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Transportation Report on Annual Concurrency (TRAC)

March 2009

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Multimodal 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:

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Bellingham Transportation Planning Documents

Public Works web site: 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 Multimodal Transportation Concurrency
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

2009-2014 Transportation Improvement Program (TIP)
http://www.cob.org/services/neighborhoods/community-planning/transportation/index.aspx

2010-2015 Transportation Improvement Program (TIP)
Draft 2010-2015 TIP will be available mid-May 2009 and must be adopted by July 1, 2009.

Web Sites for Bellingham/Whatcom Transportation Information

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

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EXECUTIVE SUMMARY

In February 2006, the City Council adopted BMC 13.70, the Transportation Concurrency Management Ordinance, with an effective date of June 15, 2006, consistent with the adoption of the June 2006 Bellingham Comprehensive Plan and GMA requirements for *"A transportation element that implements, and is consistent with, the land use element*" (RCW 36.70A.70 (6)). BMC 13.70 specifically established a program to monitor and maintain adequate transportation facilities in support of the City's infill land use strategy and the first Transportation Report on Annual Concurrency (TRAC) was published in March 2006.

The TRAC is a monitoring and reporting system that Public Works staff has published since March 2006 to inform the City Council, the Planning Commission, the general public, and the development industry which portions of the City are best suited for infill development based on adequate transportation infrastructure and services. The TRAC indicates where development proposals may require transportation mitigation to meet Bellingham's Multimodal Transportation Concurrency requirements. As such, the TRAC is Bellingham's documentation that the City is in full compliance with the Washington State Growth Management Act (GMA) requirements that:

*"After adoption of the comprehensive plan by jurisdictions required to plan or who choose to plan under RCW 36.70A.040, 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)). [*Note*: Bellingham requires financial commitment within 3 years consistent with requirements for fully funded project on 6-Year TIP]

The 2009 TRAC reflects the evolution of Bellingham's integrated land use-transportation planning approach from auto-centric to multimodal. In November 2008, the City Council adopted amendments to BMC 13.70 and the Transportation Element of the Bellingham Comprehensive Plan, which fundamentally changed Bellingham's level of service (LOS) standards from auto-centric to multimodal to further support Urban Village and infill land use policies in the Land Use Element and multimodal policies in the Transportation Element of the Bellingham Comprehensive Plan. As of January 1, 2009, **BMC 13.70 Multimodal Transportation Concurrency** measures the availability and adequacy of the four major modes of transportation facilities and service; pedestrian, bicycle, public transit, and motorized vehicles throughout Bellingham's transportation network.

The TRAC also provides 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 6-Year TIP must be consistent with the Transportation Element of the Comprehensive Plan and must be adopted by July 1 each year.

More in-depth technical analysis of BMC 13.70 Multimodal Transportation Concurrency is available in the Program Development Report, available from Public Works.

Summary of 2009 TRAC Findings

The intent of BMC 13.70 Multimodal Transportation Concurrency is to implement the multimodal transportation policies of the Transportation Element and the infill land use strategies of the Land Use Element. The new multimodal methodology allows the City to emphasize infill where the multimodal transportation facilities are already available or have funding secured for construction within 3 years.

Figure 1. 2009 Multimodal Transportation Concurrency Person Trips Available for New Development in Bellingham listed by Concurrency Service Area

2009 Person Trips Available (PTA) in 15 Concurrency Service Areas (CSA)									
Concurrency Service Area[1]	Sidewalk Percent Complete	Ped Credit PTA	Bike Lane Percent Complete	Bike Credit PTA	WTA Transit PTA	Vehicle Capacity PTA	Gross CSA PTA	Pending Pipeline Trips[2]	Net CSA PTA[3]
CSA 1	90.1%	480	76.5%	208	607	7,570	8,865	2,674	5,691
CSA 2	46.0%	0	66.3%	128	88	2,780	2,996	900	1,596
CSA 3	91.3%	492	70.3%	160	1,245	4,809	6,706	497	5,709
CSA 4	100.0%	600	100.0%	400	317	3,916	5,232	1,115	3,617
CSA 5	96.2%	552	91.3%	328	548	2,042	3,470	0	2,970
CSA 6	95.0%	540	96.7%	376	250	3,598	4,765	43	4,222
CSA 7	83.3%	396	93.6%	352	170	3,804	4,722	0	4,222
CSA 8	99.6%	600	87.3%	296	1,536	6,581	9,014	530	7,984
CSA 9	100.0%	600	67.0%	136	122	1,480	2,338	0	1,838
CSA 10	82.3%	384	94.9%	360	1,074	307	2,124	0	1,624
CSA 11	53.6%	48	62.6%	104	102	4,126	4,381	0	3,881
CSA 12	83.1%	396	89.4%	312	280	2,093	3,081	1	2,580
CSA 13	69.1%	228	93.9%	352	305	1,476	2,361	0	1,861
CSA 14	51.1%	12	84.7%	280	98	683	1,073	0	573
CSA 15	25.6%	0	7.3%	0	0	1,099	1,099	0	599
Citywide					**Total**	**PTA**	**62,227**	**5,760**	**48,967**

1. Figure 4. Illustrates Concurrency Service Area boundaries (CSA).
2. Pending pipeline trips represent developments that have been issued a Concurrency Certificate, but have not been constructed and therefore not represented in the field data.
3. 500 PTA have been withheld from each CSA to maintain a minimum buffer of 500 PTA in each CSA.

