
2011 Concurrency Report

On The Level Of Service (LOS) Of The County's Arterial Road Network

From April 1, 2010 to March 31, 2011

This report is prepared by the Snohomish County Department of Public Works Transportation and Environmental Services Division.

CONTENTS

Executive Summary	1
Summary of Arterial Units in Arrears	1
List of Acronyms Used in This Report	2
Concurrency Management System	2
Methods for Determining Level of Service (LOS)	2
Arterial Unit Status Definitions	3
Concurrency Report	4
Arterial Units at Ultimate Capacity	4
Arterial Units in Arrears	4
Arterial Units No Longer in Arrears	4
Arterial Units at Risk of Falling into Arrears	5
Summary Tables	12
Table 1 Summary of Level of Service (LOS) Status	12
Table 2 Summary of Arterial Units at Risk	13
Table 3 Summary of Concurrency Determinations	14
Table 4 Concurrency Projects in the Currently Adopted TIP	15
Table 5 Status of Arterial Units Compared With Prior Year	16

Executive Summary

The 2011 concurrency report summarizes the Level-of-Service (LOS) of Snohomish County's arterial road system and the strategies by the Department of Public Works (DPW) to remedy LOS deficiencies. This report covers the period from April 2010 (the date of publication of the previous report) through March 2011.

Summary of Arterial Units in Arrears, at Ultimate Capacity and at Risk

Status of Arterial Units	2010	2011
Arterial Units in Arrears	4	0
Arterial Units at Ultimate Capacity	3	3
Arterial Units at Risk of Falling into Arrears	11	14 ¹

¹ The actual physical number of AU's At Risk is 12 because two of these AU's are on the border of two TSA's and are given a separate AU number for each TSA and thus are counted as 4 arterial units.

List of Acronyms Used in This Report²

ALOSI	Arterial LOS Improvement
AU	Arterial Unit
AUIA	Arterial Unit in Arrears
CASI	Critical Arterial System Improvements
DPW	Snohomish County Department of Public Works
IRC	Inadequate Road Condition
LOS	Level of Service
SR	State Route (state highway)
TSA	Transportation Service Area
WSDOT	Washington State Department of Transportation
TIP	Snohomish County's six-year Transportation Improvement Program. (The TIP referenced in this report is always the current TIP that is usually adopted in November of the prior year.)
N/R	Not Required. The information was deemed not to be required based on the LOS being at a level high enough to not warrant concern.

Review of the Concurrency Management System

Consistent with the requirements of the Growth Management Act (GMA), the concurrency requirements of Snohomish County Code Chapter 30.66B require that for every development application, the County determine whether or not capacity exists (and will likely exist within six years) when the development adds its new trips to the road system. This concurrency determination includes two important considerations:

- 1) An estimate of existing traffic volumes and all new traffic that will be added to the road system from developments that have been deemed concurrent (pipeline trips), and;
- 2) The additional capacity that will be provided on the road system by any system improvements which will be constructed and open to the public within the next six years.

Methods for Determining Level of Service (LOS)

Snohomish County uses a four-tiered approach to determining the level of service on the road system.

- 1) Screening: Current peak-hour traffic counts are compared with estimated capacities for each arterial unit and average daily traffic (ADT) counts are compared with the thresholds adopted in county code.
- 2) Monitoring: Monitoring consists of more frequent traffic counts and analysis of the traffic conditions.
- 3) Operational Analysis: Operational analysis consists of travel-time studies and/or results from traffic models to determine whether or not LOS on an arterial unit is currently operating below the adopted standard.
- 4) Future Level-of-Service Determinations: Future LOS determinations are used to determine whether or not the LOS within six years is likely to be operating below the

² There are additional abbreviations in other sections of the report that are applicable to those sections.

adopted standard with the addition of new trips expected to be added to the road system by developments already deemed concurrent.

A review of Snohomish County's concurrency management system is available on the County's web site. The web site includes previous concurrency reports, and many other documents related to the County's traffic mitigation and concurrency regulations including DPW Rules 4224. The web site address is:

http://www.snoco.org/Departments/Public_Works/Divisions/TES/ProgramPlanning/3066B/

Arterial Unit Status Definitions

The following arterial unit status definitions are for those arterial units whose LOS has declined to the point where the Operational Analysis method is used to determine the existing and future (forecast) LOS.

