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# **Transportation Report on Annual Concurrency (TRAC)**

May 2008

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## EXECUTIVE SUMMARY

The Transportation Report on Annual Concurrency (TRAC) is a monitoring and reporting system that Public Works staff uses to inform the City Council and the public of which arterial streets are experiencing traffic congestion, nearing LOS thresholds, and where development proposals may require transportation mitigation to meet Bellingham's Transportation Concurrency requirements. The goal of the TRAC is to provide an assessment of the existing multimodal transportation system to help inform the City Council in making funding decisions for the City's annual 6-Year Transportation Improvement Program (TIP). The TIP must be consistent with the Transportation Element of the Comprehensive Plan and must be adopted by July 1 each year.

Past TRAC documents have reported the status of both existing and 6-year forecasts of transportation concurrency conditions based on volume-to-capacity (v/c) ratio methodology that has been adopted by the City since 1994. Existing conditions are based on actual traffic counts conducted throughout the City of Bellingham, but providing the 6-year forecast requires labor-intensive manual update and examination of the City's Travel Demand Forecast Model.

The v/c ratio methodology used by the City since 1994 has many problems and will not allow the City to achieve the amount of infill desired by the community within identified Urban Villages, the City limits, and Urban Growth Area (UGA). As per City Council direction (June 4, 2007), Public Works staff is in the process of developing new methodology to measure, monitor, and report transportation concurrency conditions. ***The 2008 TRAC reports existing conditions, but does not present a 6-year forecast using the v/c ratio method because new concurrency methodology is expected to be adopted by next year.***

The 2008 TRAC contains information on the performance of Bellingham's Transportation Concurrency requirements and Concurrency Evaluation Tracking Tool (CETT). The CETT tracks expected traffic impacts from development expected to generate 10 or more PM Peak vehicle trips on arterial segments, as reported in trip distribution analyses, against the most current arterial street traffic counts and link capacities on the citywide arterial street network. If the traffic impact from a development proposal does not exceed the adopted LOS threshold, as measured by the CETT, then a Certificate of Transportation Concurrency may be issued, and the project may proceed through the normal development review process. If a development proposal is expected to exceed the adopted LOS standards, then as per RCW 36.70A.70 (6) (b), the application cannot be accepted and a permit cannot be issued unless:

- Developer reduces scope of project to lower trip generation to available capacity within adopted LOS standards;
- Developer funds or constructs capacity mitigation or funds transportation demand management strategies (Commit to public transit service via bus passes, adding bicycle and pedestrian facility capacity, connecting missing links in the bicycle and pedestrian network, etc);
- City commits public funding on 6-Year TIP to transportation system improvements to provide additional capacity on affected arterial;
- City Council adopts different LOS standard, as per Transportation Element policy TP-12, through once-per-year Comprehensive Plan amendment process.

## Summary of Findings

An overview of the TRAC findings for 2008 existing conditions indicates the following:

