
2017 CONCURRENCY REPORT

An Annual Report on the Level-of-Service (LOS) of the County's Arterial Road Network from April 1, 2016 to March 31, 2017



Prepared by the Transportation and Environmental Services
Division of the Department of Public Works

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Executive Summary

This Concurrency Report details the Level-of-Service (LOS) of Snohomish County's arterial road system. This report, where possible and known, identifies strategies that may be implemented by either the Department of Public Works (DPW) or another jurisdiction to remedy the LOS deficiencies.

Summary of Arterial Units at Risk of Falling into Arrears, in Arrears or at Ultimate Capacity

Status of Arterial Units	2016	2017
Arterial Units at Risk of Falling into Arrears	9 ¹	12 ²
Arterial Units in Arrears	0	0
Arterial Units at Ultimate Capacity	3	3

The number of Arterial Units in Arrears has remained at zero since 2011 and the number of Arterial Units at Ultimate Capacity has remained at 3 since 2007.

List of Acronyms Used in This Report³

ALOSI	Arterial LOS Improvement
AU	Arterial Unit
AUAR	Arterial Unit At Risk of Falling into Arrears
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 under the jurisdiction of the WSDOT)
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 required based on the LOS being at a level high enough not to warrant concern.
U	Urban
R	Rural

- ¹ The actual number of AU's At Risk in last year's report was 12 because three of the AU's are on the border of two TSA's and are given a separate AU number for each TSA and are counted as 2 arterial units each.
- ² The actual number of AU's At Risk in this year's report is 16 because four of the 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 2 arterial units each.
- ³ There are additional abbreviations in other sections of this report that are applicable to those sections.

Review of the Concurrency Management System

Consistent with the requirements of the Growth Management Act (GMA) and the concurrency requirements of Snohomish County Code (SCC) Chapter 30.66B for new development, the County is required to 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 other developments that have been deemed concurrent (pipeline trips), and;
- 2) The additional capacity on the road system that will result from 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 LOS 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 Chapter 30.66B SCC.
- 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 if the LOS on an arterial unit is currently operating below the adopted standard.
- 4) Future Level-of-Service Forecast: A future LOS forecast is used to determine if the LOS within six years is likely to be operating below the 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.snohomishcountywa.gov/888/Traffic-Mitigation-Concurrency>

Arterial Unit Status Definitions

Arterial Units at Risk of Falling into Arrears (AUAR)

Arterial units that are close to being deficient, i.e. 1-2 mph above LOS F for urban roads or LOS D for rural roads, are considered to be at risk of falling into arrears. For arterial units meeting these criteria, DPW utilizes the Operational Analysis method to determine the existing and future (forecast) LOS, and monitors the units with travel time and delay studies conducted on an annual basis (see Methods for Determining Level-of-Service (LOS) above).

Occasionally, the operating conditions and contributing factors associated with an arterial units decline in LOS to the level where that arterial unit is considered to be "At Risk", can be attributed to another jurisdictions roadway. When this is the case, the solution to improve the LOS is entirely under the control of the other jurisdiction. For this type of situation the County has little, if any, control over the solution, and if the other jurisdiction will not agree to the County's solution, the County is forced to accept the existing condition.

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. DPW utilizes the Operational Analysis method to determine the existing and future (forecast) LOS, and monitors the units with travel time and delay studies conducted on an annual basis.

Arterial Units at Ultimate Capacity (AUUC)

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."

2017 Concurrency Report

This concurrency report covers the period from April 1st of the previous year through March 31st of the current year and details the Level-of-Service (LOS) of Snohomish County's arterial road network. The report, where possible and known, identifies strategies that may be implemented by either the Department of Public Works (DPW) or another jurisdiction to remedy the LOS deficiencies.