Arterial Units at Risk of Falling into Arrears (UC)

Arterial units that are close to being deficient (i.e., 1-2 mph above LOS F urban or LOS D rural) are considered to be at risk of falling into arrears. For arterial units meeting these criteria, DPW monitors the units with travel time and delay studies conducted on an annual basis.

Arterial Units in Arrears (AUIA)

Snohomish County Code defines an Arterial Unit in Arrears (AUIA) as any arterial unit operating, or within six years is forecast to operate, below the adopted LOS standard, unless a financial commitment (or strategies) is in place for improvements to remedy the deficiency within six years. The LOS for the urban area is LOS F and in the rural area is LOS D.

Arterial Units at Ultimate Capacity (AR)

SCC 30.66B.110(1) states, "When the County Council determines that excessive expenditure of public funds is not warranted for the purpose of maintaining adopted LOS standards on an arterial unit (AU), the County Council may designate, by motion, such arterial unit as being at ultimate capacity. Improvements needed to address operational and safety issues must be identified in conjunction with such ultimate capacity designation."

2011 Concurrency Report

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Arterial Units at Ultimate Capacity

The County Council has designated the following arterial units at Ultimate Capacity:

Snohomish-Woodinville Road in TSA E (AU# 211)

This urban arterial unit is located in TSA E and was designated at Ultimate Capacity in 1997.

164th Street SWISE east of Interstate 5 located in TSA D (AU# 218),

This urban arterial unit is located in TSA D and was designated at Ultimate Capacity in 2007.

164th Street SW west of Interstate 5 located in TSA D (AU# 219),

This urban arterial unit is located in TSA D and was designated at Ultimate Capacity in 2007.

Arterial Units in Arrears

There are no arterial units in arrears.

Arterial Units No Longer in Arrears

The following arterial units are no longer in arrears.

Airport Way from 99th Avenue SE to SR 9 (AU# 353)

This urban arterial unit is located in TSA C. This unit was declared "in arrears" on December 8, 2000 and was declared "not in arrears" on March 15, 2011.

Marsh Road from Lowell Larimer Road to SR 9 (AU# 198)

This rural arterial unit is located in TSA C. This unit was declared "in arrears" on June 18, 2004 and was declared "not in arrears" on January 14, 2011.

Seattle Hill Road from 35th Avenue SE to SR 96 (AU# 202)

This urban arterial unit is located in TSA D. This unit was determined to be in arrears on August 25, 2005 and was declared "not in arrears" on January 13, 2011.

20th Street SE (SR 9 to the SR 2 Westbound trestle entrance) (AU# 238)

This AU was removed from arrears status due to the AU being annexed into the City of Lake Stevens effective December 31, 2009.

Arterial Units at Risk of Falling into Arrears

The following Arterial Units are considered to be At Risk of falling into arrears. The list is sorted by location, i.e. urban or rural, then by TSA, then by AU number.

Airport Way from SR 9 to 99th Avenue SE (AU# 353)

This urban arterial unit is located in TSA C. A travel time study and forecast analysis performed in March of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
B	28.82	C	27.67	EB	B	28.8	C	27.7
E	15.62	E	13.44	WB	E	15.9	E	13.1

This AU was declared "In Arrears" on December 8, 2000. In March 2010 WSDOT completed construction of improvements to the Airport Way/Marsh Road/SR 9 and Airport Way/Springhetti Road intersections. The March 2010 travel time study showed that with the WSDOT improvements the LOS had improved to the level that on March 15, 2011 this AU was declared "Not in Arrears".

The reason for the existing and forecast LOS E in the AM and PM WB direction is the WSDOT controlled signal at SR 9. To improve this LOS, WSDOT would have to program the signal to give more priority to the Airport Way WB traffic in the AM and PM peak hours. The County will continue with operational analysis to monitor this arterial.

35th Avenue SE from 168th Street SE to Seattle Hill Road (AU# 204)

This urban arterial unit is located in TSA D. A travel time study and forecast analysis performed in October of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
B	32.26	C	24.86	NB	C	26.9	F	11.4
C	25.62	B	28.22	SB	C	26.6	F	7.2

The forecast LOS in the PM NB and SB movements is based on incorporating and modeling the existing trips in the pipeline together with the following projects and improvements identified in the adopted TIP:

- E.28.02 35th Ave SE/180th St SE Intersection Improvement
- E.28.03 35th Ave SE/Grannis Road Intersection Signal and Channelization
- E.28.06 35th Ave SE: 180th St SE to 152nd St SE Corridor Widening

Improvement to the existing and forecast LOS may be accomplished with the completion of the improvements listed in the TIP together with the signal coordination of the existing and future signals along the corridor associated with the TIP projects.

