WSDOT

OCTOBER 2015 – JUNE 2019

I-405 Express Toll Lanes

45 MONTHS OF OPERATIONS

THIS REPORT REVIEWS DATA FROM THE FIRST 45 MONTHS OF OPERATIONS (OCTOBER 2015 – JUNE 2019) OF THE EXPRESS TOLL LANES.

TABLE OF CONTENTS

I-405 Express Toll Lanes 45 Month Update: October 2015 – June 2019 1

Executive Summary 1

- Goals 1
- Legislative Performance Measures 2
- Average Corridor Speeds 4
- Transit Travel Times 5
- Revenue 6
- Toll Rates 7
- Maximum Toll 8

Appendix A: Legislative Performance Measures 10

- Detailed General Purpose Lane Travel Time Data 14
- Detailed Volume Data 27
- Detailed Speed Data 28

Appendix B: Additional Traffic Performance Data 52

Appendix C: Express Toll Lane Guide 56

- Operational Parameters 56
- How Express Toll Lanes Work 56
- Design 57
- Vehicle Limitations 57
- Dynamic Tolling 57
- How the Signs Work 58

EXECUTIVE SUMMARY

The express toll lanes are continuing to meet the three goals that the Washington State Department of Transportation set for them:

GOAL 1

Provide a choice to people

- 59,000 vehicles use the express toll lanes each day.
  - ✓ 39,000 drivers choose to pay a toll and 20,000 vehicles drive toll-free.
- Drivers pay an average toll rate of $4.79 for peak period, peak direction trips.

GOAL 2

Provide a faster, more predictable trip

- Drivers saved an average of 11 minutes using the express toll lanes compared to the general purpose lanes on trips between Bellevue and Lynnwood during peak periods.
- I-405 now carries up to 23 percent more vehicles each weekday during the peak periods when compared to before tolling began.
  - ✓ Using the most recent occupancy data, from 2018, I-405 also carries up to 16 percent more people when compared to before tolling began.
- Even though I-405 is carrying many more vehicles, average speeds in the express toll lanes have increased by as much as 17 mph, while general purpose lanes have improved by as much as 3 mph compared to pretolling in some areas.
- Every day 7,750 people ride buses in the express toll lanes. This is an increase of 9 percent for King County Metro, and 2 percent for Community Transit, when compared to before tolling began.

GOAL 3

Generate revenue to reinvest in the corridor

- In 45 months, the express toll lanes generated $99.5 million in total revenue. While $32.8 million has been used to maintain and operate the lanes, the remaining $66.8 million has been dedicated to be reinvested back into the I-405 Corridor including:
  - ✓ Complete: $11.5 million for the peak use shoulder lane on northbound I-405 in Bothell.
  - ✓ Under way: Funding for preliminary engineering, environmental review processes and construction for the I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project, which will increase capacity and improve mobility north of the SR 522 interchange.

Legislative Performance Measures

The legislation that authorized the construction and operation of the I-405 express toll lanes requires WSDOT to report quarterly on several performance measures, including:

- Whether the express toll lanes generated sufficient revenue to pay for all express toll lane-related operating costs.
- Whether the express toll lanes maintain speeds of 45 miles per hour at least 90 percent of the time during peak periods, and any alternate metric determined by the department in conjunction with the federal highway administration.

Revenue

The express toll lanes have consistently generated more revenue than is necessary to fund operational costs. During the 2019 spring quarter, the express toll lanes generated $9.3 million in total revenue, which was more than enough to cover the $5.2 million in expenditures. This brings the total revenue generated through 45 months of operations to $99.5 million, with the total cost of operating and maintaining the lanes at $32.8 million.

The Legislature specified that net revenue must be used to improve the corridor. WSDOT has already reinvested $11.5 million into the peak use shoulder lane. Additional revenue was allocated by the Legislature to fund preliminary engineering and environmental review processes for the I-405 - SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project, which will increase capacity and improve mobility north of the SR 522 interchange. Construction for this

project is scheduled to begin in 2021, with an anticipated three to four year construction period.