As Figure 1. shows, there are more Person Trips Available in the downtown CSA #8, than in any other part of the City. This is due to the high degree of completeness of pedestrian and bicycle networks and the availability of high-frequency transit routes at the downtown WTA transit hub. Proposed CSA #15 for the 640-acre King Mountain Neighborhood, which annexed to the City on March 6, 2009, has almost the fewest Person Trips Available with no credits given for pedestrian, bicycle, and transit facilities and services. This new part of the City is primarily low density residential, arterial streets lack sidewalks and bicycle lanes, and WTA transit service is minimal to meet the ADA requirements of Bakerview Industrial Area employers.

The Evolution to Multimodal Transportation Concurrency

In June 2006, Bellingham re-adopted the 1994 level of service (LOS) standard "E" volume-to-capacity (v/c) 90-100% (v/c .901 – 1.00) for all arterial street segments during the weekday evening rush hour, as well as the exception of 11 specific arterial street segments allowed to function at LOS standard "F" volume-to-capacity 100-125% (v/c 1.01 – 1.25) due to difficult mitigation. These v/c LOS standards, typically used by many jurisdictions, are auto-centric and do not account for transportation capacity available in pedestrian and bicycle facilities or public transit service. They were re-adopted in 2006 for the sole purpose of having an adopted Comprehensive Plan that was fully compliant with the transportation concurrency requirements of GMA until such time that new multimodal methodology could be developed.

Figure 2. Illustration of Typical Weekday Arterial Traffic Volumes with Peak Hour

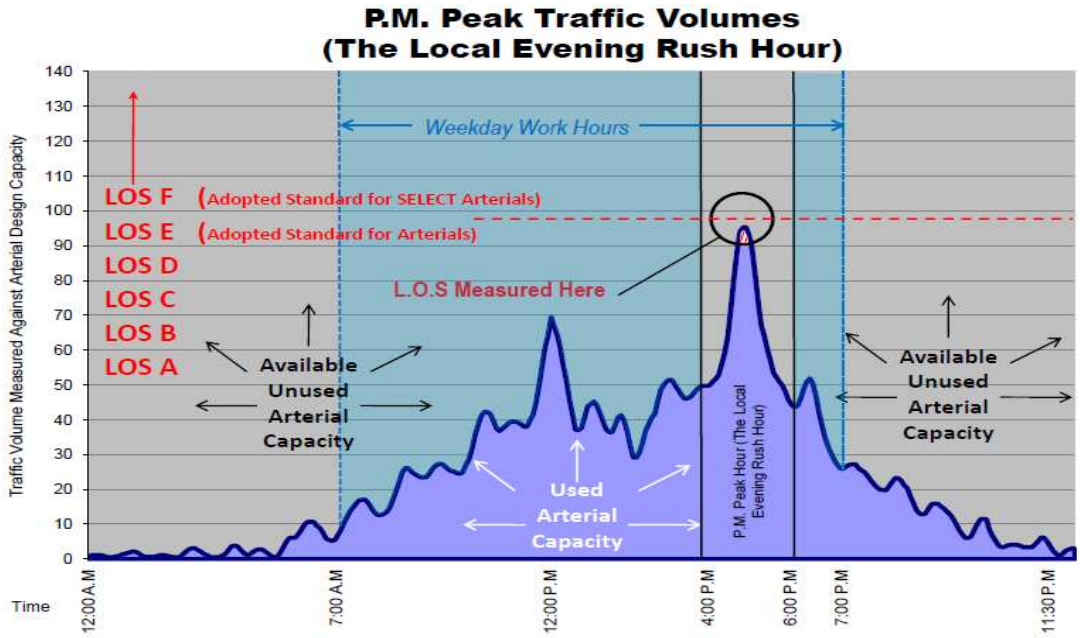


Figure 2, above, is an illustration of typical daily vehicle traffic volumes on a typical urban arterial street during an average weekday measured against the vehicle design capacity assigned to the arterial street. The illustration shows traffic building throughout the day, a minor peak period during 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 usually represents the greatest vehicle demand placed on the arterial transportation system. However, multimodal transportation networks include more than just facilities for vehicles.

Bellingham's adopted LOS "E" (v/c .901 – 1.00) meant that the City allowed and expected up to 100% of the available arterial street capacity to be used during the evening rush hour. For 15 years, these adopted LOS standards represented the City's recognition that it is not possible to both promote infill development and prevent traffic congestion in an urban area, especially one that serves as the regional employment, shopping, education, medical, and entertainment center of the Whatcom region. Despite the logic of this policy approach, it became increasingly unpopular and was frequently used as the basis to fight proposals for infill development within Bellingham and to argue for higher LOS standards to prevent vehicle traffic congestion.