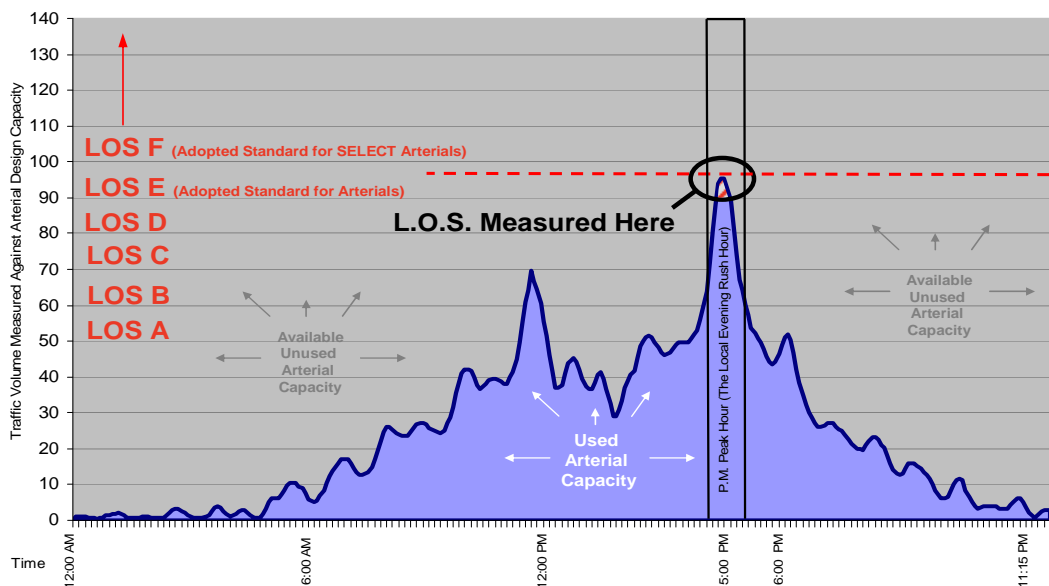
- 2008 conditions are based on the most current arterial street traffic counts available. A conservative 3% growth factor is applied to account for annual regional background traffic growth.
- In 2008, two locations are approaching the LOS standard E (v/c .901 – 1.00) threshold adopted in the Bellingham Comprehensive Plan (**See Table 1.**). Additional development and/or future background traffic growth in these areas could trigger the transportation concurrency thresholds.
  - Hannegan Road northbound between Division and Bakerview (**v/c 0.97**)
  - Old Fairhaven Pkwy westbound between 30<sup>th</sup> and I-5 southbound off-ramp (**v/c 0.98**)
- In 2008, four locations designated Highway of Statewide Significance (HSS) exceed Bellingham's adopted LOS standard E (v/c .901 – 1.00). As per RCW 36.70A.070 (6)(a)(iii)(C), HSS facilities are not subject to transportation concurrency requirements (**See Table 1.**).
- Not surprisingly, all of the locations approaching Bellingham's adopted LOS standards are major entry/exit points to the City and where City arterials intersect Interstate 5. This is consistent with the analysis and policy approach of the Bellingham Comprehensive Plan Transportation Element.
- Between January 1, 2007 and April 15, 2008, Public Works staff evaluated 35 development proposals for transportation concurrency. Since the June 15, 2006 effective date of the transportation concurrency ordinance, Public Works staff has evaluated 50 development proposals for transportation concurrency.
- To date, no single development proposal has tripped the adopted LOS standard E (v/c .901 – 1.00) and thus been denied a Transportation Concurrency Certificate, however, in 2007, the following arterial segments exceeded the adopted LOS standard E (v/c .901 – 1.00), which resulted in a moratorium on new development applications that would contribute 10 or more pm peak trips to the following arterials:
  - 1. Northwest Avenue between Interstate 5 and West Bakerview Road, and
  - 2. Lakeway Drive between Electric Avenue and the City limits
- As per GMA options (outlined on the previous page), the Bellingham City Council held a public hearing and adopted alternative LOS standard F (v/c 1.001 – 1.25) for these sections of Northwest Avenue and Lakeway Drive, consistent with the Bellingham Comprehensive Plan Transportation Element.

## Introduction to Transportation Concurrency

The Washington State Growth Management Act (GMA) requires “A transportation element that implements, and is consistent with, the land use element” (RCW 36.70A.70 (6)). GMA Transportation Element requirements include adoption of “level of service standards for all locally owned arterials and transit routes to serve as a gauge to judge performance of the system” (RCW 36.70A.070 (6)(a)(iii)(B)).

In June 2006, Bellingham adopted a newly updated Comprehensive Plan. The Transportation Element adopts level of service (LOS) standard “E” (v/c .901 – 1.00) for all arterial streets during the weekday evening rush hour, as well as the exception of 11 specific arterial street segments allowed to function at LOS standard “F” (v/c 1.01 – 1.25) due to difficult mitigation. These LOS standards, illustrated in Figure 1, are intended to provide measurable criteria to assess the adequacy of the transportation system capacity as new development is proposed.