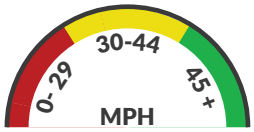
Speed reliability

While the express toll lanes have reduced travel times and increased speeds during peak periods in most sections of the corridor, some sections have fallen short of the second legislative performance measure of maintaining speeds of 45 mph or faster 90 percent of the time during peak periods. However, the southbound dual lane section and the northbound single lane section are both surpassing the 90 percent goal. WSDOT reports this measure in six month increments, in order to be consistent with reporting to the Federal Highway Administration.

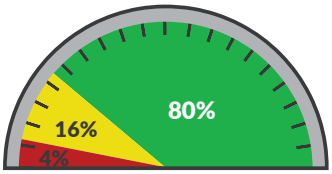
Overall, the express toll lanes are meeting the speed target 80 percent of the time during peak periods from January 2019 to June 2019, despite the fact that I-405 is carrying up to 23 percent more vehicles each weekday when compared to before tolling began. This is a significant improvement compared to the old HOV lanes, which only met the goal 62 percent of the time during the same time of year in 2015, before they were turned into express toll lanes.

The southbound lanes move at 45 mph 71 percent of the time during peak periods due to a lack of capacity in the single lane section and increasing traffic volumes. The northbound lanes met the speed goal 89 percent of the time due to heavy demand between Bellevue and Bothell.

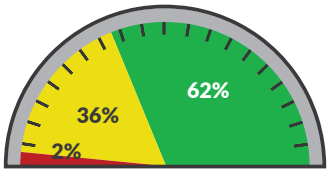
Percent of peak time periods when the lanes move vehicles within each speed range



Express toll lanes
JAN. 2019 - JUNE 2019



Pre-Tolling HOV
JAN. 2015- JUNE 2015



Average Corridor Speeds

From April to June 2019, the express toll lanes moved vehicles traveling the full length of the express toll lanes an average 16 mph faster than the general purpose lanes during the southbound morning peak period, and 23 mph faster during the northbound afternoon peak period.

Average corridor speeds, peak period

APRIL - JUNE 2019

ROUTE	GENERAL PURPOSE	EXPRESS TOLL LANES
Bellevue to Bothell (northbound)	25 mph	52 mph
Bothell to Lynnwood (northbound)	41 mph	55 mph
Lynnwood to Bothell (southbound)	23 mph	38 mph
Bothell to Bellevue (southbound)	41 mph	57 mph

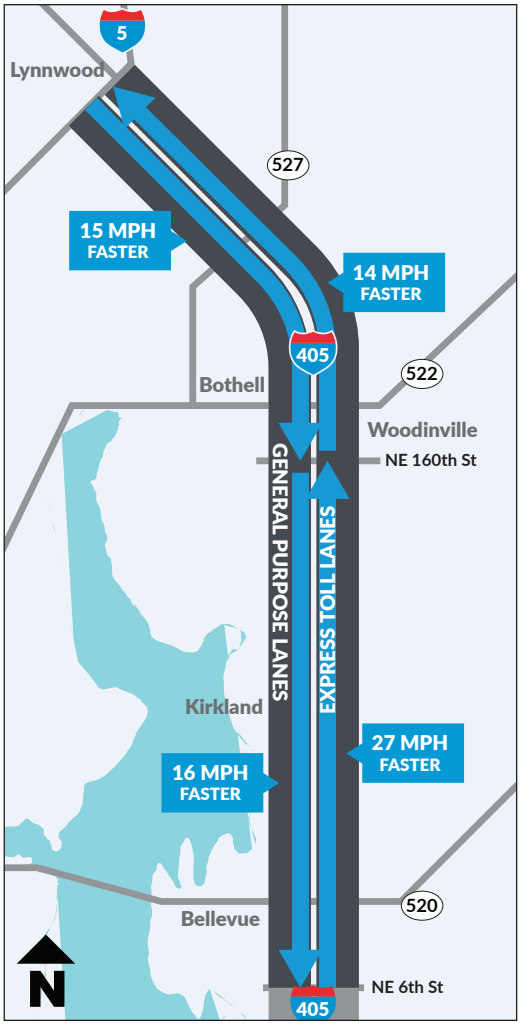
General Purpose Lanes

While most areas are seeing speed improvements, the southbound section from Lynnwood to Bothell continues to fluctuate. WSDOT is currently conducting preliminary engineering to widen I-405 between the State Route 522 and SR 527 interchanges.

