatcom	Potter Rd/S Fork Nooksack Bridge	Replacement	1,2,3,5	1,2,3,4,5,6	2013	$500,000
Mosquito Lk Rd/Canyon Crk Bridge No.334	Whatcom	Mosquito Lk Rd/Canyon Crk Brdg	Rehabilitation and sedimentation control	1,2	1,2,3,4,5,6	2013	$250,000
Marine Dr/Nooksack River Bridge No. 3	Whatcom	Marine Dr/Nooksack Rvr Bridge	Scour mitigation	1,2	1,2,3,4,5,6	2013	$250,000
Rural Rd. Safety Program	Whatcom	Various locations	Various safety imporovement on Rural Roads	1,2,3	1,2,3	2014	$1,400,000
Point Robert Transportation Improvements	Whatcom	Pt Roberts Trspt Improvements	Project location to be determined	1,2,3,4	1,2,3	2014	$150,000

Appendix H: Fiscally Constrained Projects							
Project Identification	Agency	Location	Description	Project Type	State Legislative Transportation Goals	Completion Year	Cost Estimate (YOE)
Slater Rd Intersections	Whatcom	Slate Rd.	Install turn lanes at Imhof Road and Ferndale Road - 1.5	1,2,3,4	1,2,3,4	2015	$1,000,000
Marine Dr/Little Squalicum Bridge No. 1	Whatcom	Marine Dr/ Ltl Squalicum Brdg	Rehabilitation	1,2	1,2,3,4,5,6	2015	$250,000
Hannegan Rd/Nooksack River Bridge No.252	Whatcom	Hannegan Rd/Nooksack Rvr Bdg	Scour mitigation	1,2	1,2,3,4,5,6	2016	$250,000
Mosquito Lk Rd/North Fork Nooksack River Bridge #332	Whatcom	Mosquito Lk Rd/Nfork Nooksack	Rehabilitation	1,2,3,4,5,6	1,2	2016	$500,000
South Pass Rd/Saar Crk Bridge No. 212	Whatcom	S Pass Rd/Saar Crk Brdg	Replacement	1,2,3,4,5,6	1,2,3	2016	$500,000
Marine Dr/BNSF RR Bridge No. 172	Whatcom	Marine Dr/BNSF RR Brdg	Bridge Construction	1,2,3,4,5,6	1,2,3	2016	$6,000,000
Birch Bay Drive Pedestrian Facility	Whatcom	Alderson Rd to Harborview Rd.	Pedestrian & non-motorized enhancements	1,2,3,4,5	1,2,3,4,5,6	2017	$10,000,000
Larrabee Road	Whatcom	NW to Aldrich Rd.	Fish Passages & stream restoration - 1.0	1,2,3	2,3,5,6	2017	$1,000,000
Portal Way/Dakota Crk Bridge No. 500	Whatcom	Portal Wy/Dakota Crk Brdg	Seismic retrofit	1,2,3,4,5,6	1,2	2017	$1,500,000
Jackson Rd/Terrell Crk Bridge No. 81	Whatcom	Jackson Rd/Terrell Crk Brdg	Replacement	1,2,3,4,5,6	1,2,3	2017	$750,000
Stein Rd/Dakota Crk Tributary Bridge No. 91	Whatcom	Stein Rd/Dakota Crk Tributary Brdg	Replacement	1,2,3,4,5,6	1,2,3,	2017	$750,000
Slater Rd/Nooksack River Bridge No.514	Whatcom	Slater Rd/Noosack Rvr Brdg	Bridge Construction	1,2,3,4,5,6	1,2,3	2017	$6,000,000
Birch Bay Lynden Rd/Blaine Rd.	Whatcom	Birch Bay Lynden Rd/Blaine Rd.	Intersection Improvements - 4	1,2,3,4,5	1,2,3,4	2018	$4,000,000
Mosquito Lk Rd/Porter Crk Bridge No.141	Whatcom	Mosquito Lk Rd/Porter Crk Brdg	Replacement	1,2,3,4,5,6	1,2,3	2018	$750,000
W. Badger Rd.	Whatcom	Sunrise to Markworth	Reconstruction	1,2,3,4,5	1,2,3,4,5,6	2018	$5,000,000
North Shore Road	Whatcom	Bellingham City Limits to Y Road	Reconstruction, non-motorized enhancements	1,2,3,4,5	1,2,3,4,5,6	2020	$8,000,000
Hampton Rd.	Whatcom	Lynden to Van Buren	Reconstruction	1,2,3,4,5	1,2,3,4,5,6	2020	$5,000,000
Lincoln Road II	Whatcom	Harborview Rd to SR 548 (Blaine Rd)	Reconstruction & new road, non-motorized enhancements	1,2,3,4	1,2,3,4	2022	$5,000,000
Marine Drive	Whatcom	Alderwood Ave. to McAlpine Rd.	Reconstruction & bicycle/pedestrian facilities	1,2,3,4,5	1,2,3,4,5	2022	$5,000,000
Marine Drive II	Whatcom	Alderwood Ave. to Bridge No. 172	Reconstruction & bicycle/pedestrian facilities	1,2,3,4,5	1,2,3,4,5	2022	$5,000,000
Legoe Bay Rd Protection	Whatcom	Lummi Island	Seawall removal and beach creation	1,2,5	2,3,4,5,6	2022	$3,000,000
Van Buren Rd.	Whatcom	Everson to Halverstick	Reconstruction	1,2,3,4,5	1,2,3,4,5,6	2022	$5,000,000
Mt. View Road	Whatcom	Ferndale to Rainbow	Reconstruction	1,2,3,4,5	1,2,3,4,5,6	2029	$10,000,000
Lincoln Road II	Whatcom	Harborview Rd. to Blaine	New Construction	1,2,3,4,5	1,2,3,4,5,6	2029	$7,000,000
Horton/NW/Slater Corridor	Whatcom	Horton/Slater/NW	New Roadway, Reconstruction, Intersection Control	1,2,3,4,5	1,2,3,4,5,6	2030	$20,000,000
Kickerville	Whatcom	Henry to Loomis Trl	Reconstruction	1,2,3,4,5	1,2,3,4,5,6	2030	$10,000,000
Ferry Dock Improvements	Whatcom	Ferry Dock Improvements	Improvements to Lummi Island Ferry Docks	1,2,3,4,5	1,2,3,4	2032	$8,000,000
Replacement of Whatcom Chief	Whatcom	Lummi Island	New Ferry	1,3	1,3,4	2032	$20,000,000
Hannegan Road	Whatcom	City of Bellingham to Slater	Capacity Enhance	1,2	1,2,3,4,5,6	2032	$20,000,000