The area surrounding this AU experienced a significant amount of constructed and proposed development prior to the economic downturn in 2006. The primary reason for the forecast LOS of F, in the PM SB and NB movements, is the trips in the pipeline from all the prior approved developments that were granted concurrency but have not been constructed. Given the continued downturn in the economy, specifically the construction industry, the probability of all pipeline trips being realized is not certain and the County will continue with operational analysis to monitor this arterial.

35th Avenue SE from Grannis Road to 168th Street SE (AU#'s 207 | 336)

Note: This urban arterial unit has two numbers because it is on the border between two transportation service areas (TSAs) and is thus counted as two arterial units in the summary tables.

Arterial unit 207 is located in TSA E and arterial unit 336 is located in TSA D. A travel time study and forecast analysis performed in October of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM	PM		
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
B	32.26	C	24.86	NB	B	28.7	E	13.4
C	25.62	B	28.22	SB	E	14.8	C	24.1

The forecast LOS E in the PM NB movements is based on incorporating and modeling the existing trips in the pipeline and the following projects and improvements identified in the adopted TIP:

- E.28.02 35th Ave SE/180 St SE Intersection Improvement
- E.28.03 35th Ave SE/Grannis Road Intersection Signal and Channelization
- E.28.05 35th Ave SE/39th Ave SE(York Rd) Corridor widening from SR 525 to 180th St SE

Improvement to the existing and forecast LOS may be accomplished with the completion of the improvements listed in the TIP together with the signal coordination of the existing and future signals along the corridor associated with the TIP projects.

The area surrounding this AU experienced a significant amount of constructed and proposed development prior to the economic downturn in 2006. The primary reason for the forecast LOS of E, in the PM NB movement, is the trips in the pipeline from all the prior approved developments that were granted concurrency but have not been constructed. Given the continued downturn in the economy, specifically the construction industry, the probability of all pipeline trips being realized is not certain and the County will continue with operational analysis to monitor this arterial.

Airport Road/128th Street SW from SR 99 to 1-5 SB on & off ramps (AU# 228)

This urban arterial unit is located in TSA D. This arterial unit is one of four arterial units in the county classified as a Class III Arterial which allows a reduced acceptable minimum LOS standard of 10 mph. This segment of Airport Road/128th Street SW is a busy commercial shopping corridor, which has been at or near capacity for some time.

Travel time studies performed in early 2011 indicated that the existing travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
C	18.54	D	14.76	EB	E	13.3	D	14.5
C	18.62	D	16.78	WB	C	18.6	D	15.7

The forecast LOS E in the AM EB movement is based on incorporating and modeling the existing traffic on the AU together with the trips in the pipeline.

Congestion in the EB movement in the AM and PM Peaks, is greatest between 8th Avenue W and I-5, and is caused by shopping district and school traffic combining with commuter through traffic trying to reach I-5 and beyond, and can stretch through the entirety of the commercial (shopping) district from 8th Avenue W to I-5. Closely spaced signals and the ramp signals on I-5 further degrade LOS and can create a bottleneck and gridlock situation on days when traffic is heavy.

Airport Road/128th Street SW is a candidate for being designated at “Ultimate Capacity” because the excessive expenditure of future public funds is not warranted. No further capacity improvements within the right-of-way of the County’s AU are practical based on the fact that the right-of-way for this AU is at its maximum width and the total number of constructed vehicle lanes is consistent with the adopted Transportation Element of the County Comprehensive Plan and the facility meets the standards of the Engineering Design and Development Standards (EDDS).

WSDOT will be installing on the SB I-5 off ramp an additional left turn lane that may improve the LOS for the EB traffic on Airport Road/128th Street SW. The County will continue with operational analysis to monitor this arterial.

112th Street SW from Beverly Park Road to Airport Road (AU# 234)

This urban arterial unit is located in TSA D. A travel time study and forecast analysis performed in May of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
E	16.7	E	14.8	EB	E	15.9	E	14.3
D	19.0	E	15.85	WB	D	19.1	E	16.0

The LOS E in the existing and forecast PM EB and WB movements is a result of this arterial unit crossing at signalized intersections, two arterial units, Beverly Park Road and Airport Road, both of which carry significantly more traffic than 112th St. SW. In addition, proximity to Paine Field is a factor during peak hours.