Average general purpose lanes speed, peak period

ROUTE	PRE TOLLING	SPRING 2016	SPRING 2017	SPRING 2018	SPRING 2019
Bellevue to Bothell (northbound)	25 mph	30 mph	32 mph	27 mph	25 mph
Bothell to Lynnwood (northbound)	32 mph	27 mph	39 mph	41 mph	41 mph
Lynnwood to Bothell (southbound)	24 mph	27 mph	24 mph	25 mph	23 mph
Bothell to Bellevue (southbound)	35 mph	44 mph	41 mph	42 mph	41 mph

Express toll lane speeds compared to general purpose lane speeds during spring 2019



Transit Travel Times

Since the express toll lanes opened in September 2015, transit ridership has increased by an average of five percent on I-405. During the spring 2019 quarter, an average 7,750 people used transit routes on the express toll lanes every day. WSDOT works with regional transit agencies King County Metro and Community Transit (servicing Snohomish County) to monitor transit performance on the I-405 express toll lanes. Both Community Transit and King County Metro operate Sound Transit routes on I-405.

King County Metro travel times on I-405 between Bellevue and Lynnwood have improved by 1 to 11 minutes. When comparing travel times to pre-tolling conditions, daily average travel times for Community Transit showed an improvement for the majority of routes, with the exception of Route 424 that travels along I-405 between SR 520 and SR 522. The travel time increase was slightly over a minute. The remaining routes have travel time savings of up to 4 minutes.

* Route 424 that travels along I-405 between SR 520 and SR 522 is the only route to show a travel time. increase, but reports travel times over a significantly shorter distance than the other routes.

Revenue

Toll revenue is appropriated by the Legislature and monitored by the Office of Financial Management. Under existing law, I-405 express toll lane revenue must be used to cover facility operations and maintenance costs, and any additional revenue is to be invested back in to the corridor.

Express toll lane revenue has increased over time due to increasing demand as the number of cars on the road increases. However, operations costs have remained relatively consistent over the past three years. As a result, the percentage of revenue going to I-405 improvements has increased each year.

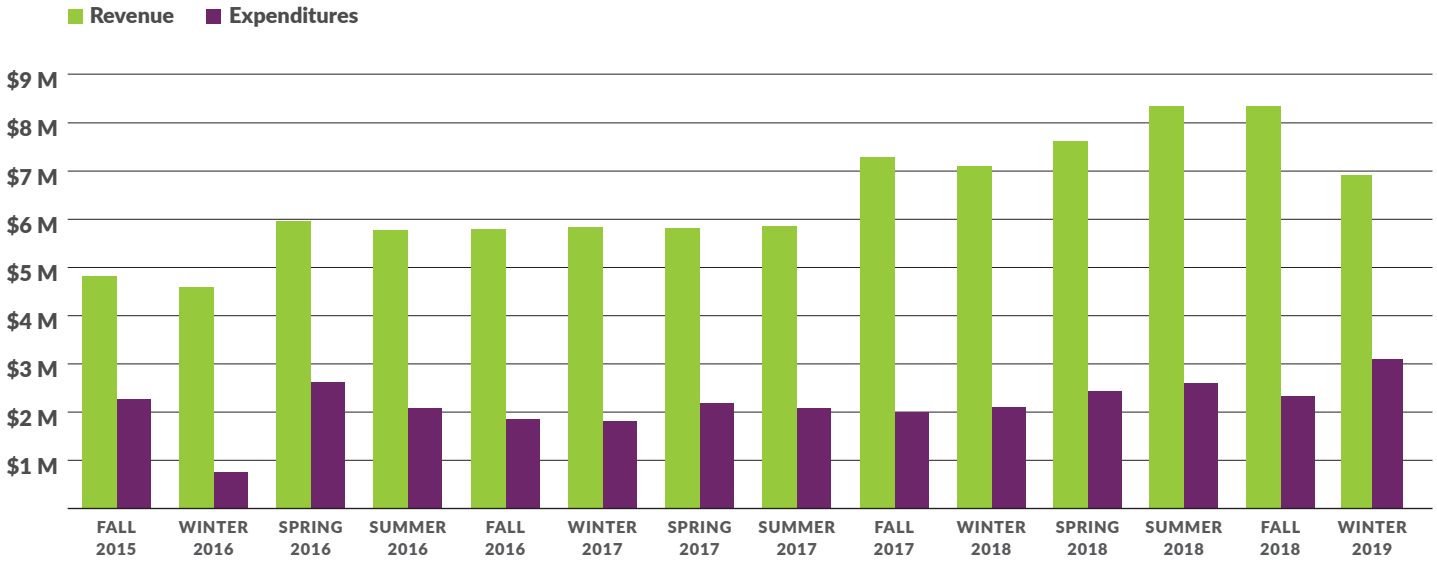
In winter 2019, express toll lane revenue decreased due to the snowy weather in February, which resulted in less volume on I-405. However, the express toll lanes generated more than enough revenue to cover expenses and finances have returned to the previous trend of increasing revenue with relatively stable expenditures.