Number of Arterial Units

Snohomish County currently has 273 urban and rural arterial units. Of the total arterial units 236, or 86.6%, have not reached the ADT thresholds established in SCC 30.66B.101 that trigger the requirement for screening and monitoring, and are operating at or above LOS D for urban arterial and LOS C for rural arterials. See Table 1 Summary of Level-of-Service (LOS) Status below for additional information.

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 SW/SE 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

As of the date of this report, there are no arterial units in arrears.

Arterial Units at Risk of Falling into Arrears

The following is a list of those arterial units considered to be at risk of falling into arrears.

Urban / Rural	TSA	AU #	Arterial Name and Limits
U	D	227	Beverly Park Road from SR 525 to Airport Road
U	D	228	Airport Road/128 th St SW from SR 99 to I-5 SB On and Off Ramps
U	D	204	35 th Ave SE from 168 ST SE to Seattle Hill Road
U	D	288	Ash Way from Maple Rd to 164 th St SW
U	D / E	207 / 336	35 th Ave SE from 188 ST SE to 168 ST SE
U	D / F	457 / 458	Maple Rd/178 th St SW from Ash Way to Larch Way

U	E / F	337 / 420	York Road/35 th Ave SE from 188 th St SE to SR 524
U	E / F	209 / 332	39 th Ave SE from 228 th St SE to SR 524
U	F	214	212 th St SW / Larch Way from MTLK TERR C/L to Cypress Way N-Leg
U	F	217	North Road from SR 524 to 176 th PI SW
U	F	220	Alderwood Mall Parkway from LYNN C/L to 164 th ST SW
U	F	278	Poplar Way from LYNN C/L to Brier C/L

Analysis of Urban Arterial Units at Risk of Falling into Arrears

The following is a comprehensive analysis of those arterial units considered to be at risk of falling into arrears. The analysis shows the AU number, AU name and limits, TSA and date the last travel time and or forecast were performed, and the existing and forecast LOS with travel speeds.

(AU# 227) Beverly Park Road from SR 525 to Airport Road

This urban arterial unit is in TSA D and is located at the south end of the Paine Field industrial/commercial area. Travel time studies performed on March 16, 2016 for the AM and on June 14, 2016 for the PM indicated that the existing 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	28.64	C	23.81	NB	C	27.60	C	22.90
D	19.58	E	16.40	SB	D	18.80	E	14.90

The major contributing factors for the forecast LOS E in the PM SB direction is the existing traffic from the industrial / commercial and residential uses in the area (Boeing is to the north) and the trips in the pipeline. The signalized intersection at Beverly Park Road and SR 524 (Airport Rd) is a state controlled intersection which WSDOT gives SR 524 the higher priority, resulting in a reduced LOS on the County arterial. DPW will continue to work with WSDOT to the extent possible to improve the efficiency of this AU.

(AU# 228) Airport Road/128th ST SW from SR 99 to I-5 SB On and Off Ramps

This urban arterial unit is located in TSA D. Travel time studies performed on April 25, 2013 and April 15, 2014 for the AM period and May 2, 2013 for the PM period and a forecast analysis indicated that the existing and forecast travel time speeds 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	
C	21.11	E	10.91	EB	C	19.8	E	12.1
D	16.82	D	15.39	WB	D	14.30	D	18.0

The AU is operating at the same level as shown in the 2016 Concurrency Report with the major contributing factors for the (existing and forecast) deficient LOS in the PM EB direction being the left turn lanes from the I-5 southbound off ramp to 128th St SW and road construction in the area. WSDOT added an additional southbound left turn lane which doubled the amount of vehicles turning left (or eastbound) onto 128th St SW

from I-5. This change, combined with the State signal at the east end of the I-5 & 128th St SW overpass, resulted in a significant delay for the EB traffic on 128th St SW between 4th Ave W and I-5. However, if the State signals are left as is, the corridor forecast will be LOS F at 8.3 mph in the PM EB. DPW will review this AU to determine if it meets the criteria for being designated Multimodal.