**Figure 1. Illustration of Typical Weekday Arterial Traffic Volumes with Peak Hour**



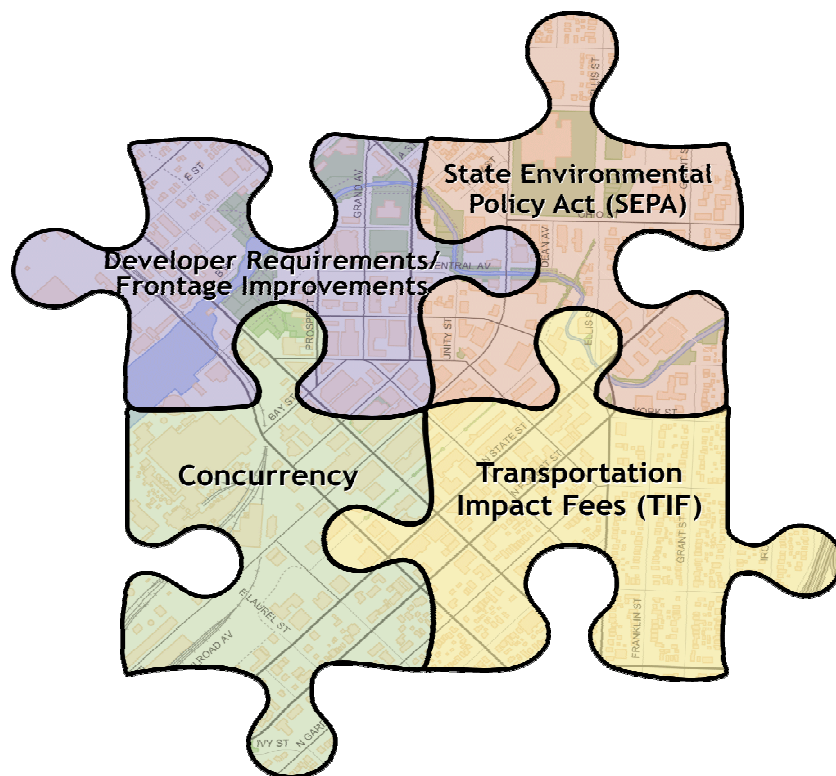
The City's adopted arterial LOS standard “E” uses a PM peak hour percent of capacity. Directional PM peak hour arterial roadway volumes are divided by the directional arterial roadway capacity to calculate the volume-to-capacity (v/c) ratio. The capacity values are based on the roadway capacity values assigned in the City's travel demand forecasting model, which have been adjusted to reflect general planning capacities based on Bellingham's adopted LOS standard “E” (v/c .901 – 1.00).

Figure 1, above, is an illustration of typical daily traffic volumes on an urban arterial street during various time periods of an average weekday. The illustration shows traffic building throughout the day, a minor peak period during the lunch hour, and a major peak period during the evening rush hour. The PM peak hour measures the heaviest 60 minutes of traffic between 4:00pm – 6:00pm and represents the greatest demand placed on the transportation system. The Figure 1 illustration also demonstrates that there is plenty of unused arterial capacity during off-peak hours. Bellingham's adopted LOS “E” (v/c .901 – 1.00) means that the City allows and expects 100% of the available arterial street capacity to be used during the evening rush hour.

GMA implementation requirements for transportation concurrency state that *“local jurisdictions must adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a locally owned transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development. These strategies may include increased public transportation service, ride sharing programs, demand management, and other transportation systems management strategies. For the purposes of this subsection (6) “concurrent with the development” shall mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years”* (RCW 36.70A.70 (6) (b)).

In February 2006, the City Council adopted the **Transportation Concurrency Management Ordinance (BMC 13.70)**, which specifically establishes a program to monitor and maintain arterial street capacity in support of the City’s land use strategy. Transportation Concurrency evaluation does not relieve development projects from requirements for SEPA review, street frontage improvements, or transportation impact fees. Figure 2, below, illustrates how the four different transportation development review “tools” fit together to provide a comprehensive transportation review and mitigation program.