112th Street SW is a candidate for being designated at “Ultimate Capacity” because the excessive expenditure of future public funds is not warranted. No further capacity improvements are practical based on the fact that the right-of-way for this AU is at its maximum width and the total number of constructed vehicle lanes is consistent with the adopted Transportation Element of the County Comprehensive Plan and the facility meets the standards of the Engineering Design and Development Standards (EDDS). The County will continue with operational analysis to monitor this arterial.

Meridian Avenue S from Meadow Place SW to SR 96 (AU# 298)

This urban arterial unit is located in TSA D. A travel time study and forecast analysis performed in May of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
NR	NR	E	15.95	NB	NR	NR	E	16.9
NR	NR	C	25.69	SB	NR	NR	C	25.6

The major contributing factor to the deficient LOS in the PM NB movement (existing and forecast) is the intersection of SR 96 (128th St) and Meridian Avenue S (aka 3rd Avenue SE at its north end). The signalization at this intersection is controlled by WSDOT. The reason for the delay at this intersection is the long signal delay on the NB leg of the WSDOT SR 96/Meridian Avenue S signal. This long signal delay is a result of the high traffic volumes coming from: the I-5 NB off ramp turning EB, the EB Airport Road/128th Street SW traffic and WB SR 96 traffic. This traffic is significantly higher than the traffic on Meridian Avenue S. The County will continue with operational analysis to monitor this arterial.

Lincoln Way from Beverly Park Road to Admiralty Way (AU# 453)

This urban arterial unit is located in TSA D. A travel time study and forecast analysis performed in May of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
E	14.02	E	14.54	EB	E	14.1	E	14.4
E	13.49	F	11.04	WB	E	13.5	F	10.8

The reason for the poor LOS is because Lincoln Way crosses two state highways: SR 99 and SR 525 at signalized intersections and a County road, Lake Road, at a four way stop. The reason for the delays at the WSDOT signalized intersections is the long signal delay on the EB and WB (Lincoln Way) legs of the intersections. These long signal delays are a result of the significantly higher traffic volumes along SR 99 and SR 525 than on Lincoln Way.

One solution to improve this LOS would be to have WSDOT program the signals to give more priority to the EB and WB traffic on Lincoln Way in the AM and PM peak hours. This would have the effect of reducing the travel time on the state highways and could only be

implemented with the concurrence of WSDOT. The County will continue with operational analysis to monitor this arterial.

204th Street SW from Lynnwood City limits to 28th Avenue W (AU# 215)

This urban arterial unit is located in TSA F and within a pending annexation area by the City of Lynnwood.

A travel time study and forecast analysis performed in April of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
C	22.77	E	15.34	EB	C	22.4	E	14.9
D	19.05	E	16.66	WB	E	16.6	E	15.7

The major contributing factors to the deficient LOS in the EB PM movement are the combination of delays at the signalized intersection at Poplar Way and the all-way stop at 28th Ave W intersection. A school zone with a regulatory speed limit of 20 mph may also contribute to this slowdown. For the PM WB movement the primary contributor to the deficient LOS is the delay at the signalized intersection at Poplar Way, which also causes a delay in the WB AM movement. With signal optimization, the worst case speed improves to 14.9 mph. The County will continue with operational analysis to monitor this arterial.

Poplar Way from Lynnwood City Limits to Brier City Limits (AU# 278)

This urban arterial unit is located in TSA F and is within a pending annexation area by the City of Lynnwood. A travel time study and forecast analysis performed in May of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
D	21.9	D	17.39	NB	NR	NR	E	16.6
C	24.6	E	15.42	SB	NR	NR	E	14.1

This section of Poplar Way is a 2-lane urban collector with 3 traffic signals along its length. This AU serves as an important north-south corridor between the Brier / Kenmore residential and commercial areas on the south and the Alderwood Mall commercial area along with I-5 / SR 524 access on the north.

The reasons for the declining LOS are somewhat complex and not the result of a single issue. Several signals, a large percentage of “pass through” traffic; the crossing of several roads that carry equal or greater amounts of traffic; the two-lane nature of the road; the slower 30 mph posted speed, schools in the area and pipeline trips contribute to the declining LOS. The County will continue with operational analysis to monitor this arterial.