DPW will continue to work with WSDOT to the extent possible to improve the efficiency of this AU.

(AU# 288) Ash Way from 164th Street SW to Lynnwood City Limits

This arterial unit (AU) is located in TSA D. A travel time study performed on September 22, 2016 and a forecast analysis indicated the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
D	20.21	C	22.44	NB	C	22.20	E	14.00
B	32.13	D	19.31	SB	B	31.60	D	18.20

This section of Ash Way south of 164th Street SW is a 2-lane urban major collector controlled by a signal on the north end and a 2-way stop condition on the south end. This AU serves as an alternate to Alderwood Mall Parkway for north-south traffic flowing between major Lynnwood shopping areas to the south and Interstate 5 or residential areas north and east. Factors contributing to the declining LOS are; the intersection of Ash Way / 164th St SW being in close proximity to signalized on/off ramps of Interstate 5 to the east; Ash Way north of 164th having a large park and ride lot and a large number of mid-rise developments; the large number of vehicles during the EB PM peak hour; heavy NB right and SB left turn traffic competing with the EB through traffic with only about 400 feet between Ash Way and the I-5 SB on ramps.

The issue going southbound is the proximity of the Ash Way and Maple Road intersection (a two-way stop) to the signalized intersection of Maple Road and Alderwood Mall Parkway (only about 300 feet). Ash Way is often used as an alternative route to and from the large-scale shopping areas in and around the Alderwood Mall. Heavy use of the two-way stop controlled intersection in close proximity to the signalized intersection can (at times) contribute to a peak-hour bottleneck at the south end.

DPW will continue to analyze this corridor to determine appropriate solutions to improve the LOS.

(AU# 457/458) Maple Road / 178th Street SW from Lynn City Limits to Larch Way

These arterial units (AU) are located in TSA D and F. A travel time study performed on September 22, 2016 and a subsequent forecast analysis indicated the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
C	26.98	D	17.48	EB	D	21.10	E	13.20
C	27.91	C	26.87	WB	C	26.80	C	23.50

This section of Maple Road and 178th Street SW is a 2-lane urban major collector and is the only east-west crossing of Interstate 5 between 164th Street SW on the north and SR 524 to the south.

The road is nearly equidistant between the 164th and SR 524 (about a mile from each). Nearly 9,000 vehicles per day use the Maple Road overpass of Interstate 5 to avoid congestion and signals on the other routes. Factors contributing to the declining LOS are EB traffic queuing at the all-way stop intersection of Maple Road and Butternut Road; a lesser eastbound queue at the all-way stop of Larch Way and 178th Street SW; and the intersection of Ash Way and Maple Road (only about 300 feet east of busy Alderwood Mall Parkway) can be a choke point, especially for WB traffic in the PM peak.

DPW will continue to analyze this corridor to determine appropriate solutions to improve the LOS.

(AU# 204) 35TH Ave SE from 168 ST SE to Seattle Hill Road

(AU# 207 and AU# 336) 35TH Ave SE from 188 ST SE to 168 ST SE

(AU# 337 and AU# 420) York Road/35TH Ave SE from 188th ST SE to SR 524

Note: These three urban arterial units are typically referred to as the 35th Ave SE corridor. Because a TSA border runs down the middle of two arterial road sections, they are being counted as two arterial units in the summary tables.

North Section: (AU# 204) 35th Ave SE from 168th St SE to Seattle Hill Road is located in TSA D. A travel time study and forecast analysis performed in February 2, 2016 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		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
B	28.94	D	18.35	NB	C	26.80	E	14.90
B	32.71	B	30.41	SB	B	28.10	B	33.30

Middle Section: (AU# 207 and AU# 336) 35th Ave SE from 188th St SE to 168th St SE. AU# 207 is located in TSA E and AU# 336 is located in TSA D. A travel time study and forecast analysis performed on February 2, 2016 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		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
B	28.33	C	23.72	NB	B	31.5	D	21.30
D	18.13	B	30.09	SB	E	14.1	C	23.60