**Figure 2. Components of Development Review for Transportation**



### **Bellingham Arterial Streets Subject to BMC 13.70 Transportation Concurrency**

The Bellingham Comprehensive Plan Transportation Element includes a map of all existing and planned arterial streets in Bellingham and the Urban Growth Area (UGA) that will be needed to accommodate urban levels of development, (See Figure 3., below).

As per RCW 36.70A.70 (6) (b), all designated arterial streets within the Bellingham city limits are subject to BMC 13.70, which contains the Transportation Concurrency Management requirements for all new development proposed after June 15, 2006.

### **Highways of Statewide Significance (HSS)**

The Washington State Department of Transportation (WSDOT) is responsible for setting LOS standards for Highways of Statewide Significance (HSS) and has established LOS D in urban growth areas. As per RCW 36.70A.070 (6)(a)(iii)(C) "Highways of Statewide Significance" (HSS), such as Interstate 5 and Guide Meridian (SR 539) within Bellingham, are not subject to transportation concurrency requirements.

### **Highways of Regional Significance (non-HSS)**

LOS standards for state "Highways of Regional Significance" (HRS) are based on the standards adopted by the Regional Transportation Planning Organization (RTPO) in conjunction with WSDOT. WSDOT and Whatcom Council of Governments (WCOG) have established LOS standard D (v/c .801 - .901) for state "Highways of Regional Significance" (HRS) in urban growth areas of Whatcom County and LOS standard C (v/c .701 - .801) for rural areas of the County. Bellingham has adopted LOS standard E (v/c .901 – 1.01) for the portions of HRS facilities within the City limits. HRS facilities in Bellingham include SR 542 – Mt Baker Highway and SR 11 – Chuckanut Drive/Old Fairhaven Parkway.

## Detail of Existing Conditions for 2008 TRAC Findings

The 2008 TRAC identifies arterial streets where the LOS is within or approaching the LOS standard “E” (v/c .901 – 1.01) or the Alternative LOS standard “F” (v/c 1.001 – 1.25) thresholds. The existing (2008) LOS performance of arterials was evaluated using traffic count data and pipeline trips reserved for development in the Concurrency Evaluation Tracking Tool (CETT) for current conditions through April 15, 2008.

### **Concurrency Evaluation Tracking Tool (CETT) – 2007 LOS**

The Concurrency Evaluation Tracking Tool (CETT) is a spreadsheet-based tool which is used to evaluate traffic impacts from proposed development, compare it to current traffic volumes and the established capacity of arterial streets, and determine whether adequate transportation facilities are available concurrent with the proposed development. The CETT provides a snapshot in time of the LOS available on the City’s arterial street network.

### **Methods and Limitations**

The CETT relies on the following input variables to develop short range traffic forecasts:

- **Traffic Counts** – The CETT uses the most current arterial street traffic count data available. The age of the traffic count data ranges from 2005 to the present. A growth factor of 3% is applied to older count data to be more indicative of current conditions.
- **Roadway Capacities** – Roadway capacities are based on the capacities assigned to arterial streets within the City’s travel demand forecast model, which was developed for long-range planning evaluations. Capacity is based on the particular characteristics found on the arterial, such as number of lanes, speed limit, turn lanes, and the number of vehicles that the arterial is designed to carry per hour. The capacities have been adjusted to reflect the general roadway planning capacity based on Bellingham’s LOS standard “E” (v/c .901 – 1.00) and Alternative LOS standard “F” (v/c 1.001 – 1.25) on Bellingham’s arterial streets.
- **Pipeline development traffic estimates** – Vehicle trips generated from the 35 development proposals evaluated for transportation concurrency between January 1, 2007 and April 15, 2008 have been assigned to affected arterial street links, tracked, and added to the traffic counts for the respective arterial links.