**York Road/39th Avenue SE from Grannis Road to SR 524
(AU# 337 and AU# 420)**

Note: This arterial unit has two numbers because it is on the border between two transportation service areas (TSAs) and is thus counted as two arterial units in the summary tables.

Arterial unit 337 is located in TSA F and arterial unit 420 is located in TSA E. This AU is within a pending annexation area by the City of Bothell. A travel time study and forecast analysis performed in October of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	Direction	LOS	MPH	LOS	MPH
B	32.26	C	24.86	NB	B	31.3	E	13.8
C	25.62	B	28.22	SB	E	14.5	D	21.2

The forecast LOS E in the PM NB movement is based on modeling the future intersection signals at 35th Ave SE & 198th PL SE and. 35th Ave SE & Grannis Road. The forecast LOS E in the AM SB movement and the LOS D in the PM SB movement are caused by the WSDOT signal at SR 524. To improve the forecast LOS WSDOT would have to program the signal to give more priority to the NB and SB traffic in the AM and PM peak hours. This would have the effect of reducing the travel time on the state highway. The forecast LOS takes into account the following projects and improvements identified in the adopted TIP:

- E.28.03 35th Ave SE/Grannis Road Intersection Signal and Channelization
- E.28.05 35th Ave SE/39th Ave SE(York Rd) Corridor widening from SR 525 to 180th St SE

Improvement to the existing and forecast LOS may be accomplished with the completion of the improvements listed in the TIP together with the signal coordination of the existing and future signals associated with the TIP projects along the 35th Ave SE corridor.

The area surrounding this AU experienced a significant amount of constructed and proposed development prior to the economic downturn in 2006. The primary reason for the forecast LOS of E, in the PM NB movement, is the trips in the pipeline from all the prior approved developments that were granted concurrency but have not been constructed. Given the continued downturn in the economy, specifically the construction industry, the probability of all pipeline trips being realized is not certain and the County will continue with operational analysis to monitor this arterial.

Bunk Foss & Ritchey Roads from 99th Ave SE to South Machias Road (AU# 256)

This rural arterial unit is located in TSA C. A travel time study and forecast analysis performed in September of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS				Direction	Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
A	27.46	B	25.08	EB	A	27.7	B	26.0
D	23.33	A	29.22	WB	D	23.2	A	30.7

The primary reason for the substandard AM westbound LOS is the delay resulting from the combination of the SR 2 westbound off-ramp and the signal at SR 9, which is controlled by WSDOT. To improve this LOS WSDOT would have to program the signal to give more priority to the WB traffic in the AM peak hours. This would have the effect of reducing the travel time on SR 9. As of the date of this report no work is planned and no decision has been made as to a change in status for this arterial unit. The County is continually working with the WSDOT to discuss changes to the lane channelization and signalization for the westbound traffic onto SR 9. The County will continue with operational analysis to monitor this arterial.

180th Street SE from SR 9 to Broadway Avenue (AU# 262)

This urban arterial unit is located in TSA E. A travel time study and forecast analysis performed in October of 2010 indicated that the existing and forecast travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS				Direction	Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
B	31.85	B	30.03	EB	B	31.7	B	29.3
D	17.85	E	13.43	WB	E	16.9	F	7.3

The primary reasons for the low existing and forecast PM WB LOS is the signal and the number of turn and through lanes on 180th Street SE at the SR 9 intersection. They consist of 1 combined through and left turn lane and 1 right turn lane with a queue for a maximum of 2 vehicles.

WSDOT has a SR 9 widening project that extends from 212th Street SE to 176th Street SE, which includes improvements to all four legs of the SR 9 / 180th Street SE intersection. The improvements on both the EB and WB 180th Street SE legs consist of, 2 left turn lanes, 1 through lane and 1 right turn lane. For the east leg, the length of the queues is 200 feet for the two SB turning lanes and 110 feet for the NB turn lane. For the west leg, the length of the queues is over 250 feet for the two NB turning lanes and 110 feet for the SB turn lane. The improvements on both SR 9 legs consist of 2 left turn lanes over 450 feet, 2 through lanes and 1 right turn lane over 350 feet. WSDOT will also be installing an Intelligent Transportation System (ITS) which will result in more efficient signal priority management.

The additional lane improvements should allow more traffic to flow through the intersection given the same signal duration timing and further improvements should be realized with the ITS. The County will continue with operational analysis to monitor this arterial.