South Section: (AU# 337 and AU# 420) York Road/35th Ave SE from 188th St SE to SR 524. AU# 337 is located in TSA F and AU# 420 is located in TSA E. A travel time study and forecast analysis performed on February 2, 2016 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	30.76	C	23.75	NB	D	21.9	E	13.00
E	16.04	D	19.20	SB	E	16.6	E	15.70

This is one of the fastest growing areas of Snohomish County and the new construction associated with that growth contributes to the decreased LOS of the AU. The major contributing factor for the forecast LOS E in both directions along AUs 207 and 337 is the trips in the pipeline from all the approved (but not completed) and pending developments in the area, including pipeline trips from the future Northshore School District (NSSD) high school. The new high school is located at the SE corner of 35th Ave SE and 188th St SE and will open in the fall of 2017.

The NSSD and private developers constructed two new County roads (191st St SE and 39th Ave SE). 191st St SE runs from 35th Ave SE eastward along the NSSD's southern boundary then turns south and becomes 39th Ave SE connecting to Jewel Road. Several new housing developments in the area have been completed, with two being located on opposite sides of York Rd at the York and Jewel Road intersection and one on 39th Ave SE across from the new high school.

The County completed a Small Areas Transportation Study to determine what other road projects in the area would help to alleviate the pressure on the 35th Ave SE corridor. The study determined that the extensions of 43rd Ave SE to the north connecting to Sunset Road and to the south connecting to SR 524 would provide relief.

Two new signals on 35th Ave SE at the 198th St SE/197th St SE intersections have been completed as well as the signal at 35th Ave SE and 188th St SE (Grannis Rd). Fine tuning of the signal timing is still ongoing to optimize operations along the corridor. Channelization for the two new developments at the York Road and Jewel Road intersection needs to be completed.

Improvements programed and funded in the current 2017 – 2022 TIP to improve the LOS are:

- Project E28.05. 35th Ave SE/39th Ave SE (York Rd), Corridor widening from SR 524 to 180th St SE, Phase II
- Project E28.06. 35th Ave SE, From 180 St SE to 152 St SE (Seattle Hill Rd), Phase I
- Project E.59 43rd Ave SE, From SR 524 to Sunset Road at 180th St SE

Entire Corridor: From SR 524 to Seattle Hill Road. The following table shows the existing and forecast LOS when measured on all three sections functioning as one contiguous corridor.

Existing LOS				Direction	Forecast LOS			
AM		PM			AM		PM	
LOS	MPH	LOS	MPH	LOS	MPH	LOS	MPH	
B	29.28	C	22.51	NB	C	25.90	E	16.60
D	20.05	C	26.60	SB	E	13.90	C	22.50

When the LOS is measured along the entire corridor, the LOS improves in all times and directions. Because of the ongoing development in the area, funded road capacity projects, and signal timing modifications the LOS is expected to improve.

DPW will continue to analyze this corridor to determine appropriate solutions to improve the LOS.

(AU# 209 and AU# 332) 39TH Ave SE from 228th St to SR 524

This urban arterial unit is located in TSAs E and F. AU# 209 is located in TSA E and AU# 332 is located in TSA F. An AM travel time study performed on June 7, 2016, a PM travel time study performed on September 29, 2016 and a forecast analysis 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		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
C	23.39	E	16.73	NB	E	16.40	E	13.20
C	22.38	B	29.82	SB	D	18.00	B	29.80

The major contributing factors for the existing and forecast LOS E in the PM NB direction are the number of new pipeline trips from the large number of new developments occurring on both the east and west side of this arterial unit and the many trips being diverted to this AU due to higher volumes on other roads.

DPW will continue to analyze this corridor to determine appropriate solutions to improve the LOS.