### **Transportation Concurrency – Existing Conditions (Through mid-April 2008)**

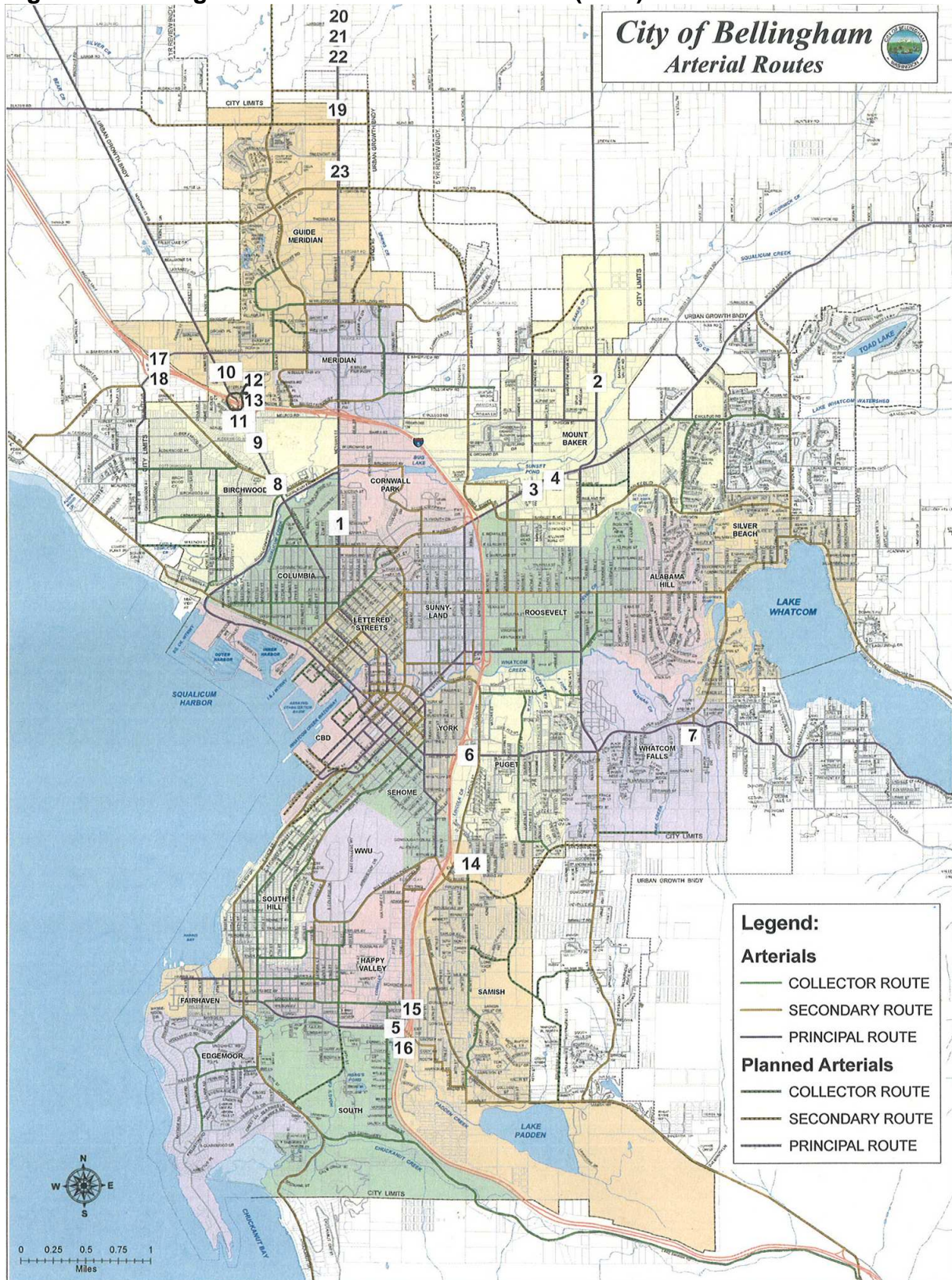
***2008 conditions measured on arterial streets are based on the most current arterial street traffic counts available.*** A conservative 3% growth factor is applied to account for annual regional background traffic growth.