Appendix H: Fiscally Constrained Projects							
Project Identification	**Agency**	**Location**	**Description**	**Project Type**	**State Legislative Transportation Goals**	**Completion Year**	**Cost Estimate (YOE)**
Various Bridges Rehabilitation/Replacement	Whatcom	Countywide	As prioritized	1,2,3	1,2,3,4,5,6	2013-2032	$30,000,000
SR 539/Lynden-Aldergrove Port-of-Entry Improvements	WSDOT	SR 539	This project supports Lynden-Aldergrove port-of-entry expansion as identified in the US-Canada Beyond the Border Vision Declaration and Action Plan. Widening of SR 539 from H Street to the international boundary will provide a dedicated NEXUS lane and reserve additional capacity to enable future full-service freight processing.	4	1, 3, 4, 5, 6	2014	$9,600,000
I-5/Ferndale Vicinity - Cable Median Barrier	WSDOT	I-5	Upgrading the high tension cable median barrier on I-5 in the vicinity of Ferndale from 3-strand to 4-strand cable barrier will improve the performance of the barrier.	1	3	2015	$660,000
I-5/Bellingham VMS	WSDOT	I-5	Add a VMS for northbound travelers (north of the existing VMS in south Bellingham - mp 249.92). This is needed to give northbound border travelers current wait time information for each of the four border crossings in order to choose the most optimal crossing option. This benefits the traveler and the border inspection agencies by helping to balance demand.	1	1, 3, 4, 5,6	2015	$430,000
I-5/Birch-Bay Lynden Rd - Northbound Off-Ramp Intersection Ramp Terminal Improvements	WSDOT	I-5	Construct a five-leg roundabout at the I-5 northbound ramp terminal intersection with Birch Bay Lynden Road and Valley View Road. The roundabout will combine the traffic movements at two closely spaced intersections into one safer and more efficient intersection.	1, 4	1,3,4,5,6	2016	$4,400,000
SR 539/Lynden, Birch Bay-Lynden Rd to SR 546 - Widening	WSDOT	SR 539	SR 539, Guide Meridian, is a border-crossing highway essential for local commerce and international freight headed to and from the Canadian border. This section of the Guide Meridian is currently a narrow two-lane roadway with minimal shoulders. Widening SR 539 to four lanes within Lynden will eliminate a bottleneck, reduce collisions and is the last portion of a critical upgrade to the corridor extending from Bellingham to Lynden.	1,4	1,3,4,5,6	2022	$30,000,000
Highway Preservation	WSDOT	countywide	State highway overlay and reconstruction. Future investments are estimated based on projected program for 2013-2015 (I-5/ SB Joe Leary Slough to Nulle - PCCP Rehab, $9m; I-5/ PCCP Rehab thru Bellingham -Old Fairhaven Parkway to Bakerview Rd., $10M)	2	1, 2, 3, 4, 5, 6	2032	$145,000,000
Highway Incident Response	WSDOT	I-5	1 FTE beginning '19-'21	1	1, 3, 4, 5,6	2032	$3,900,000
Highway Low-Cost Enhancements Program	WSDOT	countywide	Funding for safety improvements. ('13-'15 - $250,000; '15-'17 - $350,000; '17-'19 - $350,00; '19-'21 - $350,000; '21-'23 - $350,000)	1	3	2032	$4,300,000

Appendix H: Fiscally Constrained Projects							
Project Identification	**Agency**	**Location**	**Description**	**Project Type**	**State Legislative Transportation Goals**	**Completion Year**	**Cost Estimate (YOE)**
I-5/Bellingham, Iowa Street - Interchange Improvements	WSDOT	I-5	The I-5 Iowa Street interchange is a key access point to Bellingham's industrial areas. Additionally, six adjacent I-5 bridges are impacted by this project and need to be replaced. All six bridges are classified as functionally obsolete and cannot be widened to accommodate future improvements on this congested section of the interstate. Replacing the bridges and rebuilding the interchange will reduce backups on I-5 and keep interstate traffic moving smoothly through Bellingham. This project implements the top recommendation of the Interstate 5 Master Plan.	4	1,3,4,5,6	2032	$158,000,000
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2012	$3,418,600
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2013	$1,588,000
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2014	$0
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2015	$106,000
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2016	$3,421,800
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2017	$0
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2018	$1,080,000
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2019	$3,396,600
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2020	$3,409,920
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2021	$3,425,904
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2022	$3,445,085
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2023	$3,468,102
Revenue Vehicles	WTA	Whatcom County	Replacement coaches, mini-buses, and vanpool vehicles	Replacement	2	2024	$3,495,722
Total							**$965,828,730**

APPENDIX I:
Levels of Service

The Washington State Growth Management Act (GMA) requires cities and counties to adopt level of service (LOS) standards for arterials and transit routes. LOS is defined as "qualitative measures describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." It can be described in terms of volume over capacity, travel times, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. The standards are used to identify acceptable levels of congestion on roadways. The two most common methods used are arterial and intersection Levels of Service. Both methods use the letter identification of A through F, which denotes from best to worst.

Arterial Level of Service for Motor Vehicles

The arterial LOS is for uninterrupted flow conditions (such as on freeways and long sections of roadways between stop signs or signalized intersections). Whatcom County, and most of the local jurisdictions within the County, uses this method for determining a roadway's LOS during the pm peak traffic hour. It is quantified by determining the ratio of vehicle volume to capacity (v/c) of a roadway.

The following definitions apply (Highway Capacity Manual, 2000 Edition):

Level of Service A describes primarily free flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the arterial classification. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delay at signalized intersections is minimal.

Level of Service B represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial classification. The ability to maneuver in the traffic stream is only slightly restricted and delays are not bothersome.

Level of Service C represents stable operations; however, ability to maneuver and change lanes in midblock locations may be restricted than in LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the average free-flow speed for the arterial classification.

Level of Service D borders on a range in which small increases in flow may cause substantial increases in approach delay and hence decreases in arterial speed. LOS D may do to adverse signal progression, inappropriate signal timing, high volumes or some combination of these. Average travel speeds are about 40 percent of free-flow speed.

Level of Service E is characterized by significant delays and average speed of one third of the free-flow speed or less. Such operations are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections and inappropriate signal timing.

Level of Service F characterizes arterial flow at extremely low speed from less than one-third to one-quarter of the free-flow speed. Intersection congestion is likely at critical signalized locations with long delays and extensive queuing.

The transportation policy for Whatcom County is established at the LOS of C (i.e., vehicle traffic counts at 70% to 80% of capacity) for all roads that are not within cities or urban growth areas. This

results in a v/c ratio of .75 during p.m. peak hours. The policy for some of the cities and urban growth areas is LOS D (i.e., vehicle traffic counts at 80% to 90% of capacity). Due to size, population, large employers, and commuter traffic, Bellingham has a LOS of E (i.e., vehicle traffic counts at 90% to 100% of capacity) for its streets. There are also 14 arterial streets and intersections that are already beyond capacity at p.m. peak hour but have severe constraints for improvement. These unique streets and intersections have a LOS of F. Some additional arterial streets and intersections identified in the Bellingham Comprehensive Plan Transportation Element are forecast to reach LOS F by 2022.

Intersection Level of Service for Motor Vehicles

A different method of determining the accepted LOS is used for intersections. This takes into account a greater number of variables than the arterial method. The Cities of Lynden, Ferndale, and Bellingham have adopted intersection LOS method.

The City of Bellingham has adopted automobile LOS "E" for both arterials segments and intersections. Intersection LOS is not part of Bellingham's concurrency calculations, but is reviewed via traffic studies required by SEPA.

Following are criteria used in the intersection method (Institute of Transportation Engineers, 2nd Edition):

Level of Service A Describes operations with very low control delay, up to 10 seconds. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B Describes operation with control delay greater than 10 and up to 20 seconds. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C Describes operations with control delay greater than 20 and up to 35 seconds. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D Describes operations with control delay greater than 35 and up to 55 seconds. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E Describes operations with control delay greater than 55 and up to 80 seconds. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of Service F Describes operations with control delay in excess of 80 seconds. This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, v/c with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Bicycling Level of Service

Engineering standards for roadway capacity for motor vehicles are based on systematic vehicle counts. Roadway widths, speed limits, and design of intersections are components in calculation of Level of Service, but these measurements are appropriate for motor vehicles

and are less appropriate measurements for cycling. A similar measurement and evaluation system for cycling transportation could offer a basis for decisions about when and where to construct changes to the walking and bicycling transportation network.

Level of Service standards for bicycling have been developed to offer a measure by which facilities could be ranked and construction priorities could be established. Level of Service for bicyclists measure different characteristics than capacity and speed. Bicyclists may be well served by a low traffic shared roadway lane in a downtown location but may benefit from a wide shoulder in a higher speed area. Planners, engineers and policy makers can make more efficient investment decisions when measurements become available through a cycling-specific Level of Service calculation.

Walking Level of Service

The 2011 update of the federal Highway Capacity Manual includes a Multi-modal Level of Service rating system that similarly rates facilities for quality of the walking environment. Existing infrastructure can be evaluated based on the presence or absence of these features. Planning and Complete Streets policies can prioritize locations for improvement based on target standards.

Level of Service for State Highways

The Whatcom Council of Governments sets LOS standards for state highways of regional significance which are also referred to as non-highways of statewide significance (SR 11, 542, 544, 547, and 548). The Whatcom Council of Governments set LOS during the peak hour for urban roads at D and for rural roads at C. WSDOT, in consultation with local governments, sets LOS standards for highways of statewide significance (I-5, SR 9, SR 20, SR 539, SR 543, and SR 546).