(AU# 214) 212th St SW / Larch Way from MTLK TERR C/L to Cypress Way N

This urban arterial unit is located in TSA F. A travel time study performed on September 21, 2016 and a subsequent forecast analysis indicated that the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
C	24.31	E	16.33	EB	D	21.50	E	14.90
D	18.75	C	25.60	WB	E	16.10	C	24.20

This AU is an important east-west connector between Mountlake Terrace and Bothell. The major contributing factor for the existing and forecast LOS E in the PM EB direction and the AM WB direction is primarily due to lengthy delays at the signalized Poplar Way intersection. Another contributing factor is the queues at both the 28th Ave W and Cypress Way intersections because they are both all-way stops. Overall, the EB PM LOS for this arterial unit is still projected to be above the standard.

DPW will continue to analyze this corridor to determine appropriate solutions to improve the LOS.

(AU# 217) North Road from SR 524 to 176TH Place SW

This arterial unit (AU) is located in TSA F. This section of North Road is an urban major collector with 2 traffic signals along its length. A travel time study performed on September 28, 2016 and a subsequent forecast analysis indicated the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
B	30.19	B	34.34	NB	B	28.60	B	34.60
F	11.10	D	19.76	SB	E	13.20	D	18.60

The major contributing factors for the existing and forecast declining LOS is the SB delay at SR 524 in both the AM and PM peak hours, and to a lesser extent, the delay for the AM SB movement at the Lynnwood High School signal. The worst case overall existing LOS for the AU is F in the AM SB direction. The AM forecast LOS E in the SB direction is based on optimizing the signals at Lynnwood High School and SR 524. WSDOT approval will be needed for any changes to the signal at SR 524. Further operational analysis will need to be performed to encompassing the entire AU to arrive at a definitive conclusion on the LOS of the AU.

The segment of this AU from SR 524 to 164th Street SW was recently widened to a 3-lane urban section with final construction activities expected to be completed by Fall of 2016 (2016 – 2021 TIP Project E.45.02).

(AU# 220) Alderwood Mall Parkway from LYNN C/L to 164TH ST SW

This urban arterial unit is located in TSA F. A travel time study performed on September 27, 2016 and a subsequent forecast analysis indicated the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
C	25.08	D	18.86	NB	D	21.50	D	18.90
C	25.66	D	17.78	SB	C	23.10	E	13.20

This AU is a 3-lane Urban Major Collector that serves as an important north-south corridor between the Alderwood Mall and Costco commercial areas to the south all commercial and residential areas to the north, east and west. The major contributing factors for the declining LOS are not the result of a single issue but are comprised of multiple things. This corridor has 3 traffic signals, with a 4th that is under the jurisdiction of the City of Lynnwood and creates significant delays. This corridor is a mix of 2 to 5 lanes but the 2-lane section just north of the midway point can create a bottleneck if traffic is heavy. With people avoiding the I-5 and SR-405 intersection slowdowns and taking surface streets, the corridor also has a large percentage of “pass through” traffic. Finally, the slower 30 mph posted speed, traffic from schools in the area, and pipeline trips, all contribute to the declining LOS. The section of the AU from 164th Street SW to SR 525 SB on/off ramps is programmed in the 2017 – 2022 Transportation Improvement Program (TIP) (Project E.60) for widening to a 5-lane urban section with bike lanes and pedestrian facilities, with preliminary engineering (PE) scheduled to begin in 2019. In addition, a signal is to be constructed at the SR 525 SB Ramps.

The county will continue with operational analysis to monitor this arterial until the project is completed.