**Table 1. 2008 Arterial Streets performing within the Transportation Concurrency limits for LOS Standard E (v/c .901 – 1.00) and Alternative LOS Standard F (v/c 1.001 – 1.25)**

ID	Arterial Street Link	X/Of	Street Name	X/Of	Street Name	Dir	2008 V/C	V/C Std.	Met	TIP
1	Meridian Street	N/Of	Illinois Street	S/Of	Squalicum Pkwy	SB	0.91	1.00	Yes	No
2	Hannegan Rd	N/Of	Division St	S/Of	Bakerview Rd	NB	0.97	1.00	Yes	No
3	E. Sunset Dr	W/Of	Hannegan Rd	E/Of	Orleans St	EB	0.95	1.00	Yes	No
4	E. Sunset Dr	W/Of	Hannegan Rd	E/Of	Orleans St	WB	0.90	1.00	Yes	No
5	Old Fairhaven Pkwy	E/Of	30th St	W/Of	I-5 SB On Ramp	WB	0.98	1.00	Yes	No
6	Lakeway Dr	W/Of	King St	E/Of	I-5 SB Off-Ramp	EB	0.91	1.00	Yes	No
7	Lakeway Dr	E/Of	Electric Ave	W/Of	City limit / UGA	EB	1.06	1.25	Yes	No
8	Northwest Ave	NW/Of	Birchwood Ave	SE/Of	Maplewood Ave	NWB	1.02	1.25	Yes	No
9	Northwest Ave	NW/Of	Maplewood Ave	SE/Of	McLeod Rd	NWB	1.10	1.25	Yes	Yes
10	Northwest Ave	N/Of	I-5 NB Off Ramp	S/Of	Bakerview Rd	NB	1.02	1.25	Yes	Yes
<b>Arterial interchanges and Highways of Statewide Significance (HSS) not subject to Transportation Concurrency</b>										
11	Northwest Ave	S/Of	I-5 SB Off Ramp	N/Of	McLeod Rd	SB	1.06	HSS	N/A	Yes
12	Northwest Ave (Underpass)	S/Of	I-5 NB Off Ramp	N/Of	I-5 SB Off Ramp	NB	0.98	HSS	N/A	Yes
13	Northwest Ave (Underpass)	S/Of	I-5 NB Off Ramp	N/Of	I-5 SB Off Ramp	SB	1.08	HSS	N/A	Yes
14	Lincoln St (I-5 On Ramp)	S/Of	I-5 NB On Ramp	N/Of	Elwood Ave	NB	1.68	HSS	N/A	IMP
15	Old Fairhaven Pkwy	E/Of	32nd St	W/Of	I-5 SB Off Ramp	WB	1.05	HSS	N/A	IMP
16	Old Fairhaven Pkwy	E/Of	32nd St	W/Of	I-5 SB Off Ramp	EB	0.94	HSS	N/A	IMP
17	W. Bakerview Rd (Overpass)	SW/Of	I-5 NB Off Ramp	NE/Of	I-5 SB On Ramp	NEB	0.93	HSS	N/A	IMP
18	W. Bakerview Rd (Overpass)	SW/Of	I-5 NB Off Ramp	NE/Of	I-5 SB On Ramp	SW	1.38	HSS	N/A	IMP
19	SR 539 Guide Meridian	S/Of	Kelly Rd	N/Of	Kline Rd	NB	1.00	HSS	N/A	DOT
20	SR 539 Guide Meridian	N/Of	Smith Rd	S/Of	Ten Mile Rd	NB	1.20	HSS	N/A	DOT
21	SR 539 Guide Meridian	N/Of	Smith Rd	S/Of	Ten Mile Rd	SB	0.97	HSS	N/A	DOT
22	SR 539 Guide Meridian	N/Of	Kelly Rd	S/Of	Smith Rd	NB	0.93	HSS	N/A	DOT
23	SR 539 Guide Meridian	N/Of	Horton Rd	S/Of	Kline Rd	NB	0.93	HSS	N/A	DOT