Summary Tables

Table 1: Summary of Level of Service (LOS) Status

Below is a LOS summary of arterial units for the past six years showing those above or below the screening level and a more detailed breakout of those below the screening level.

	2006	2007	2008	2009	2010	2011	% of 2011 AU's to Total AU's
LOS above screening level ^a	252	250	251	259	236	240	88.6%
LOS below screening level ^a	64	53	50	42	34	31	11.4%
Total number of arterial units	316	303	301	301	270	271	100.0%
Breakout of arterial units below screening level							
Monitoring level	25	23	19	10	11	11	4.1%
Operational Analysis level	30	22	21	25	17	17	6.3%
Arterial Units in Arrears	8	7	7	4	3	0	0.0%
Arterials at Ultimate Capacity	1	1	3	3	3	3	1.1%
Total below Screening Level	64	53	50	42	34	31	11.4%

^a See *Review of Concurrency Management System* described above for an explanation of the various 'tiers' of the concurrency management system. In simple terms, arterial units above the screening level are those clearly passing the LOS test. Below the screening level, as congestion increases, the level of analysis typically goes from monitoring to operational analysis which determines if the arterial unit is in arrears.

Table 2: Summary of Arterial Units at Risk

Table 2 shows a summary of the arterial units at risk. The data includes; the AU name and number, TSA, if the AU listed in Table 17 of the Transportation Element (TE), ALOSI or CASI designation, status of improvements, if the AU is located within a pending annexation area, and if the AU is a candidate for ultimate capacity designation. The table is by TSA in a descending order.

The abbreviations used in the table are:

ALOSI	Arterial LOS Improvements	ANNEX PEND	Annexation Pending
CASI	Critical Arterial System Improvements	UCC	Ultimate Capacity Candidate
NP	Not Programmed	IP-TIP	Improvements Programmed in TIP
DR	Design Report	PIC	Programmed Improvements Completed

Name of Arterial Unit	AU No.	TSA	Table 17	ALOS / CASI	Status of Imp.	Annex Pend	UCC
Bunk Foss & Ritchey Roads from 99 th Ave SE to South Machias Road	256	C	NO	NA	NP	NO	NO
Airport Way from SR 9 to 99 th Ave SE	353	C	YES	CASI	DR, NP	NO	NO
35 th Ave SE from 168 th St SE to Seattle Hill Road	204	D	YES	CASI	IP-TIP	NO	NO
Airport Road/128 th St SW from SR 99 to 1-5 SB on & off ramps	228	D	NO	NA	PIC	NO	YES
112 th Street SW from Beverly Park Road to Airport Road	234	D	YES	CASI	PIC	NO	YES
Meridian Ave S from Meadow Place SW to SR 96	298	D	NO	NA	NP	NO	NO
Lincoln Way from Beverly Park Road to Admiralty Way	453	D	NO	NA	NP	NO	YES
35 th Ave SE from Grannis Road (188 TH St SE) to 168 th Street SE	207/336	D/E	YES	CASI	IP-TIP	NO	NO
180 th St SE from SR 9 to Broadway Ave	262	E	YES	ALOSI	IP-TIP	NO	NO
York Road/39 th Ave SE from Grannis Road to SR 524	337/420	E/F	YES ¹	CASI	IP-TIP	YES (BOTH)	NO
Poplar Way from Lynnwood City Limits to Brier City Limits	278	F	YES	CASI	NP	YES (LYNN)	NO
204 th St SW from Lynnwood City limits to 28 th Avenue W	215	F	NO	NA	NP	YES (LYNN)	NO

¹ Listed as part of the 180th St SE corridor improvements

Table 3: Summary of Concurrency Determinations

Table 2 shows a summary of the concurrency determinations that were made in 2010. The data is organized by transportation service areas and by size and type of development. Size is determined by the number of peak-hour trips (PHT).