(AU# 278) Poplar Way from LYNN C/L to Brier C/L

This urban arterial unit is located in TSA F. A travel time study performed on January 13, 2016 and a subsequent forecast analysis indicated the travel time speed and LOS in the AM and PM peak hours to be:

Existing LOS					Forecast LOS			
AM		PM		Direction	AM		PM	
LOS	MPH	LOS	MPH		LOS	MPH	LOS	MPH
D	20.82	E	16.77	NB	D	20.40	E	16.00
D	18.83	E	13.15	SB	D	18.2	E	14.10

This section of Poplar Way is a 2-lane urban major collector with 3 traffic signals along its length and 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 major contributing factors for the declining LOS are not the result of a single issue but are comprised of multiple things, i.e. several signals along the corridor with roads that carry equal or greater amounts of traffic, a large percentage of “pass through” traffic; being only two-lanes; the slower 30 mph posted speed, traffic from schools in the area, and pipeline trips, all contribute to the declining LOS. The section from Lynnwood City Limits to Larch Way is programmed in the 2017 – 2022 Transportation Improvement Program (TIP) (Project E.54) for widening to a 3-lane urban section with bike lanes, curb, gutter and sidewalk, with preliminary engineering (PE) scheduled to begin in 2019.

The county will continue with operational analysis to monitor this arterial.

Analysis of Rural Arterial Units at Risk of Falling into Arrears

There are no Rural Arterial Units at Risk of Falling into Arrears.

Summary Tables

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

Table 1 is a summary of the LOS of all arterial units for the past six years. Above the screening level means the ADT volume on the unit has not reached the thresholds in SCC 30.66B.101 needed to trigger screening. Below the screening level means that the ATD volume has reached or exceeded the ADT thresholds in SCC 30.66B.101.

The top half of the table gives a general breakdown of those AU's above or below the screening level. The bottom half of the table shows a more detailed breakout of just those AU's below the screening level.

Breakout of The No. of Arterial Units Above or Below Screening Level							
LOS STATUS	2012	2013	2014	2015	2016	2017	% of 2016 AU's to Total AU's
LOS above screening level ¹	244	242	238	230	240	236	86.6%
LOS below screening level ¹	26	25	29	34	33	37	13.4%
Total number of arterial units	270	267	267	264	273	273	100%
Breakout Of Arterial Units Below Screening Level							
Monitoring level ¹	10	14	12	20	11	15	5.5%
Operational Analysis level ²	16	11	17	14	22	22	8.1%
Arterial Units in Arrears	0	0	0	0	0	0	0%
Total below screening level	26	25	29	34	33	37	13.6%

¹ See "Review of Concurrency Management System" described on page 2 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. For those arterial units below the screening level as congestion increases the level of analysis typically goes from monitoring to operational analysis which determines if the arterial units LOS does not meet standards.

² See Table 4 "Status of Arterial Units Compared with Prior Year" for more detailed information for all arterial units at this level.

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, the TSA, if the AU is listed in Table 14 of the adopted Transportation Element (TE), if the improvement is an Arterial Level-of-Service Improvement (ALOSI), a Critical Arterial System Improvement (CASI), or an Arterial System Enhancement (ASE), the status of the improvements in the adopted TIP, if the AU is located within a pending annexation area, and if the AU is a candidate for being designated at Ultimate Capacity. The abbreviations used in the table are:

W	=	Widening of an Existing Arterial Road	ANNEX PEND	=	Annexation Pending
N	=	New Arterial Road Alignment	UCC	=	Ultimate Capacity Candidate
IS	=	Intersection Improvements	IP-TIP	=	Improvements Programmed in Current TIP
NP	=	Not Programmed	PD-TIP	=	Project Design Programmed in Current TIP
DR	=	Design Report	RW-TIP	=	Right-of-way Acquisition Programmed in Current TIP
PIC	=	Programmed Improvements Completed	OI	=	Operational Improvement
WDI	=	WSDOT Dependent Improvement	NIT	=	Not in TIP

The table is organized in descending order starting with TSA then AU Number.