**Figure 3. Existing Arterial Street LOS Conditions (2008)**



## **Arterials Approaching LOS Standard E (v/c .901 – 1.00) in 2008**

### ***ID 2. Hannegan Road northbound between Division St & East Bakerview Rd.***

- 2008 v/c = .97 (LOS standard "E").
- Primary entry/exit point to northeast Bellingham from many places in Whatcom County with heavy commuter traffic exiting City in evening.
- Alternate north-south parallel commuter route to heavy volume Guide Meridian.
- No traffic signals north of Bakerview adds to attraction as alternative to Guide Meridian.
- Narrows from 2 lane capacity to 1 lane capacity north of Division Street and requires a lot of merging from left turn lane to northbound through lane.
- North Bellingham's major industrial area with heavy volumes of truck traffic.
- Capacity mitigation would be expensive and difficult and could impact businesses.
- Transportation Demand Management strategies, such as increased public transit service from northern rural areas, park-n-ride facilities, car-pooling, and flex-scheduling could be moderately effective.

**Outlook:** Depending on scale, new development proposals could trip the LOS standard E threshold (v/c .901 – 1.00), which would require mitigation or denial of the project.

### ***ID 5. Old Fairhaven Parkway westbound between 30<sup>th</sup> St & I-5 southbound off-ramp***

- 2008 v/c = .98 (LOS standard "E")
- I-5 exit 250 is the first major entry/exit point to Bellingham from all points south.
- Major freeway exit point for rush hour commuter traffic from Bellingham, Whatcom County, and Skagit County to residential areas of southwest Bellingham.
- No other arterials crossing Interstate 5 south of Samish Way overpass.
- High trip generation commercial development (Grocery, liquor, two gas stations, convenience store, car wash, coffee stand on both sides of Old Fairhaven Parkway between 30<sup>th</sup> and freeway interchange.
- WSDOT closure of 32<sup>nd</sup> Street and installation of new traffic signal has resulted in safer traffic operations, but also slows east-west traffic flow.
- As development continues in Bellingham (Samish, South, Fairhaven Neighborhoods) and Whatcom County, traffic is expected to increase on Old Fairhaven Parkway.
- Capacity mitigation would be expensive and difficult and would impact businesses.
- Transportation Demand Management strategies, such as a park-n-ride facilities and public transit service are in place, but may need to be expanded.

**Outlook:** Depending on scale, new development proposals could trip the LOS standard E threshold (v/c .901 – 1.00), which would require mitigation or denial of the project.



## **Transportation Concurrency Management Program Future Enhancements**

- **Implement new Transportation Concurrency Methodology in 2009 to calculate “total multimodal transportation capacity” to account for pedestrian, bicycle, transit, and automobile into the Transportation Concurrency evaluation process to successfully implement the infill land use strategy adopted in the Bellingham Comprehensive Plan.**

Staff proposes to transition from the current ‘link-based’ volume-to-capacity LOS standards to ‘total capacity-based’ LOS standards for Bellingham’s Transportation Concurrency Management Program. The ‘link-based’ system has been in place since 1995 and will not be the best long-term LOS capacity measurement tool to help Bellingham implement the urban-oriented infill land use strategy adopted in the Bellingham Comprehensive Plan.

Public Works staff received Council direction to work with transportation consultants to develop new LOS standards in 2008, modeled after cities such as Kirkland, Bellevue, and Redmond, which have successfully implemented GMA-based urban infill strategies for several years. If work can be completed in 2008, staff’s goal would be to implement this new system in 2009.

- **Continued Concurrency Evaluation Tracking Tool refinement**

When most people consider ‘traffic impact’ they are usually referring to the number of automobile trips generated from a development proposal rather than how much pedestrian, bicycle, or transit capacity is available or being consumed. ‘Traffic’ impact is usually equated with automobiles. Currently, the Concurrency Evaluation Tracking Tool (CETT) is limited to calculating arterial street volume-to-capacity ratios only for vehicle traffic. Staff proposes to translate high-frequency transit, sidewalks, and bicycle lanes into ‘total arterial capacity’ for development proposal evaluation using CETT. This will help to support the infill land use strategy by allowing staff to credit proposals for development along arterials that have the full range of multi-modal transportation facilities already in place.