Transit Level of Service

The WTA strategic plan establishes standards for transit service in the region. Regional and local jurisdictions may refer to WTA strategic plan rather than defining their own LOS standards for transit services.

City of Lynden's Level of Service

As part of the City's 1994 Comprehensive Plan, LOS C was adopted by the City for weekday peak hour traffic on roadways within the City limits. A standard of LOS D was adopted for intersections with the two state highways (Guide Meridian and Badger Road) within the City.

City of Ferndale's Level of Service

The City of Ferndale established intersection LOS, as follows:

- **Traffic Signals, Roundabouts, and All-Way Stop Controlled Intersections** – LOS C or better based on overall average delay per vehicle.
- **Unsignalized Two-Way Stop Controlled Intersections** – LOS D or better for worst traffic movement.

The City of Ferndale generally utilizes an intersection Level of Service for automobiles, except along four primary corridors within the City: Main Street/Axton Road, Slater Road, Grandview Road, and Vista Drive. Along these corridors, the average weekday pm peak hour travel speeds are determined and compared against the posted speed limit. LOS C has been adopted throughout the City. For areas measured by corridor travel time, this LOS equates to approximately 50% of the posted speed limit, although sub-segments within the corridor may be allowed to fall to approximately 40% of the speed limit, provided that the overall average maintains an LOS C.

Whatcom County Level of Service

The Whatcom County Comprehensive Plan sets an LOS of 0.75 weekday peak hour volume/capacity on collectors and arterials outside urban growth areas, except for designated primary routes, for which an LOS of 0.90 is established. For County collectors and arterials within urban growth areas, the LOS is set at 0.90. The LOS standard can be reduced for a development in urban growth areas if the development provides non-motorized facilities or access to a transit stop within one quarter mile. The County also sets an LOS standard for the Lummi Island ferry: 513 passenger trips annually per capita Lummi Island population.

Bellingham's LOS and Multimodal Transportation Concurrency Program

From June 2007 to January 2009, Bellingham Public Works transportation planners worked to fundamentally change Bellingham's level of service (LOS) standards from auto-centric to multimodal to further support Urban Villages and infill land use policies in the Land Use Element and multimodal transportation policies in the Transportation Element of the Bellingham Comprehensive Plan. BMC 13.70 now measures the availability and adequacy of facilities and service for the four major modes of mobility; pedestrian, bicycle, public transit, and motorized vehicles, throughout Bellingham's transportation network. In recognition of its innovative approach and contribution to furthering the goals of the Washington's Growth Management Act, Bellingham's Multimodal Transportation Concurrency Program received the American Planning Association/Planning Association of Washington Award for Transportation Planning in Washington State in November 2009.

Bellingham's Comprehensive Plan Transportation Element adopts the following LOS:

TP-11 Establish Level of Service (LOS) standards for a range of multimodal transportation modes to identify deficiencies and need for improvements.

Bellingham's adopted LOS standard is "**Person Trips Available by Concurrency Service Area**" based on arterial and transit capacity for motorized modes and on the degree of network completeness for pedestrian and bicycle modes, as listed below. The individual thresholds for each transportation mode available in each Concurrency Service Area are listed in Table 1 of BMC 13.70 Multimodal Transportation Concurrency requirements.

Motorized Transportation Modes

- **Arterial Streets:** Peak Hour LOS Person Trips Available (PTA) during weekday p.m. peak hour based on data collected at designated Concurrency Measurement Points for each Concurrency Service Area;
- **Transit:** Determine seated capacity, measure ridership, and equate to person trips available via public transit service during weekday p.m. peak hour based on data collected at designated Concurrency Measurement Points for each Concurrency Service Area;

Non-motorized Transportation Modes

- **Bicycle:** Credit person trips according to degree of bicycle network completeness for designated system facilities/ routes for each Concurrency Service Area;
- **Pedestrian:** Credit person trips according to degree of pedestrian network completeness for designated system facilities/routes for each Concurrency Service Area; and

- **Trails:** Credit person trips according to degree of bicycle and pedestrian network completeness, where trails serve a clear transportation function for a Concurrency Service Area.

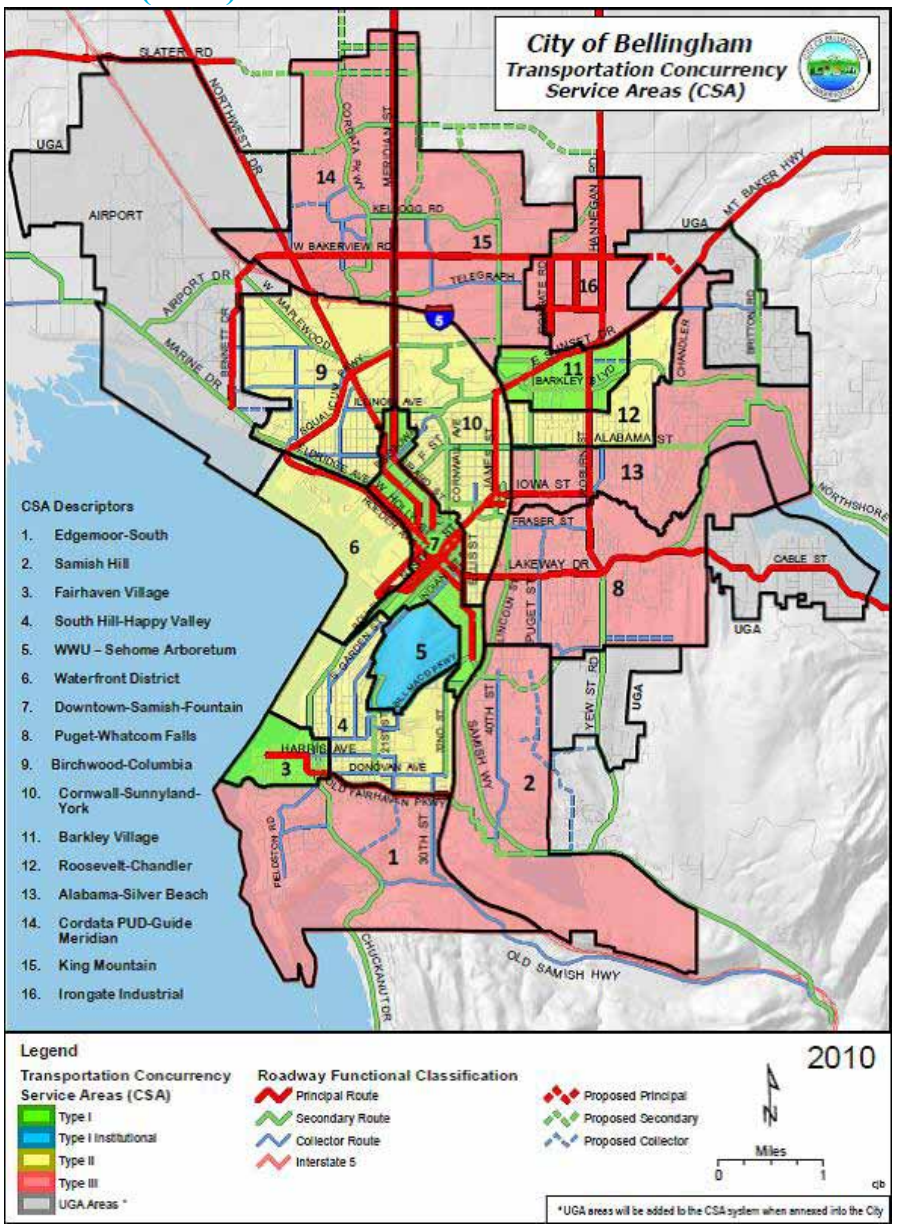
Bellingham is divided into 16 Concurrency Service Areas (CSA) classified into Types 1, 2, or 3 according to location, land use environment, and availability of multimodal transportation modes.