GMA-required transportation concurrency ordinances are designed to gauge the performance of the transportation system and ensure that adequate facilities are available concurrent with new development. However, State law also clearly states that transportation concurrency LOS policy is not to be used as a mechanism to stop or prevent growth.

WAC 365-195-510 Concurrency.

(1) Transportation. The aim of transportation planning for local jurisdictions is to achieve concurrency for transportation facilities. If concurrency for transportation facilities is not achieved, development may not be approved.

(2) Other public facilities. Each comprehensive plan should designate those public facilities in addition to transportation facilities for which concurrency is required.

(3) Levels of service. The concept of concurrency is based on the maintenance of specified levels of service with respect to each of the public facilities to which concurrency applies. For all such facilities, planning jurisdictions should designate appropriate levels of service.

(a) Transportation. The designation of levels of service in the transportation area will be influenced by regional considerations. For transportation facilities subject to regional transportation plans under RCW 47.80.030, local levels of service should conform to the regional plan. Other transportation facilities, however, may reflect local priorities.

(b) ***Levels of service should be set to reflect realistic expectations consistent with the achievement of growth aims. Setting such levels too high could, under some regulatory strategies, result in no growth. As a deliberate policy, this would be contrary to the act.***

The 2009 TRAC reflects the evolution of Bellingham's integrated land use-transportation planning approach from auto-centric to multimodal. The traditional auto-centric v/c ratio LOS methodology used by the City since 1994 would 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).

In January 2008, Public Works hired Kirkland, WA-based transportation consultants Transpo Group and spent a full year developing and presenting new multimodal transportation concurrency methodology to the Planning Commission and City Council, along with amendments to BMC 13.70 and the Transportation Element of the Comprehensive Plan. The new multimodal methodology and amendments to the Transportation Element were adopted on November 24, 2008 and became effective January 1, 2009.

How BMC 13.70 Multimodal Transportation Concurrency Works

Adopting an appropriate level of service (LOS) for the community is required under the Growth Management Act. Bellingham Transportation Element states the following:

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.

Based on the geographic distribution of the 53 transportation concurrency evaluations conducted for new development between June 15, 2006 and November 3, 2008, Bellingham was divided into 15 Concurrency Service Areas classified into Types 1, 2, or 3 according to location, land use environment, and availability of multimodal transportation modes (See Figures 3 and 4, below).

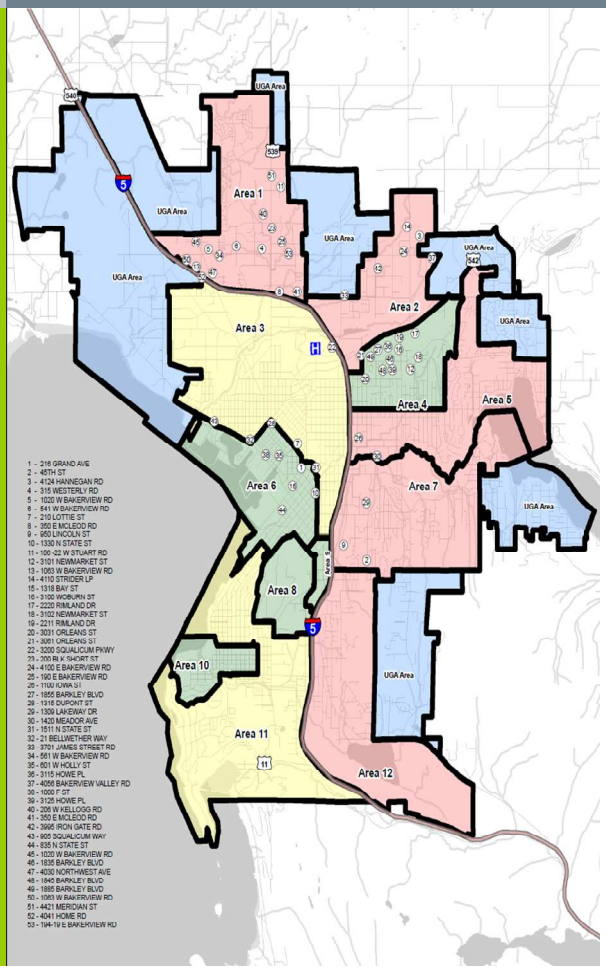
Type 1 CSA *(Green)* are Urban Villages with adopted Master Plans or active planning processes leading toward the adoption of a Master Plan. Type 1 CSA are characterized by a high percentage of pedestrian and bicycle facilities, high frequency transit service, and higher density land uses with a good mix of services. WWU is an exception and is classified as Type 1 CSA #10 due to the extremely high transit service and ridership, campus parking limitations, and the adopted WWU Institutional Master Plan.

Type 2 CSA *(Yellow)* are essentially transition areas between Urban Villages and outlying areas. Type 2 CSA are characterized by a moderate percentage of pedestrian and bicycle facilities, high frequency transit service, and moderate density land uses that are primarily residential with a small degree of mixed uses.