TSA	AU No.	Name and Limits of Arterial Unit	In TE Table 14	Imp Type	Status of Imp & (TIP#)	Annex Pend	UCC
D	227	Beverly Park Road from SR 525 to Airport Road	NO	NA	NIT	NO	NO
D	228	Airport Rd/128 th St SW from SR 99 to I-5 SB On & Off Ramps	NO	NA	PIC	NO	YES
D	204	35 th Ave SE from 168 ST SE to Seattle Hill Road	YES	W	PD-TIP, RW-TIP (E.28.06)	NO	NO
D	288	Ash Way from 164 th Street SW to Lynnwood City Limits	NO	NA	NIT	NO	NO
D/E	207/336	35 th Ave SE from 188 ST SE to 168 ST SE	YES	W	PD-TIP, RW-TIP (E.28.06)	NO	NO
D/F	337/420	York Road/35 th Ave SE from 188 th St SE to SR 524	YES	W	PD-TIP, RW-TIP (E.28.05)	NO	NO
D/F	457/458	Maple Road/178 TH St SW from Lynn City Limits to Larch Wy	NO	NA	NIT	NO	NO
E / F	209 / 332	39 th Ave SE from 228 th St SE to SR 524	YES	W	IP-TIP (E.55)	NO	NO
F	214	Larch Way from MTLK TERR C/L to Cypress Way N	YES	W	NIT	NO	NO
F	217	North Road from SR 524 to 176 th PI SW	NO	NA	PD-TIP (E45.02)	NO	NO
F	220	Alderwood Mall Parkway from LYNN C/L to 164 th ST SW	YES	W	PD-TIP (E.60)	NO	YES
F	278	Poplar Way from Lynnwood City Limits to Brier City Limits	YES	W	PD-TIP (E.54)	NO	NO

Table 3: Summary of Concurrency Determinations

Table 3 shows a summary of the concurrency determinations that were made in the previous year. The data is organized by TSA, type of development (residential or non-residential), and size of the development measured by the number of peak hour trips generated by the development.

Type and Size of Development	2016 Totals by Transportation Service Areas								Year By Year Totals For The 5 Previous Years				
	A	B	C	D	E	F	2016	% of 2016 Total	2015	2014	2013	2013	2011
Residential (<= 50 PHT)	0	6	3	30	6	11	47	75%	47	54	61	17	9
Residential (> 50 PHT)	2	2	0	3	1	4	5	8%	5	5	5	6	1
Non-Residential (<= 50 PHT)	1		1	3	1	0	9	14%	9	5	7	14	13
Non-Residential (> 50 PHT)				1	1		2	3%	2	1	1	1	2
Total	3	8	4	37	9	15	63	100%	63	65	74	38	25

Table 4: Status of Arterial Units Compared With Prior Year

Table 4 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 (AUIA). 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 for a second 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 at the beginning of this report and in DPW Rule 4224. The abbreviations used in the table are:

<u>Arterial Unit Status</u>		<u>Additional Terms</u>	
S	= Screening	LOS	= Level-of-Service
M	= Monitoring	ADT	= Average Daily Traffic
OA	= Operational Analysis	FCST	= Forecast
AR	= At Risk	V/C	= LOS estimate based on comparison of volumes
AUIA	= Arterial Unit in Arrears	W / IMPS	= With fully-funded improvements completed or expected to be complete within six years
 <u>OA Level Study Terms</u>		U	= Urban
TTS	= Travel Time Study	R	= Rural
IntTTS	= Intermediate TTS	PEND	= Pending
RECON	= Reconnaissance	UNIT	= Number assigned to the arterial unit
		NB	= North Bound
		SB	= South Bound
		WB	= West Bound
		EB	= East Bound
		AM	= The morning (AM) Peak Hours for traffic
		PM	= The evening (PM) Peak Hours for traffic
		NA	= Not Applicable

The projects identified below are listed by TSA in descending order from TSA A to TSA F (starting with the highest relevant TSA), then by the AU number (lowest to highest), the AU name, limits, Rural or Urban designation, the prior year’s status, the current year’s status, and any Notes.