Size and Type of Development	2010 Totals by Transportation Service Areas						Year By Year Total For Last 6 Years					
	A	B	C	D	E	F	2010	2009	2008	2007	2006	2005
Small Residential (< 7 PHT)	2	1	0	6	0	0	9	28	65	148	168	93
Medium Residential (7 – 50 PHT)	1	0	0	3	1	1	6	18	23	132	215	120
Large Residential (> 50 PHT)	0	2	0	7	0	0	9	2	5	24	34	17
Small Non Residential (< 5 PHT)	0	1	2	1	0	0	4	6	13	5	3	7
Medium Non Residential (5 – 50 PHT)	0	1	0	2	2	0	5	14	10	18	13	11
Large Non Residential (> 50 PHT)	0	1	0	1	0	0	2	1	6	4	8	4
Total	3	6	2	20	3	1	35	69	122	331	441	252

Table 4: Concurrency Projects in the Currently Adopted TIP

The Snohomish County Council adopts the annual Transportation Improvement Program (TIP) in November of the year preceding this report. The TIP is divided into separate Groups. Group E is titled “Capacity” and identifies those projects that are designed to improve capacity on the County’s arterial network.

Within Group E are projects that will improve AU’s listed in this report with concurrency problems, i.e. in arrears or at risk of going into arrears (at risk).

To find information on the projects listed in Table 3 below, or all the projects in the TIP, you may view the currently adopted TIP on the County’s web site. The web site address is:

http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/TES/ProgramPlanning/

Table 3 lists those “Concurrency Projects” adopted in the TIP that will improve AU’s listed in this report as being in arrears or are at risk of going into arrears. The list is arranged in order of the projects TIP number.

TIP #	PROJECT	TSA
E.28.02	35 AVE SE/180 ST SE INTERSECTION IMPROVEMENTS	D/E
E.28.03	35 AVE SE/GRANNIS RD INTERSECTION SIGNAL AND CHANNELIZATION	D/E
E.28.04	35 AVE SE AND SEATTLE HILL ROAD CHANNELIZATION	D
E.28.05	35 AVE SE/39 AVE SE TO 180 ST SE CORRIDOR WIDENING	D/E/F
E.28.06	35 AVE SE: 180ST SE TO 152 ST SE CORRIDOR WIDENING	D/E/F
E.31.02	52 AVE W (BEV-ED RD) TO LYNNWOOD C/L TO 148 ST SW	D
E.32.04	51 AVE NE AND 100 ST NE INTERSECTION IMPROVEMENTS	A
E.33.00	GRANITE FALLS ALTERNATE ROUTE: SR 92 TO MOUNTAIN LOOP HWY	B
E.33.01	GRANITE FALLS ALTERNATE ROUTE: JORDAN RD /ENGBRETSON RD ROUNDABOUT	B
E.47.02	SEATTLE HILL RD FROM 35 AVENUE SE TO 132 ST SE 3 INTERSECTION IMPROVEMENTS	D
E.50.01	156 ST SE: 35 AVE SE TO 55 AVE SE IMPROVEMENTS	D
E.52.03	E GIBSON RD / ASH WAY AND 128 ST SW INTERSECTION IMPROVEMENTS	D
E.52.04	E GIBSON RD INTERSECTION IMPROVEMENTS: ASH WAY AND 128 ST SW	D

Table 5: Status of Arterial Units Compared With Prior Year

Table 5 shows those arterial units, sorted by TSA, whose current status, as compared to the prior year, is either: Operational Analysis (OA), At Risk (AR), or In Arrears (AUJA). A status of Screening (S) or Monitoring (M) will only be used when the status has improved to that level from the prior year and if the AU remains at screening or monitoring the next year it will be removed from the list. The definitions of the different arterial unit status and methods for determining that status can be found on pages 2 and 3 of this report and in DPW Rule 4224.

The abbreviations used in the table are:

<p><u>Arterial Unit Status</u></p> <p>S = Screening</p> <p>M = Monitoring</p> <p>OA = Operational Analysis</p> <p>AR = At Risk</p> <p>AUJA = Arterial Unit in Arrears</p> <p>UC = Ultimate Capacity</p> <p><u>OA Level Study Terms</u></p> <p>TTS = Travel Time Study</p> <p>IntTTS = Intermediate TTS</p> <p>RECON = Reconnaissance</p>	<p><u>Additional Terms</u></p> <p>LOS = Level of Service</p> <p>ADT = Average Daily Traffic</p> <p>FCST = Forecast</p> <p>V/C = LOS estimate based on comparison of volumes</p> <p>W / IMPS = With fully-funded improvements completed or expected to be complete within six years</p> <p>U or R = U = Urban & R = Rural</p> <p>PEND = Pending</p> <p>UNIT = Number assigned to the arterial unit</p> <p>NB = North Bound WB = West Bound</p> <p>SB = South Bound EB = East Bound</p>
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TSA	ROAD NAME	FROM	TO	RIU	UNIT	2010	2011	2011 Notes
B	BUNK FOSS RD / RITCHEY RD	99 AVE SE	S MACHIAS RD	R	256	OA / AR	OA / AR	WB AM & FCST LOS D
C	MARSH RD	LOWELL-LARIMER RD	SR 9	U	198	AUJA	S	WORST CASE LOS B
C	AIRPORT WY	SR 9	99 AVE SE	U	353	AUJA	OA / AR	AM/PM WB LOS E: FCST LOS E
C	SPRINGHETTI RD	BROADWAY AVE	AIRPORT WY	R	445	OA	OA	AM NB LOS C: FCST LOS C
D	SEATTLE HILL RD	35 AVE SE	SR 96	U	202	AUJA	M	AM/PM NB FCST LOS C