Type 3 CSA *(Red)* are primarily east of Interstate 5 and at the edges of the City. 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 degree of mixed uses, and a high degree of automobile dependency.

Figure 3. Geographic Distribution of Transportation Concurrency Evaluations, 2006-2008

Transportation Concurrency Evaluations



- **BMC 13.70 Transportation Concurrency Management ordinance adopted April 24, 2006**
- **Effective date June 15, 2006 with adoption of Comprehensive Plan**
- **53 individual project reviews for Transportation Concurrency done from June 2006 to Nov 2008**
- **General activity clusters**
  - **Downtown-Old Town- Waterfront**
  - **Barkley Village**
  - **W. Bakerview-Northwest**
  - **Meridian-Cordata**
  - **Bakerview Industrial Area**

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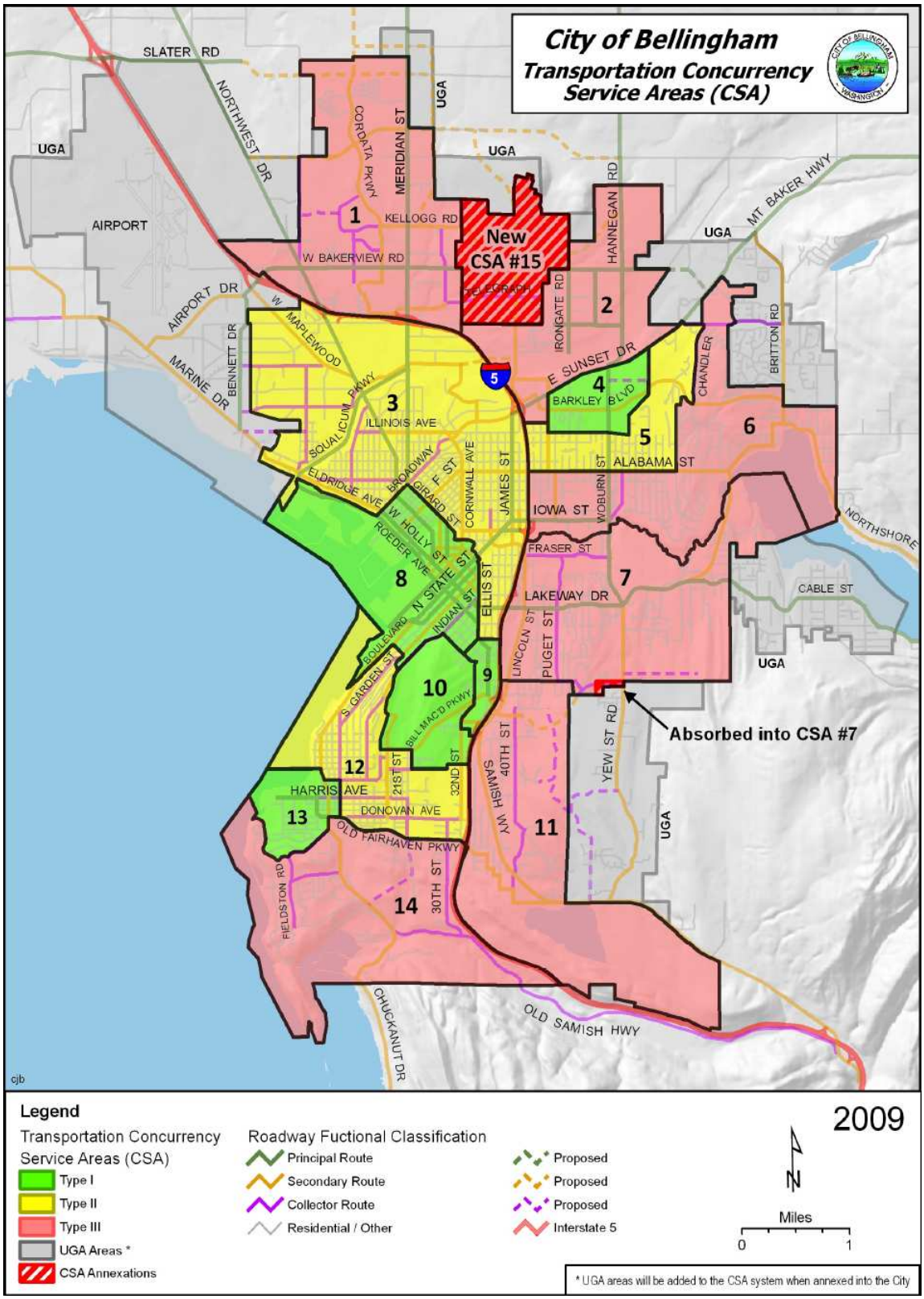
Figure 4. Bellingham's 15 Concurrency Service Areas (CSA)



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. Therefore, 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 and policy dials adopted in BMC 13.70 Table 1., as follows:

Figure 5. BMC 13.70 Table 1. Multimodal Transportation Concurrency Policy Dials

	Transportation Concurrency Service Areas		
Mode	**Type 1[1]**	**Type 2[2]**	**Type 3[3]**
Motorized			
Auto			
Mode weight factor[4]	0.70	0.80	0.90
Transit			
Mode weight factor[5]	1.00	1.00	0.80
Non-Motorized			
Pedestrian			
Percent threshold for minimum system complete[8]	50%	50%	50%
Person trip credit for 1% greater than minimum threshold[9]	20	20	20
Mode weight factor[6]	0.60	0.60	0.60
Bicycle			
Percent threshold for minimum system complete[8]	50%	50%	50%
Percent credit for 1% greater than threshold[9]	20	20	20
Mode weight factor[7]	0.40	0.40	0.40

1. Type 1 = Urban Village areas with adopted master plans, high-density mixed use zoning, or an active master plan process.
2. Type 2 = Medium density areas adjacent to and influenced by Urban Villages.
3. Type 3 = Lower density and auto-oriented areas outside of Urban Villages.
4. Auto mode weight factor considers the importance of roadways to a service area, relative to the availability of other mode alternatives.
5. Transit mode weight factor considers the availability/viability of the transit mode to a service area.
6. Pedestrian mode weight factor considers the importance of pedestrian facilities to a service area, relative to land use and travel patterns.
7. Bicycle mode weight factor considers the importance of bicycle facilities to a service area, relative to land use and travel patterns.
8. This is the minimum level of the planned system completed for it to be considered a viable mode alternative.
9. Person trips credited to service area based on the amount of the system completed minus the minimum threshold.

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.

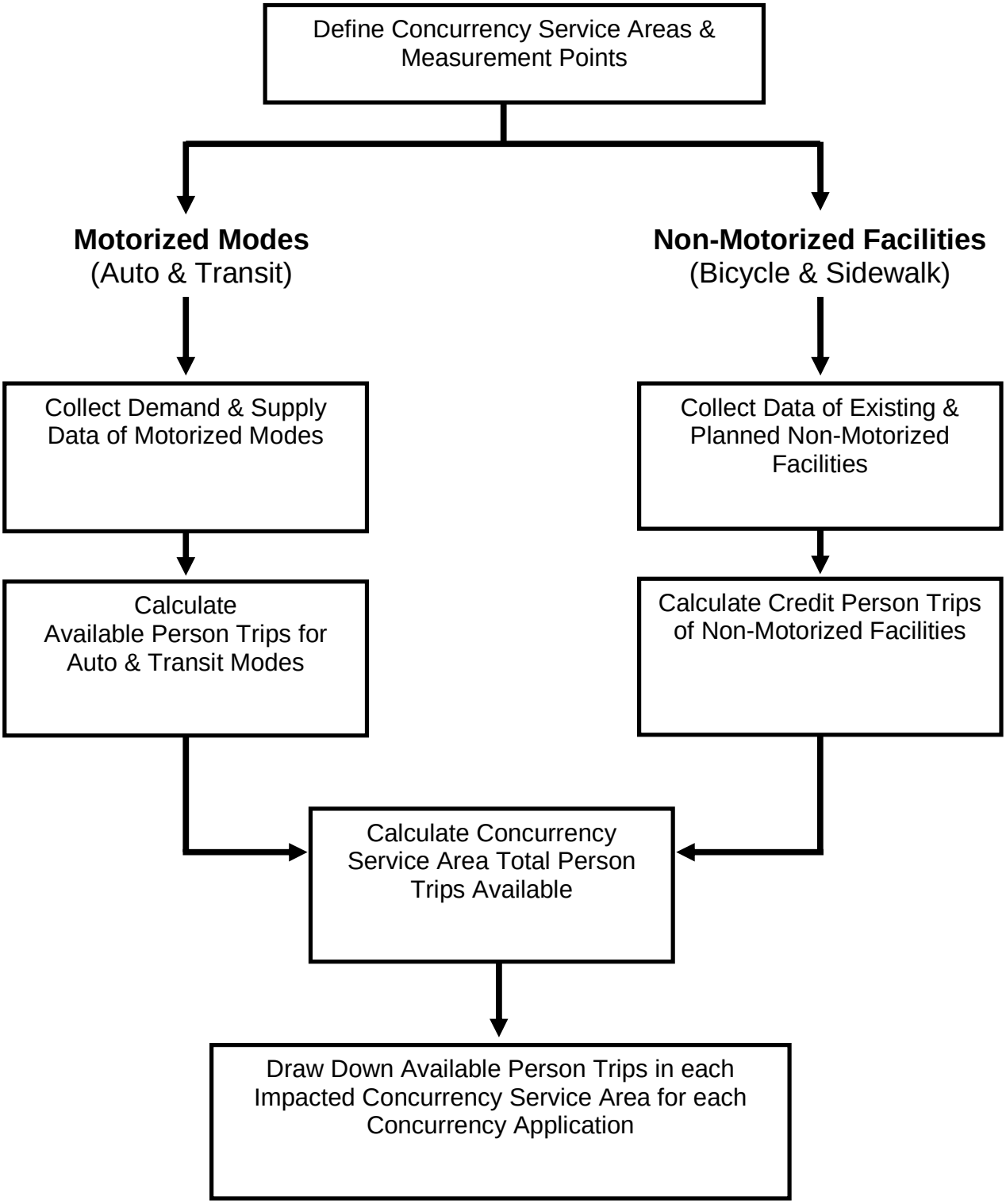
For example, each WTA high-frequency transit "GO Line" (15-minute headways) can provide the seated capacity equivalent of up to 320 person trips per hour (40-seat bus x 4 runs per hour in each direction).