The intent of BMC 13.70 Multimodal Transportation Concurrency is to further implement the multimodal transportation policies of the Transportation Element and the infill land use strategies of the Land Use Element. Consistent with Washington's Growth Management Act and the Bellingham Comprehensive Plan, the Multimodal Transportation Concurrency methodology promotes infill development where the greatest degree of multimodal transportation facilities are already available or have funding secured for construction.

Concurrency Service Area (CSA) Classifications

Type 1 CSA *(Green)* are Urban Villages with adopted Master Plans (Downtown, Old Town, Samish, and Barkley) or active planning processes leading toward the adoption of a Master Plan (Fountain). Type 1 CSA are characterized by a high percentage of pedestrian and bicycle facilities, high frequency transit service, and higher density land uses with a good mix of services. WWU (CSA #5) is an exception and is classified as "Type 1 Institutional" due to the extremely high transit service and ridership, campus parking limitations, and the adopted WWU Institutional Master Plan. The combination of land use characteristics and availability of transportation alternatives in Type 1 CSAs generally creates a lower degree of reliance on the private automobile for transportation mobility.

Figure 19. Bellingham's 16 Concurrency Service Areas (CSA)



Type 1A CSA *(Blue)* are areas that have very similar transportation characteristics to Type 1 CSA's (Green), but have different land use characteristics in that they are primarily "Institutional Uses" and/or have "Institutional Master Plans (IMP)." Western Washington University (WWU-CSA 5) is the only Type 1A CSA at present, but the Saint Joseph's Hospital campus area, the Whatcom Community College campus area, and the Bellingham Technical College (BTC) campus area are all potential future Type 1A (Blue) CSA's.

Type 2 CSA *(Yellow)* are essentially transition areas between Urban Villages and outlying suburban areas. With the exception of the Roosevelt-Chandler CSA #12, Type 2 CSAs are located west and south of Interstate 5. Type 2 CSA are generally characterized by grid pattern residential streets, a moderate percentage of pedestrian and bicycle facilities, some high frequency transit service, and moderate density land uses that are primarily residential with a smaller degree of mixed uses and neighborhood commercial services. The combination of land use characteristics and availability of transportation alternatives in Type 2 CSAs generally creates a moderate degree of reliance on the private automobile for transportation mobility.

Type 3 CSA *(Red)* are located furthest from the urban core at the outer edges of Bellingham and, with the exception of Edgemoor-South CSA #1, are primarily located east and north of Interstate 5. Type 3 CSA are characterized by a low percentage of pedestrian and bicycle facilities, moderate to low transit service availability, moderate to low density land use with a small to non-existent degree of mixed uses. The combination of land use characteristics and availability of transportation alternatives in Type 3 CSAs generally creates a higher degree of reliance on the private automobile for transportation mobility.

In order to promote infill development where adequate multimodal transportation facilities already exist, higher emphasis and Person Trip Availability is awarded to Type 1 CSAs, moderate emphasis and Person Trip Availability is awarded to Type 2 CSAs, and lower emphasis and Person Trip Availability is awarded to Type 3 CSAs. This is done through weighting factors called "Policy Dials" adopted in BMC 13.70 Table below.

Table 27: Multimodal transportation policy dials applied to land use environments

	Transportation Concurrency Service Areas		
Mode	Type 1	Type 2	Type 3
Motorized			
Auto			
Mode weight factor	0.7	0.8	0.9
Transit			
Mode weight factor	1	1	0.8
Non-Motorized			
Pedestrian Percent threshold for minimum system complete	50%	50%	50%
Person trip credit for 1% greater than minimum threshold	20	20	20
Mode weight factor	1	0.9	0.8
Bicycle Percent threshold for minimum system complete	50%	50%	50%
Person trip credit for 1% greater than threshold	20	20	20
Mode weight factor	1	0.9	0.8
Multi-Use Trails Person trip credit for 1% greater than threshold	10	10	10
Mode weight factor	1	0.9	0.8

Source: City of Bellingham

Calculations to establish the number Person Trips Available for each CSA are made as follows:

Motorized Vehicle Person Trips Available

The City regularly collects vehicle traffic counts at designated Concurrency Measurement Points on arterials streets serving Concurrency Service Areas (CSA). Vehicle traffic volumes are converted to person trips using local and national data for average car occupancy rates. Motorized vehicle person trips are then used as one variable to calculate total Person Trips Available within each Concurrency Service Area (CSA). Adjustments are made based on the directional use of the corridor.

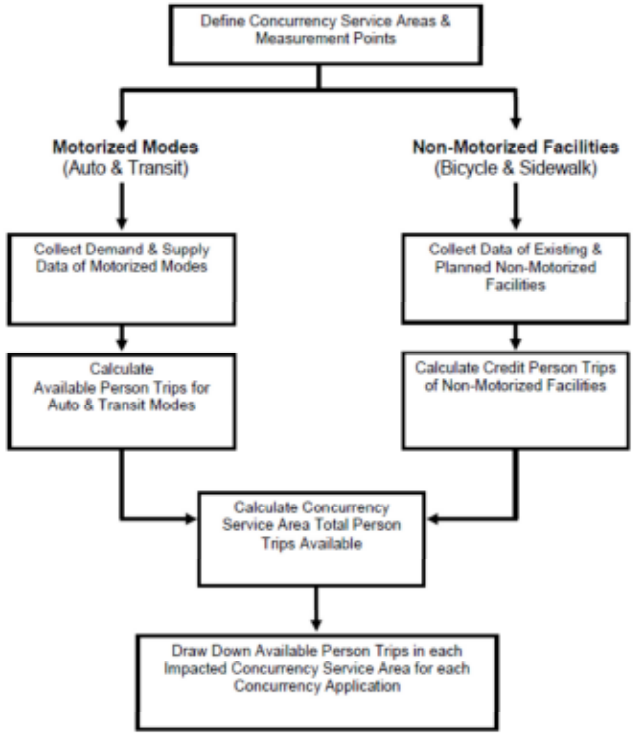
Transit Person Trips Available

Transit trips are determined by counting seated capacity available on WTA buses, measurements of ridership on selected routes at Concurrency Measuring Points, and conversion to Person Trips Available within Concurrency Service Areas (CSA). Transit person trips are used as one variable to calculate total Person Trips Available within Concurrency Service Areas (CSA). The City works with WTA to determine seated capacity on transit routes, regularly collect transit ridership statistics, and to calculate the number of transit person trips available in each Concurrency Service Areas (CSA) within the City. Adjustments are made based on the ability of the off-peak transit service to actually serve travel demands during the PM peak hour. For example, each WTA high-frequency transit "GO Line" (15-minute headways) can provide the seated capacity equivalent of up to 320 person trips per hour (40-seat bus x 4 runs per hour in each direction).

Non-Motorized Bicycle and Pedestrian Person Trips Available

Sidewalks, bicycle lanes, and, in some cases, off-street multi-use trails also provide person trips in the multimodal transportation network. Pedestrian and bicycle trips are determined by measuring the degree of completeness of selected pedestrian and bicycle routes serving Concurrency Service Areas (CSA), and converting this to credits for Person Trips Available. The City works directly with the Bicycle and Pedestrian Advisory Committee (BPAC) to determine the degree of completeness of selected pedestrian and bicycle routes serving Concurrency Service Areas (CSA). Pedestrian and bicycle person trip credits are used as one variable to calculate total Person Trips Available within Concurrency Service Areas (CSA). The City awards 20 person trip credits for every 1% of bicycle or pedestrian facility completed above 50%. As an example, assume that the existing inventory shows 45,000 linear feet of select bicycle facilities serving Concurrency Service Areas (CSA) "X". Assume that an additional 27,000 linear feet of planned bicycle facilities have been adopted in the Transportation Element and/or fully funded within the 6-Year TIP. This equates to 72,000 linear feet of "planned" bicycle network for the CSA "X". The 72,000 planned network divided by the 45,000 existing inventory results in a 62.5% complete network, which is 12.5% above the minimum 50% threshold for awarding person trip credit. At 20 credits for every 1% above 50%, this would convert to 250 bicycle person trips available for CSA "X". The more complete the bicycle network is, the more person trip credits are available.