- **Transportation corridor “profiles” (for heavy use corridors)**

Developing 24-hour “profiles” for heavy use transportation arterial corridors (LOS E and LOS F) will help transportation planning staff and City Council to better understand the range of circumstances, issues, and problems affecting these arterial corridors. A greater understanding of the situation for each corridor will help transportation planning staff and City Council to develop a range of potential mitigation alternatives. Staff envisions this tool as part of the new Transportation Concurrency Methodology implemented in 2009.

- **Transportation network connectivity opportunities and issues for all transportation modes, including vehicle, bicycle, and pedestrian**

Future refinement and enhancement of the travel demand forecast model may allow it to be used directly or indirectly for “connectivity analysis” to explore the potential cost/benefit of connecting existing dead-end streets. As infill development continues to occur, it will become increasingly difficult, disruptive, and expensive to add capacity to arterials through physical widening or the addition of turn lanes. Connecting currently unconnected streets could result in better traffic circulation and relief of regional traffic congestion. Analyzing and modeling the costs and benefits of connecting streets may create lower cost mitigation alternatives to relieve traffic congestion.

## Transportation Concurrency Information Sources

All questions regarding Bellingham's Transportation Concurrency requirements, the Transportation Report on Annual Concurrency (TRAC), or the Transportation Element of the Bellingham Comprehensive Plan should be directed to:

**Chris Comeau**, AICP, Transportation Planner  
City of Bellingham Public Works Department  
210 Lottie Street (City Hall)  
Bellingham, WA 98225  
(360) 778-7900 telephone; (360) 778-7901 fax;  
Email: [ccomeau@cob.org](mailto:ccomeau@cob.org)

## Bellingham Transportation Planning Documents

**Public Works web site:** [www.cob.org](http://www.cob.org), click on "Departments", click on "Public Works"

**City of Bellingham 2006 Comprehensive Plan, Transportation Element**  
<http://www.cob.org/pcd/planning/growth/comp-update.htm>, click Chapter 3.

**BMC 13.70 Transportation Concurrency Management**  
<http://www.cob.org/web/bmcode.nsf>, click Title 13, click 13.70

**BMC 19.06 Transportation Impact Fees**  
<http://www.cob.org/web/bmcode.nsf>, click Title 19, click 19.06

**2007-2012 Transportation Improvement Program (TIP)**  
<http://www.cob.org/documents/pw/transportation/2007-Bellingham-TIP.pdf>

**2008-2013 Transportation Improvement Program (TIP)**  
Draft 2009-2014 TIP will be available in May 2008 and must be adopted by July 1, 2008.

## Web Sites for Bellingham/Whatcom Transportation Information

Bellingham Public Works Department .....	<a href="http://www.cob.org/pw">www.cob.org/pw</a>
Bellingham Planning Department.....	<a href="http://www.cob.org/pcd">www.cob.org/pcd</a>
Whatcom Transportation Authority .....	<a href="http://www.ridewta.com">www.ridewta.com</a>
Whatcom County .....	<a href="http://www.co.whatcom.wa.us">www.co.whatcom.wa.us</a>
Port of Bellingham.....	<a href="http://www.portofbellingham.com">www.portofbellingham.com</a>
Whatcom Council of Governments.....	<a href="http://www.wcog.org">www.wcog.org</a>
Washington State Department of Transportation.....	<a href="http://www.wsdot.wa.gov">www.wsdot.wa.gov</a>
U.S. Federal Highway Administration.....	<a href="http://www.fhwa.dot.gov">www.fhwa.dot.gov</a>
U.S. Department of Transportation.....	<a href="http://www.dot.gov">www.dot.gov</a>