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 6. Multimodal Calculation of Person Trips Available and Used Within Each CSA



Procedures for New Development Under BMC 13.70 Multimodal Transportation Concurrency

Multimodal Transportation Concurrency evaluation is a pre-application requirement. When new development is proposed, the project is evaluated to ensure that there are enough Person Trips Available in the CSA to serve the new development. If there are enough PTA, then the number of PTA needed are extracted from the system and a Temporary Certificate of Transportation Concurrency is issued with a one-year window to submit a complete application for the proposed development. If a complete application is not received by the City before the one year expiration date, then the certificate expires and the reserved PTA are restored to the system.

As per RCW 36.70A.070 (6) (b), new developments must be prohibited unless there are an adequate number of Person Trips Available within the Concurrency Service Area (CSA) of the development, or improvements to the multimodal transportation system to accommodate the impacts are made concurrent with the development or unless the multimodal transportation network affected by the new development meets one of the three exceptions listed below, consistent with the concurrency management requirements of the Growth Management Act.

Consistent with transportation concurrency requirements of the Growth Management Act (RCW 36.70A.070 (6) (b)), land use and building permits for new developments may be issued as long as:

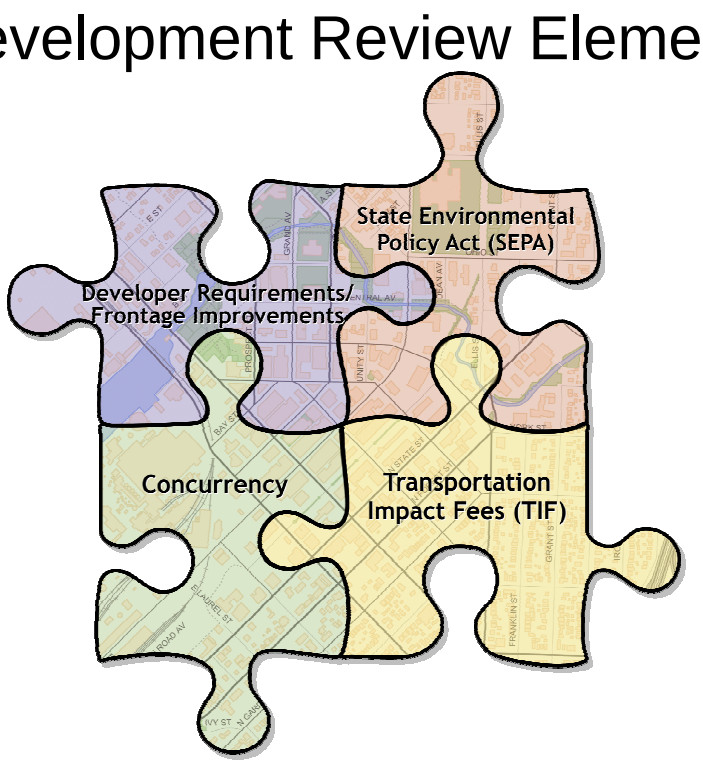
1.) The Concurrency Service Area (CSA) affected by the proposed development has an adequate number of Person Trips Available (PTA), or

2.) The Concurrency Service Area (CSA) affected by the proposed development has new or expanded multimodal transportation facilities or services scheduled and fully funded for improvement within the first, second, or third year of the City's Six-Year Transportation Improvement Program or within WTA's adopted budget; or

3.) The transportation facilities affected by the proposed development are designated as "Highways of Statewide Significance" not subject to local transportation concurrency standards. *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. 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.*

If there are not enough Person Trips Available in the CSA to serve a proposed development, then the applicant may propose to reduce or delay project or implement concurrency mitigation measures (sidewalk, bike lane, transit, TDM, etc) to provide the number of person trips needed to serve the proposed development. For motorized modes, this may require the addition of capacity for vehicles or transit through a variety of measures. For non-motorized modes, this may include the construction of sidewalk or bicycle lanes.

Figure 7. Multimodal Transportation Concurrency Development Requirements



Transportation concurrency mitigation refers only to the addition of motorized transportation capacity or completeness of non-motorized transportation network, whether through the addition of a new travel lane or turn lane for vehicles, sidewalks, bicycle lanes, ride-sharing and other TDM programs, or transit service. Figure 7. above, shows that "Concurrency" is only one piece of the transportation mitigation puzzle.