TSA	UNIT	ROAD NAME	FROM	TO	R/U	2016	2017	2017 Notes
D	204	35 AVE SE	168 ST SE	SEATTLE HILL RD	U	OA	OA-AR	PM NB EXIST LOS D PM NB FCST LOS E,
D	220	ALDERWOOD MALL PKWY	164 ST SW	LYNN C/L	U	OA	OA-AR	PM SB FCST LOS E
D	225	148 & 150 ST SW/JEFFERSON/MADISON	SR 99	ASH WY	U	OA	OA	PM WB TIP LOS D FCST LOS E WITH FUTURE TIP PROJECT
D	227	BEVERLY PARK RD	SR 525	ASH WY	U	OA-AR	OA-AR	PM SB EXIST & FCST LOS E
D	228	AIRPORT RD / 128 ST SW	SR 99	I-5 SB ON/OFF RAMPS	U	OA-AR	OA-AR	PREVIOUS TRAVEL TIME STUDY PUT AU AT RISK, AWAITING FURTHER DATA ANALYSIS
D	230	112 ST SW	EVT C/L	EVT C/L	U	OA	M	PM EB/WB EXIST & FCST LOS D; AM EB EXIST & FCST LOS D
D	288	ASH WY	164 ST SW	LYNN C/L	U	OA	OA-AR	PM NB FCST LOS E
D	293	GIBSON RD/134 ST/4 AVE/ASH WY	SR 99	128 ST SW	U	OA	OA	PM EB/WB EXISTING LOS E
D	297	MEADOW RD, MEADOW PL SW, MERIDIAN AVE S, 130 ST SE, 3 AVE SE	164 ST SW	SR 96	U	OA	OA	AM SB FCST LOS E
D	304	LARCH WY	164 ST SW	178 ST SW	U	OA	OA	AM NB/SB FCST LOS E
D	334	NORTH ROAD	JONATHAN RD	164 ST SW	U	S	M	AM NB/SB FCST LOS D
D	352	4 AVE W	112 ST SW	EVT C/L	U	M	OA	PM NB EXIST & FCST LOS E, SB LOS D
D/E	207 / 336	35 AVE SE	188 ST SE	168 ST SE	U	OA	OA-AR	AM SB FCST LOS E AM NB EXIST LOS F FCST LOS PEDNDING

TSA	UNIT	ROAD NAME	FROM	TO	R/U	2016	2017	2017 Notes
D/F	457 / 458	178TH ST SW/MAPLE RD	LYNN C/L	LARCH WY	U	OA	OA-AR	PM EB FCST LOS E
E	354	PARIDISE LAKE RD	SR 522	KING CO LINE	U/R	S	M	PM WB EXIST LOS D, PENDING FCST
E	471	YEW WAY	BROADWAY AVE	SR 524	U	S	OA	SB AM EXIST LOS D, AM SB FCST LOS E
E/F	209 / 332	39TH AVE SE	228 ST SE	SR 524	U	OA-AR	OA-AR	PM NB EXIST & FCST LOS E, AM NB FCST LOS E, 2017 TT & FCST PENDING
E/F	337 / 420	YORK RD / 35 AVE SE	SR 524	188 ST SE	U	OA-AR	OA-AR	AM SB EXIST & FCST LOS E, PM NB/SB FCST LOS E, 2017 TT & FCST PENDING
F	214	212 ST SW/LARCH WY	MT LK TERR C/L	CYPRESS WY (N LEG)	U	OA-AR	OA-AR	PM EB EXIST / FCST LOS E AM WB FCST LOS E
F	217	NORTH RD	SR 524	176 PL SW	U	OA-AR	OA-AR	AM SB EXIST & FCST LOS F, OPTIMAZATION OF WSDOT SIGNAL NEEDED
F	278	POPLAR WY	LYNN C/L	BRIER C/L	U	OA-AR	OA-AR	PM NB/SB EXIST & FCST LOS E WITH SIGNAL OPTIMAZATION