TSA	ROAD NAME	FROM	TO	RIU	UNIT	2010	2011	2011 Notes
D	35 AVE SE	168 ST SE	SEATTLE HILL RD	U	204	M	OA / AR	PM FCST LOS F
D	164 ST SW/SE	I-5 NB ON & OFF RAMPS	MILL CREEK C/L	U	218	UC	UC	NO CHANGE FROM LAST YEAR
D	164 ST SW	LYNN C/L (Spruce Way)	I-5 SB ON/OFF RAMPS	U	219	UC	UC	NO CHANGE FROM LAST YEAR
D	ALDERWOOD MALL PKWY	164 ST SW	LYNN C/L	U	220	OA	M	PM EXISTING & FCST LOS D
D	BEVERLY PARK RD	SR 525	AIRPORT RD (EVT)	U	227	OA	M	PM WB EXISTING & FCST LOS D
D	AIRPORT RD / 128 ST SW	SR 99	I-5 SB ON/OFF RAMPS	U	228	OA / AR	OA / AR	PM EB FCST LOS F: LOS E WITH SIGNAL OPT. IMPS
D	4 AVE W	128 ST SW	112 ST SW	U	229	OA / AR	M	AM SB LOS D, PM EXISTING & FCST LOS D
D	112 ST SW	BEVERLY PARK RD	AIRPORT RD	U	234	OA / AR	OA / AR	EXISTING & FCST LOS E, AM WB LOS D
D	36 AVE W	LYNN C/L s/o 164 ST SW	164 ST SW	U	287	OA	M	AM NB EXISTING & FCST LOS E
D	GIBSON RD / 134 ST / 4 AVE / ASH WY	SR 99	128 ST SW	U	293	OA	OA	PM WB FCST LOS E
D	MERIDIAN AVE S / 130 ST SE / 3 AVE SE	MEADOW PL SW	SR 96	U	298	OA / AR	OA / AR	PM NB EXISTING & FCST LOS E
D	4 AVE W	112 ST SW	EVT C/L	U	352	OA / AR	OA	PM NB EXISTING & FCST LOS E
D	LINCOLN WY	BEVERLY PARK RD	ADMIRALTY WY	U	453	OA / AR	OA / AR	PM WB EXISTING & FCST LOS F, REMAINDER OF AM/PM: LOS E
D/E	35 AVE SE	GRANNIS RD	168 ST SE	U	336/207	M	OA / AR	AM SB FCST LOS E, PM NB FCST LOS E
E	SNOH-WOODINVILLE RD	KING CO LINE	SR 522 (EB RAMPS)	U	211	UC	UC	NO CHANGE FROM LAST YEAR

TSA	ROAD NAME	FROM	TO	RIU	UNIT	2010	2011	2011 Notes
E	180 ST SE	SR 9	BROADWAY AVE	U	262	OA	OA / AR	AM WB FCST LOS E, PM WB FCST LOS F: LOS E WITH SIGNAL OPT. IMPROVEMENTS
E/F	YORK RD / 35 AVE SE	SR 524	GRANNIS RD	U	337/420	OA / AR	OA / AR	AM SB FCST LOS E, PM NB FCST LOS E
F	204 ST SW	LYNN C/L	28 AVE W	U	215	OA / AR	OA / AR	PM EXISTING & FCST LOS E
F	POPLAR WY	LYNN C/L	BRIER C/L	U	278	OA / AR	OA / AR	PM SB EXISTING LOS E: FCST LOS E (BOTH DIRECTIONS)