In addition to the pre-application requirements of BMC 13.70 Multimodal Transportation Concurrency, all new development proposed in Bellingham is also required to:

1.) Conduct a traffic impact analysis study for any project expected to generate 50 or more p.m. peak hour vehicle trips or where known level of service issues exist on arterials or at intersections;
2.) Fund and construct street frontage improvements that are required by City development regulations;
3.) Fund and construct transportation improvements that are required to mitigate impacts identified through the State Environmental Policy Act (SEPA) project review process; and
4.) Pay Transportation Impact Fees (TIF) at the time of building permit issuance consistent with the base rate applied on the date of application for building permit (2009 TIF = $1,695 per p.m. peak hour vehicle trip).

Detail of Existing Conditions for 2009 TRAC Findings

The 2009 TRAC identifies Person Trips Available by Concurrency Service Area using 2006-2008 traffic count data, 2007-2008 WTA capacity and ridership statistics, 2008 inventories of sidewalk and marked bicycle lanes, and pipeline trips reserved for development in the Concurrency Evaluation Tracking Tool (CETT) for current conditions through March 6, 2009.

Concurrency Evaluation Tracking Tool (CETT)

The Concurrency Evaluation Tracking Tool (CETT) is a spreadsheet-based tool that contains current arterial traffic volumes and capacities, seated transit capacities and ridership volumes, and completeness of bicycle and pedestrian networks. The CETT is used for Transportation Concurrency evaluations to determine whether enough Person Trips are Available, or can be provided concurrent with, development proposed within Concurrency Service Areas. The CETT provides a snapshot in time of the status of the citywide multimodal transportation network.

Pipeline Development Estimates

Person trips generated from the 68 total development proposals evaluated for transportation concurrency between June 15, 2006 and March 6, 2009 have been assigned to and drawn down from affected CSAs**.**

The intent of BMC 13.70 Multimodal Transportation Concurrency is to implement the multimodal transportation policies of the Transportation Element and the infill land use strategies of the Land Use Element. The new multimodal methodology allows the City to emphasize infill where the multimodal transportation facilities are already available.

The number Person Trips Available in any given CSA is generally reflective of the degree of multimodal transportation facilities and services available within that CSA. It should come as no surprise that there are more Person Trips Available in the downtown CSA #8, than in any other part of the City. This is due to the high degree of completeness of pedestrian and bicycle networks and the availability of high-frequency transit routes at the downtown WTA transit hub.

It should also come as no surprise that proposed CSA #15 for the 640-acre King Mountain Neighborhood, which annexed to the City on March 6, 2009, has almost the fewest Person Trips Available with no credits given for pedestrian, bicycle, and transit facilities and services. This new part of the City is primarily low density residential, arterial streets lack sidewalks and bicycle lanes, and WTA transit service is minimal to meet the ADA requirements of Bakerview Industrial Area employers.