Figure 20. Calculation of person trips available and used within each CSA



APPENDIX J:
Endangered Species Act and stormwater requirements

The effects of transportation systems, both during construction and use, have been evaluated for decades. For federal projects, the enactment of the National Environmental Policy Act (NEPA) ushered in the era of environmental review during the planning and design for transportation projects. In the State of Washington, the enactment of the State Environmental Policy Act (SEPA) required a similar review for all state and local projects. Accompanying each of these determinations are a multitude of permits, granted by numerous federal, state and local agencies, responsible for implementing other pieces of legislation (e.g., Clean Water Act, Shoreline Management Act).

In recent years the listing of Chinook Salmon and Bull Trout as endangered, has occurred under the Endangered Species Act. With these listings came a complete new set of processes to be complied with during the design and permit review for transportation projects. Following are concise reviews of: the permitting process for the ESA and stormwater standards.

Endangered Species Act

The Endangered Species Act (ESA) was enacted to protect the Nation's heritage in fish, wildlife, and plants from extinction. In addition, the habitat upon which endangered and threatened species depend may be conserved. A species is listed under the ESA when declining populations threaten its existence. The National Marine Fisheries Service (NMFS) is responsible for anadromous fish species and marine mammals, while the U.S. Fish and Wildlife Service (USFWS) is responsible for all other animal and plant species. With this responsibility is the issuance of effect determinations for each project.

There are two standards which require a transportation project to be in full compliance with ESA: project is funded in full, or partially, by the federal government; a federal permit is required (e.g., section 404 under Clean Water Act). Further, these transportation projects must obtain concurrence from one or, depending upon the species affected, both of the Services. Prior to reaching the Services, the projects are first reviewed by the state Department of Transportation.

The major step in complying with the ESA is development of a biological assessment (BA). This assessment, prepared by individuals with experience in the field, is required if listed species, or their critical habitat, may be present in the area affected by an action. Upon review of the BAs there are three types of effect determinations:

1. No effect

2. Not likely to adversely affect

3. Likely to adversely affect

Within section 7 of the ESA there is the requirement that every Federal agency provide for consultation with the applicant and appropriate permitting agencies during the review of a project. Informal consultation refers to an optional process that includes all discussion, correspondences, etc., between the Service(s) and the Federal agency, or designated non-federal representative (e.g., WSDOT). This will assist the Federal agency in determining whether formal consultation is necessary.

During informal consultation the Service may suggest modifications to the action to avoid the likelihood of adverse affects and formal

consultation. Informal consultations are necessary assistance in ascertaining whether a project will have a no effect or not likely to adversely affect determination under the ESA.

If a determination is made by the Service that an action may adversely affect listed species or habitat, a formal consultation is required. The Service shall then forward to the Federal agency a written explanation of the basis for the request. Formal consultations will be completed in 90 days, unless the Service and Federal agency agree to a longer period (see 50 CFR 402.14). The Service produces a documented opinion, referred to as a biological opinion. This opinion supports the Federal decision that this action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

The regulations and rules that implement the ESA are continually changing. As frustrating as another level of environmental can be, the lack of compliance can be costly in time and money. It is for this reason that local, regional entities become well versed in the ESA prior to project design. It is at that stage that necessary changes can be more cost effective.

Stormwater Management

Impervious surfaces have several effects on the natural hydrologic cycle; the main effects include reductions in infiltration and increases in surface runoff. Reductions in the area of pervious surfaces can also have a significantly increase runoff even when pervious surfaces are still present. Increases in runoff effectively amplify the volume and velocity of runoff, improving the likelihood of flash floods and earlier erosion.

The Water Pollution Control Act of 1948 (33 USC 1251, Chapter 26) was enacted to ensure the "restoration and maintenance of chemical, physical, and biological integrity of the Nation's waters'; however, until 1980 the focus of pollution control was directed toward point sources. A 1987 amendment to the law, the National Pollution Discharge Elimination System (NDPES), established a permitting program to control water pollution by regulating sources that discharge contaminants directly into U.S. waters, which includes storm water. The amendment required industrial, municipal, and other facilities attain permits if contaminants go directly into surface waters. Transportation projects and the corresponding impacts on stormwater faced further scrutiny after the ESA listed several freshwater and ocean dwelling species as "threatened", "endangered", or "candidate" species.

In 1991 the State of Washington ratified a highway runoff program (WAC 173-270) intended to:

1. Control highway runoff into waters of the state to the maximum extent possible

2. Establish procedures and criteria for WSDOT's highway runoff program mandated by the Puget Sound water quality management plan pursuant to chapter 90.70 RCW

3. Provide for appropriate consultation and coordination with tribes, local governments, and other interested and affected parties

This program is applicable to state highway right-of-ways within Puget Sound that are owned or controlled by WSDOT or the areas for which WSDOT has maintenance responsibility (subject to availability of funding). Authority of the program is provided in the RCW, chapters 90.48 and 90.70. Additional State regulations relevant to stormwater management may be found in the following WAC and RCW Sections:

Section 303 of the Clean Water Act (implemented the Total Maximum Daily Load), WAC 173-218 (implemented the Underground Injection Control program), sections 401 and 404 of the Clean Water Act, RCW 79.90 in conjunction with WAC 332-30 (aquatic land use authorization conditions), WAC 173-201A (State Surface Water Quality Standards), and th4 RCW 47.01.200(1).

The Washington State Department of Transportation's (WSDOT) Highway Runoff Manual M 31-16, based on evolving best management practices, was "developed to direct the planning and design of stormwater management facilities for existing and new Washington State highways, rest areas, park-and-ride lots, ferry terminals, and highway maintenance facilities throughout the state". These projects include: stormwater planning, construction of stormwater pollution prevention, source control, preservation of natural drainage patters, runoff treatment, flow control, wetland protection, basin/watershed planning, operations, and maintenance (Chapter 3 of HRM). The manual, originally published in February of 1995, has undergone many revisions that reflect the increasing standards of stormwater management.

Information on ESA-listed species and their habitat, as well as stormwater design standards, is changing quickly. This includes the updating of WSDOT's Runoff Manual as well as the Department of Ecology's recently updated Stormwater Management Manual for Western Washington. Most local governments are not in position to have fish biologists and policy analysts to keep track of every change. For this reason, it is important for local governments to be inquiring with WSDOT environmental staff early in the design of a transportation project.

APPENDIX K:
Financial assumptions

This report documents the process used to consult with local government agencies and WSDOT regarding year of expenditure and forecast methodologies. It also describes the data sources and calculations selected as a result of the consultation process.

1. Financial assumption consultation

Whatcom Council of Governments (WCOG) staff used transportation revenue and expenditure data collected by the Washington Department of Transportation's (WSDOT) Economic Analysis Unit (EAU) from local jurisdictions and transit agencies. A methodology to use the revenue and expenditure data forecast future values was created in consultation with the EAU staff.

WCOG staff presented the financial methodology to the Transportation Technical Advisory Committee (TTAC) along with the spreadsheets and formulas for their review. This process involved several months of exchanges between the TTAC and jurisdiction budget managers. Consultation included reviewing the base-year revenue and expenditures for each category and comparing EAU values with jurisdiction's internal records. Some of the jurisdictions also had forecast growth rates for some of the revenues and expenditures. Also, new funding sources not accounted for in the past such as Transportation Benefit Districts were considered in the forecast. This will be discussed latter in the document.

2. Year of Expenditure (YOE) methodology

The current transportation bill (SAFETEA-LU) requires that metropolitan transportation plans use an inflation rate to adjust year of expenditure dollars, based on reasonable financial principals and information, developed cooperatively by the MPO, States, and public transportation operator. The expenditure and revenue YOE methodology is described below.

Expenditure Forecast

WCOG staff used the WSDOT annualized highway construction cost index forecast as an inflation rate regarding future growth in expenditure.

Revenue Forecast

Property Taxes: Growth for Property Tax was determined using the state Property Tax forecast by the Economic and Revenue Forecast Council. They do not have long-term forecasts. The Forecast Council June forecast for FY 2011 determined a growth rate of .20%, FY 2012 growth rate of 2.3% and a FY 2013 growth rate 2.6%. The remaining years were calculated at the same rate as FY 2013 at 2.6% until 2032.