Figure 8. Multimodal Transportation Concurrency Person Trips Available by Concurrency Service Area for New Development in 2009															
Concurrency Service Areas (CSA)	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Motorized Modes															
Auto															
Two-way Directional Factor	0.86	0.9	0.86	0.91	0.92	0.83	0.84	0.72	0.96	0.99	0.84	0.9	0.86	0.74	0.89
Mode weight factor	0.9	0.9	0.8	0.7	0.8	0.9	0.9	0.7	0.7	0.7	0.9	0.8	0.7	0.9	0.9
Average Car Occupancy (ACO)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Transit															
Two-way Directional Factor	0.86	0.9	0.86	0.91	0.92	0.83	0.84	0.72	0.96	0.99	0.84	0.9	0.86	0.74	0.89
Mode weight factor	0.8	0.8	1	1	1	0.8	0.8	1	1	1	0.8	1	1	0.8	0.8
Non-Motorized Modes															
Pedestrian															
Percent threshold for minimum system complete	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Person trip credit for 1% greater than minimum threshold	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mode weight factor	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Bicycle															
Percent threshold for minimum system complete	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Percent credit for 1% greater than threshold	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Mode weight factor	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Motorized Modes															
Auto															
1. available vehicle capacity = capacity - vehicles	7,499	2,640	5,380	4,740	2,130	3,695	3,875	10,102	1,695	340	4,200	2,225	1,880	790	1,055
2. adjusted vehicles = vehicle capacity x v/c threshold	6,470	2,376	4,624	4,303	1,964	3,075	3,251	7,232	1,626	337	3,527	2,012	1,622	584	940
3. auto person trips = adjusted vehicles x ACO	8,412	3,089	6,011	5,594	2,553	3,998	4,227	9,402	2,114	438	4,585	2,616	2,109	759	1,222
4. available person trips = auto person trips x mode weight factor	7,570	2,780	4,809	3,916	2,042	3,598	3,804	6,581	1,480	307	4,126	2,093	1,476	683	1,099
Transit															
1. available seated capacity = seated capacity - riders	879	122	1,449	349	594	376	253	2,146	127	1,083	152	310	353	165	0
2. adjusted seated capacity = seated capacity x v/c threshold	758	110	1,245	317	548	313	212	1,536	122	1,074	128	280	305	122	0
3. available person trips = auto person trips x mode weight factor	607	88	1,245	317	548	250	170	1,536	122	1,074	102	280	305	98	0
Total Motorized PTA = auto + transit	8,177	2,868	6,054	4,232	2,590	3,849	3,974	8,118	1,602	1,380	4,229	2,373	1,781	781	1,099
Non-Motorized Modes															
Pedestrian															
1. percent complete = existing facilities / planned facilities	90%	46%	91%	100%	96%	95%	83%	100%	100%	82%	54%	83%	69%	51%	26%
2. percent above threshold = % complete - threshold	40%	-4%	41%	50%	46%	45%	33%	50%	50%	32%	4%	33%	19%	1%	-24%
3. ped. person trips = % above threshold x person trip credit	800	0	820	1,000	920	900	660	1,000	1,000	640	80	660	380	20	0
4. available person trips = ped. person trips x mode weight factor	480	0	492	600	552	540	396	600	600	384	48	396	228	12	0
Bicycle															
1. percent complete = existing facilities / planned facilities	77%	66%	70%	100%	91%	97%	94%	87%	67%	95%	63%	89%	94%	85%	7%
2. percent above threshold = percent complete - threshold	27%	16%	20%	50%	41%	47%	44%	37%	17%	45%	13%	39%	44%	35%	-43%
3. bike person trips = percent above threshold x person trip credit	520	320	400	1,000	820	940	880	740	340	900	260	780	880	700	0
4. available person trips = bike person trips x mode weight factor	208	128	160	400	328	376	352	296	136	360	104	312	352	280	0
Total Non-Motorized PTA = pedestrian + bicycle	688	128	652	1,000	880	916	748	896	736	744	152	708	580	292	0
Gross Person Trips in CSA = motorized + non-motorized	8,865	2,996	6,706	5,232	3,470	4,765	4,722	9,014	2,338	2,124	4,381	3,081	2,361	1,073	1,099
Pending Person Trips in Development Pipeline	2,674	900	497	1,115	0	43	0	530	0	0	0	1	0	0	0
Minus 500 PTA to maintain minimum buffer for each CSA	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Net Person Trips Remaining = motorized + non-motorized	**5,691**	**1,596**	**5,709**	**3,617**	**2,970**	**4,222**	**4,222**	**7,984**	**1,838**	**1,624**	**3,881**	**2,580**	**1,861**	**573**	**599**

Recommendations for Future Enhancements

- ✓ Create CSA #15 for 640-acre King Mountain Neighborhood Annexation (March/April 2009)
- ✓ Add 12-acre San Juan/Yew St Annexation to CSA #7 (March/April 2009)

- **Explore Further Refinement/Addition of Concurrency Service Areas**
    - CSA #1 (Guide-Meridian-Cordata) may be too large and may need to be split or re-sized. The level of development intensity in this area, along with the amount of development potential remaining may warrant more than one CSA.
    - Consider creating a new Type 1 CSA for Whatcom Community College area (within CSA #1) and the new WTA Cordata transit hub, which opened in January 2009.
    - Consider creating a separate new Type 1 CSA for the Waterfront District to keep the Person Trips Available separate from downtown Bellingham and Old Town Person Trips Available in CSA #8. This would be beneficial to both the Waterfront District and the downtown and Old Town areas.
    - Consider creating a new Type 1 CSA for the Fountain District if an Urban Village Master Plan is adopted. Similar to Samish Way Urban Village CSA #9.

- **Continued Refinement of Multimodal Transportation Concurrency Methodology**
    - The methodology is new and will need to be monitored to assess its effectiveness in promoting infill development. Over time, staff anticipates that there will be a need for refinements and adjustments to be made to support infill and multimodal policies.
    - Continue to conduct additional sensitivity analysis to determine the effect of variable weighting factors on different modes of transportation and policy dials in different types of land use environments. There may be justification to award greater credit for completeness of bicycle and pedestrian facilities in Type 1 Urban Village CSA's and less credit for Type 3 Suburban CSA's to further the infill land use strategy.
    - The 2008 North Sound Travel Survey conducted for the Whatcom and Skagit Councils of Government (WCOG & SCOG) may contain some useful local data that could be beneficial to the Multimodal Transportation Concurrency methodology. Public Works staff will examine and incorporate local data, where appropriate.
    - Establish an Interlocal Agreement with WTA for direct mitigation from developers

- **Maintain and Update the Concurrency Evaluation Tracking Tool**
    - The Concurrency Evaluation Tracking Tool (CETT) maintains an inventory of arterial traffic counts and capacities, high-frequency transit capacity and ridership, and the degree of completeness of sidewalk and bicycle networks. The CETT is also used to track and monitor the number of person trips withdrawn for new development for each CSA. To maintain the effectiveness of this tool, staff must maintain upkeep of arterial traffic counts, WTA transit ridership, completeness of sidewalks and bike lanes, and, where applicable, trails that serve a transportation function.