Federal Funds: WSDOT has federal funding forecasts published each quarter. The June 2011 federal funds forecast for obligation authority runs to 2027. The remaining years (2028 thru 2032) growth rate were kept at the same rate as year 2027.

Motor Vehicle Fuel Taxes: WSDOT forecasts motor vehicle fuel tax each quarter (used the June 2011 Report). The forecast for fuel taxes distributed to local cities and counties were used for this analysis.

Sales Taxes: WSDOT annually completes a sales tax forecast for local transit districts and the Economic and Revenue Forecast Council does a short-term forecast of taxable sales. WSDOT releases long-term sales tax forecast in November each year so the last forecast was released on November 2010. The forecasted growth rate for sales taxes in the long term is estimated at roughly 4.5 percent beginning FY 2014.

Special Assessments: The September 2011 Long Term Consumer Price Index predicts an inflation rate of about 2 percent per year. A growth rate of 2 percent per year was applied to most jurisdictions.

Other Local Revenues (General Fund, Local Road User Tax, Other State Funds, and Bond Proceeds): The September 2011 Long Term Consumer Price Index predicts an inflation rate of about 2 percent per year. A growth rate of 2 percent per year was applied to all jurisdictions.

Ferry Tolls: The ferry toll numbers from the County (operator of the Whatcom ferry to Lummi Island) for years 2009 and 2010 came from their published and audited financial statements. The County forecasted year 2011 and applied a 1% annual growth rate through 2032.

3. Forecast methodology

City and County Forecasting Methodology

Jurisdiction's constrained revenue forecasts were determined by multiplying the total future revenues for each jurisdiction by the percentage of historic expenditures comprised of construction and preservation projects.

The forecast base-year values are the average of expenditure and revenues by categories for year 2005 through 2009. There are exceptions to the base year and the YOE methodology for each jurisdiction. These exceptions were determined in consultation with finance managers and engineers for each jurisdiction and were based on their knowledge of the organization's financial allocation.

Whatcom County:

Calendar year 2009 was used as the starting point for property taxes. Per the county, property taxes were held flat until year 2015.

The ferry toll numbers from the county for years 2009 and 2010 came from their published and audited financial statements. The county forecasted from 2011 and recommended a 1% annual growth rate through 2032.

As per county request, Traffic Policing (Expenditure) was held constant from 2009 through 2032.

Bellingham:

City of Bellingham has a Transportation Benefit District in place for years 2012 through 2020 that will generate estimated $3,000,000 per year. That amount was applied both on the Expenditure ($1,000,000 per year in Construction Category and $2,000,000 per year in Maintenance Category) and Revenue ($3,000,000 per year in the Special Assessment Category).

City of Bellingham requested that WCOG use about $6,000,000 as the base number for construction and $2,000,000 for preservation. WCOG staff used 2006 values as the starting point because it came closest to the $6,000,000 per year for construction.

Other Local Receipts include sales tax revenue and other sources. WCOG staff used Growth factor= Average of Sale tax Growth rate of 4.5% and Average CPI of 2.0% for a total average of 3.25%.

WCOG used a 3.25% growth factor per year for Other Local Receipts in the revenue category.

Everson:

Below are construction projects added to the expenditure and revenue spreadsheet that were not accounted for in the states database. These projects were added under construction (Expenditures) and under Other Local Receipts (Revenues), Other State Funds (Revenues), and Federal Revenues (Revenues). The base was an average of years 2005 through 2009 with the new added numbers below.

Year	Local	State	Federal	Total	Construction Projects
2006	0	23,570	151,021	174,591	Bay to Baker Trail
2007	0	12,182	78,053	90,235	Bay to Baker Trail
2008	44,150	35,320	509,192	588,661	Mission Road Phase 2
2009	4,635	3,708	53,454	61,797	Mission Road Phase 2

Ferndale:

Used a 2% annual growth rate on the property tax category.

Used a 2.5% annual growth rate on the sales tax category.

Used Year 2009 as the base for the forecast.

Apply $1,000,000 per year both on the expenditure (Construction) and revenue (Other Local Receipts) to account for a policy change in impact fees that will generate additional funds.

Apply $300,000 per year (Years 2012 thru 2022) for preservation projects and $185,000 per year (years 2012 thru 2022) for construction projects to account for the newly passed Transportation Benefit District. This is also reflected under the Special Assessment category in the revenue side of the table.

Lynden:

City of Lynden requested a base construction amount of $3,000,000 in year 2011. WCOG staff started year 2011 using the year 2006 revenue and expenditure values provided by EAU because it also had a construction total of about $3,000,000.

WSDOT Forecasting Methodology

WCOG staff worked with WSDOT to obtain and develop the fiscally constrained numbers. WSDOT Economic Analysis unit submitted the 2010 legislative project list. WSDOT Mount Baker office refined the project list by adding unfunded projects to complete the state's 20 year fiscally constrained forecast. The project list includes projects that might not have funding until 2015. The list includes projects from the 2005-2007 biennium through the 2013-2015 biennium. The 2013-2015 biennium as the starting point for the forecast. The forecast methodology used to calculate construction and preservation costs is explained below.

Convert the state fiscal year 2013-2015 to calendar year. To determine year 2013 numbers first take a quarter (.25) from the 2011-2013 and a quarter from the 2013-2015 and add the two. To determine year 2014 numbers divide by half (.5) the total number in the 2013-2015 biennium. The forecasting starts at year 2013 and ends on year 2032.

WSDOT has a motor vehicle fuel tax forecast each quarter. The June 2011 report which forecast to year 2027 was used in the forecast. Growth rate of the Motor Vehicle Fuel Tax distribution to cities and counties were used to calculate year of expenditure. The same growth rate applied in year 2027 was used in the remaining forecast years (2028 thru 2032).

The state highway maintenance cost for Whatcom County was based on the proportional amount of 11-13 statewide maintenance budget ($382M) based on Whatcom County population (3%) plus anticipated increases based on need. This calculation was conducted by WSDOT.

WTA Forecasting Methodology

The financial reports of WTA were used to calculate year of expenditure capital revenue to year 2032. The base year was calculated by averaging years 2000 thru 2009 federal and state capital revenue.

Federal capital forecast was calculated by using the WSDOT federal funds forecast which is published each quarter. The June 2011 federal funds forecast for obligation authority was used through 2027 and kept the same rate after that for the remaining years.

State capital forecast was calculated by using the Implicit Price Deflator-Personal Consumption September 2011 forecast.

The Regional Transportation Plan needs to include a list of capital transit projects that are fiscally constrained. The WTA calculation methodology mentioned above determines the fiscally constrained number for transit capital projects.

APPENDIX L:
Resource agency review

Federal and state resource agencies, including the departments of archeology, ecology, fish and wildlife, natural resources, transportation, and the Northwest Clean Air Agency, the Army Corps of Engineers, the U.S. Environmental Protection Agency, and the National Oceanic and Atmospheric Administration were given the opportunity to review the major capital projects within the metropolitan planning area in the regional transportation plan as part of the consultation process. The capital projects in the transportation plan are fiscally constrained and predicted to be complete by year 2032. These projects were highlighted both in spatial and tabular formats with brief descriptions and submitted to resource agencies. As a result, resource agencies provided comments on projects with potential environmental impacts to Whatcom Council of Governments.

United States Environmental Protection Agency review

Thank you for sending these documents! With one of our GIS specialists, I was able to take a look at the projects with the red dots with overlays for land cover (satellite image or aerial photo) and wetlands and streams. We also looked at Toxic Release Inventory (TRI) data. We don't have WDFW's Priority Habitats and Species (PHS) data to overlay. Based on this limited, cursory view of the project areas, three projects surfaced as having notable potential for resource concerns. They are:

West Horton Secondary Arterial Extension, Phase 1: The project vicinity appears to include Cordata Park and its forested habitat. Freshwater emergent wetlands may be within or near the project area. Preliminary potential concerns/impacts include forest habitat loss and fragmentation, wetlands impacts, and the incremental cumulative loss of forest cover and increase in impervious surface. If this road would impact a public park, and you are planning to seek federal funds, permits, or other approval to construct the project, then Section 4(f) would apply, which requires that public parks, historic properties, recreation areas, and wildlife refuges be avoided, or, if impacts are unavoidable, that the impacts would be *de minimus* in nature. Minimizing the clearing of native vegetation and maintaining or providing for habitat connectivity for resident wildlife species and natural hydrology and ecological processes would be important. Efforts should first be devoted to avoiding and minimizing these and other potential impacts, then to mitigate any unavoidable impacts. For example, if there is no alternative to building a new stretch of road through this area, it would be important to incorporate wildlife crossings, such as, enlarged culverts or other design, to make the roadway permeable to wildlife movement, enable fish passage, and provide for natural stream flows, channel form and function. Species needing terrestrial habitat connectivity may include but are not limited to amphibians and reptiles, small, medium, and large mammals, e.g., deer.

East Bakerview, Phase 1 Principal Arterial Improvement: Initial concerns in this project area are potential impacts to intact forest, freshwater forested wetlands, riparian areas and stream corridor. The need here is to avoid these natural areas, maintain the habitat corridor/landscape linkage potential of this habitat, and maintain overall connectivity and function within this habitat complex. Similar guidance as discussed for the first project above would also apply to each of these three projects.

Orchard Street Secondary Arterial Extension: This project area appears adjacent to or crossing I-5. Notable resource concerns here include the potential for impacts to and/or fragmentation of intact forest, forested wetland, freshwater emergent wetland, and/or the freshwater pond.

These observations are rough first impressions based on limited data and no project information other than the red dot on the map. We also cannot say that none of the other proposed projects, whether they are marked as black or red dots, have no substantial resource impacts. We just don't have the information to make that determination. I have also forwarded your request and documents to Krista Rave-Perkins of our Aquatic Resources Unit for possible comment in addition to what I am submitting.

No additional repsonses have been received.

APPENDIX M:
Addendum to the 2012 Whatcom Transportation Plan

A draft plan was available for public comment at least two weeks prior to a public hearing held by the Whatcom Transportation Policy Board. Access to the draft plan was available through the Whatcom County Library system, on-line at the WCOG web site, wcog.org, and a physical copy was available at WCOG offices. The comment period ended with the public hearings June 26, 2012, after which, the plan was adopted in it's entirety. All public access to the draft plan was consistent with the adopted WCOG Public Participation Plan.

During the open comment period for the Whatcom Transportation Plan, no comments were received from the public at large. There were previous comments from Washington State Department of Transportation, and from the Federal Highway Administration. Those comments and WCOG staff responses to them are included in the following pages of this addendum.

June 8, 2012

WCOG Responses to WSDOT Comments on the WCOG 2012-2032 Metropolitan - Regional Transportation Plan

WCOG Staff Response: For record, the following WSDOT comments are based on an early draft of the plan that was submitted early at the request of WSDOT and FHWA. Prior to receipt of these comments , substantial additional information and edits were added to the plan, many of which addressed the comments outlined below, prior to receipt of them. This is true for both WSDOT and FHWA comments.

Background

The WSDOT Northwest Region Mount Baker Office previously coordinated and compiled comments from the Aviation Division, the Community Transportation Planning Office, and Capital Program Development and Management Division and provided written comments on May 2, 2012 (attached to email).

WCOG Staff Response: Mt. Baker Office compilation of comments was responded to soon after being received. Some comments were incorporated, some were not due to applicability and excessive information contravening the concise nature of the plan. This information was provided to the Mt Baker Office.

WSDOT concludes that the draft WCOG 2012-2032 Metropolitan Transportation Plan, substantially meets the federal and state regulations for developing a long-range transportation plan, for both the metropolitan transportation planning area and the regional transportation planning area. The comments below highlight two areas that the Transportation Planning Office requests WCOG to consider prior to final adoption, on June 27, 2012.

Comments

FTA Alternatives Analysis

23CFR450.322(f) (2)

In addition, the locally preferred alternative selected from an Alternatives Analysis under the FTA's Capital Investment Grant program (49 U.S.C. 5309 and 49 CFR part 611) needs to be adopted as part of the metropolitan transportation plan as a condition for funding under 49 U.S.C. 5309;

Issue: This could affect transit funding within the region and we could not find this in the draft MTP.

WCOG Staff Response:

Transit Alternatives Analysis is required only in the instance of a New Starts situation. This program is not likely to be considered before the next plan update. Therefore, Alternative Analyses are not required of WCOG in the foreseeable future.

Project Detail

23CFR450.322 (f) (6)

In all areas (regardless of air quality designation), all proposed improvements shall be described in sufficient detail to develop cost estimates.

Issue: Some, but not all, of the project descriptions appear to be lacking "sufficient detail". This is a possible issue with federal approval of TIP/STIP projects.

Suggestions

For the next MTP update, consider extending the planning horizon. While 2012-2032 does meet the 20 year requirement, if there is any delay in adopting the plan the planning horizon can fall short. Additionally, we recommend rounding the years in five year increments, e.g., 2035.

WCOG Staff Response: Noted

Chapter 2, The Setting: This chapter doesn't flow and is difficult to follow. It isn't clear to the reader what the purpose is, i.e., how it influences the rest of the plan. Consider limiting the data, charts, and graphs in this chapter and focus on presenting a clear description of the methodology, analysis, results, and how this process influenced the MTP goals and strategies and projects. We also suggest moving most of the charts and graphs to an appendix.

WCOG Staff Response: The Settings chapter has been substantially revised. This chapter, however is intended to paint a picture of the region from a transportation perspective, not to analyze or establish methodologies. Those activities are portrayed in the appendices.

WCOG Responses to FHWA Comments on the WCOG 2012-2032 Metropolitan - Regional Transportation Plan

WCOG Staff Response: For record, the following FHWA comments are based on an early draft of the plan that was submitted early at the request of WSDOT and FHWA. Prior to receipt of these comments, substantial additional information and edits were added to the plan, many of which addressed the comments outlined below, prior to receipt of them. This is true for both WSDOT and FHWA comments.

General

The statement "this plan meets Federal and State transportation planning requirements…" needs to be substantiated. The MTP must demonstrate how and where it meets the federal planning requirements. Perhaps the easiest method is to include a table that specifically identifies the provisions of 23 CFR 450.322 and where in the MTP document the requirements are addressed.

An example of where there might be a shortfall: the MTP is required to include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand. The MTP describes current status reasonably well, but there is no analysis shown that demonstrates that future improvements will comply with the regulatory requirement to address future demand. In other words, the MTP does not explicitly show that the project listing will provide a future transportation system that sufficiently meets the needs of the region.

Another example is that the MTP does not sufficiently discuss the types of environmental mitigation activities that may be necessary as a result of a build scenario.

WCOG Staff Response: The referenced statement is of the WCOG's belief that the plan does meet requirements. Plans, as well as CFR's, are subject to interpretation. Short and long range strategies/ actions are exemplified in Appendix H. Short range projects are those identified for implementation between 2012 and 2017. Long range projects are those listed for 2017 – 2032. Applicability to plan strategies is identified under "Project Type" and relevance to "State Legislative Transportation Goals."

The MTP does not aggregate information sufficiently to describe the issues facing the region that result from the metropolitan area or that affect the metropolitan area.

WCOG Staff Response: Issues facing the region are spelled out in the Whatcom's System section.

The WCOG MPO is advised that the Transportation Improvement Program must be consistent with the newly adopted MTP.

WCOG Staff Response: Noted

Federal Requirements

Under the Section describing Federal planning requirements there are a number of specific items not listed while the last two IMTC and Smart Trips are not federally required.

WCOG Staff Response: There is no requirement, nor is it additive, to list all pertinent CFR's. The eight planning factors establish planning fundamentals and provide a baseline for the regulations.

The WCOG is advised to ensure that statements such as "CFR law also requires MTP/RTPO goals must be coordinated…" are accurate. The CFR does not discuss conflicts between MPO/RTPO goals. Further, the statement that "consistency is a requirement for all transportation plans beginning with the statewide transportation plan…" does not accurately describe the relationship between metropolitan and statewide plans (23 CFR 450.214(f) – within each metropolitan area of the State, the long-range statewide transportation plan shall be developed in cooperation with the affected MPOs).

WCOG Staff Response: the referenced terminology is extracted from 23 CFR 450.306(d)

Review of the draft document reflects a passive role that does not permit the MPO to exercise the authority and responsibility intended under 23 CFR 450. The "strategies" included in pages 8 – 13 portray the WCOG as a bystander whose responsibility is to "encourage" other agencies to perform certain activities rather than to conduct those activities. Statements such as "WCOG encourages

maximizing the safety and security of transportation facilities.." need to be substantiated with actions that the WCOG intends to undertake during the plan time frame to make sure that safety and security of the transportation system within the metropolitan area is considered in the decision making. This can be done by establishing measurable objectives for safety/security to be used in selecting projects for programming and implementation.

WCOG Staff Response: WCOG is not a TMA. WCOG does have authority to sub-allocate STP-R funds, which it does through a competitive process. Safety and security are among the criteria used to score projects proposed under this program. Any other federal funds used for transportation project implementation within the County are not under WCOG control, other than through "encouragement." As identified in the plan, WCOG also participates in border –related security measures by convening entities with security responsibility and authority and "encouraging" them to apply measures in ways that preserve transportation efficiency.

Strategy #4 states that "WCOG will work with regional jurisdictions and agencies to provide balanced access to transportation facilities…" How will WCOG do this?

WCOG Staff Response: This is a question, not a comment, but the answer is: by encouraging them to do so.

Strategy #8 states that Whatcom is an "affected county." Describe what this is and how it influences the MPO function.

WCOG Staff Response: As stated in the respective paragraph "under WA State Commute Reduction Law."

Strategy #1 and strategy #13 appear to be the same. Describe the difference or consolidate as one strategy.

WCOG Staff Response: Education is entirely different from participation. This seems self-evident.

The Setting

It would be helpful to make sure that the text discussion identifies the purposes and contents of the information in the tables.

WCOG Staff Response: Noted

Tables 1 through 8 are helpful in identifying socioeconomic and demographic indicators, but they are specific to jurisdictions within the WCOG. The information needs to be summarized and described for the metropolitan area.

WCOG Staff Response: The plan is a combined MPO RTPO, all jurisdictions are considered.

The VMT and VHT discussion on page 21 appears to be trying to justify future improvements by showing large percentage changes in some jurisdictions. However, on closer inspection the numbers may tell a different story. Changes in VMT and VHT taken by themselves portray a potentially drastic situation (although 89% change in VHT in Blaine might be reasonable considering the 82% increase in employment and 111% increase in population – see below). In order to be meaningful and provide an accurate picture for the metropolitan area, indicators should be normalized so that valid comparisons can be made. Where possible, annual percentage rates should be used and indicators should be shown on a per capita and per employee basis. Using table 1 as an example:

Household population – annual change is 1.2%

Employment – annual change is 1.4%

Daily VMT – annual change is 1.1%

Daily VHT – annual change is 1.7%

The analysis would be made stronger by answering the following questions: How are the "indicators" affecting each other? Are these rates of change reasonable? Are there particular causal relationships that can be determined? Assuming the no-build

scenario for the time frames and given the annual rates of change, what, if any improvements are necessary and why?

Again from table 1:

Daily VMT per capita in 2008 is 20.06

Daily VMT per capita in 2032 is 19.67

Daily VHT per capita in 2008 is 0.54 (32 minutes)

Daily VHT per capita in 2032 is 0.60 (36 minutes)

Daily VHT per employee in 2008 is 0.80 (48 minutes)

Daily VHT per employee in 2032 is 0.87 (52 minutes)

Even though Daily VMT is rising, on a per capita basis it is falling. Daily VHT per capita is increasing but the magnitude of that change is substantially less than what is represented in the table. What do these numbers demonstrate? How does this information influence the transportation system? Again, assuming the no-build scenario for each period, are improvements needed?

In the VMT/VHT discussion on page 21, the City of Blaine is used to demonstrate an extreme situation for the region. Normalizing the indicators (table 2) provides a substantially different picture:

Daily VMT per capita in 2008 is 16.98

Daily VMT per capita in 2032 is 13.57

Daily VHT per capita in 2008 is 0.41 (25 minutes)

Daily VHT per capita in 2032 is 0.37 (22 minutes)

Daily VHT per employee in 2008 is 0.66 (40 minutes)

Daily VHT per employee in 2032 is 0.69 (41 minutes)

WCOG Staff Response: Noted. This section has been substantially edited in the current draft.

Please clarify the information that Table 12 is showing – is it for the no-build? Is it in minutes? Is it per employee?

WCOG Staff Response: Noted. The adjacent Figure 4 stipulates minutes. The table reflects no-build as stated in the Travel Demand Forecast text associated with all figures and tables except the figure s 8, and 9.

On page 21 there is the statement "because job growth can increase VMT, the region's VMT is expected to rise by…" Job growth can be one cause of increase in VMT, but there are others, such as where people live in relation to the jobs. The metropolitan plan must identify what is causing VMT growth in the region.

WCOG Staff Response: Noted.

Review Figure 6 to make sure that the graph represents "daily" VHT.

WCOG Staff Response: VHT numbers are extracted from the WCOG TransCAD model. They are correctly labeled "Daily."

The "regional lifestyle trends" discussion mentions "unconventional methods of independent travel" but doesn't talk about what those are.

WCOG Staff Response: The current draft does not include the quoted language.

Whatcom's System

Walking and bicycling are identified as accounting for substantial percentages of all trips but they are not itemized in tables 1 through 8.

WCOG Staff Response: Noted

Programs & Projects

Where did the "Fiscally Constrained Projects" list come from?

The only demonstration of any "problems" with the transportation system is shown in Figures 7 and 8, which represent the "no-build" scenarios. What is the build scenario? Where is it identified? Was there more than one scenario for the region? If so, how were they compared? What analysis led to the selection of the projects in the list? What demonstrates that the projects in the list will solve the problems identified in Figure 8?

WCOG Staff Response: V/C is compared graphically in figures 8, and 9, and sourced from model runs.

Page 42 – how is the SHSP being implemented in the Whatcom MPO?

WCOG Staff Response: By WSDOT.

Page 42 – "Pedestrian safety can be increased by addressing pedestrian needs…" "WCOG works with member agencies to examine means for improving the regional safety record." What is WCOG doing? What projects/programs demonstrate that pedestrian safety is important? Are safety project prioritized in the TIP?

WCOG Staff Response: WCOG has authority only cooperate with entities having jurisdiction over, and responsibility for, their own road systems. "Working with" is equivalent to "cooperate."

Page 43 – "WCOG manages the BC-WA Protocol for Binational Interagency Communication…" What does it mean to "manage the protocol?"

WCOG Staff Response: Manage, in this instance, means administer, or in other words, track, monitor currency and encourage use of the protocol.

Page 43 – "WCOG continues to work with partner agencies to ensure proper attention is given to address security needs." How does WCOG do this?

WCOG Staff Response: By working with border enforcement entities, primarily CPB.

Financial Planning

Page 52 – "Federal funding will continue to play a significant role in the renewal and expansion of highway and transit infrastructure both nationwide and in this region." 23 CFR 450.322(f)(10)(iv) states, "In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23 U.S.C., title 49 U.S.C. Chapter 53 or with other Federal funds; State assistance; local sources; and private participation." The WCOG MPO is advised to document the financial component of the MTP using Federal, State, Local, and Private revenue sources as identified in the regulation. Federal revenues through titles 23 and 49 are not local jurisdiction revenue sources.

WCOG Staff Response: Noted, although once allocated to, and obligated by, local jurisdictions, federal dollars do become one component of local transportation funding sources.

The MTP does not describe how project/program costs were derived. Fiscal constraint cannot be adequately determined unless the methodology used to estimate the costs for all projects is clearly defined.

WCOG Staff Response: This information has been added to the most current plan draft as Appendix K available at wcog.org or http://resources.wcog.org/planning/2012WTP_K.pdf