TOTAL REVENUE
$99.5 M

EXPENDITURES
$32.8 M

FOR IMPROVEMENTS
$66.8 M

Revenue and expenditures remain consistent.



Toll Rates

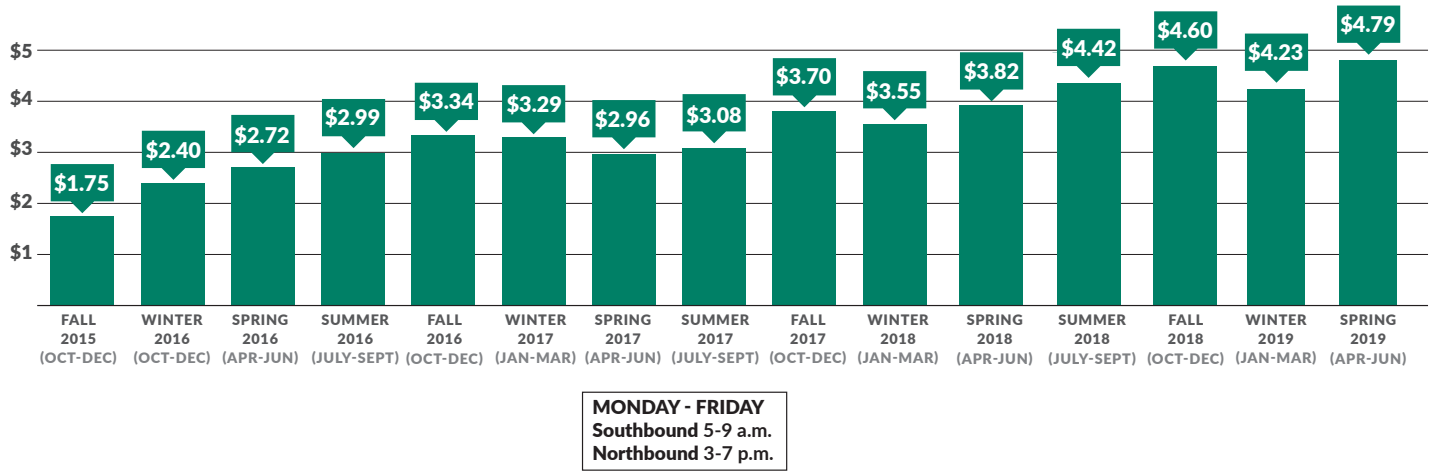
In March 2015, the Washington State Transportation Commission (WSTC) approved a minimum toll rate of 75 cents and a maximum of $10. Toll rates are adjusted by a congestion-based tolling algorithm designed to keep the express toll lanes flowing by adapting the toll rate to match the demand.

In the most recent quarter:

- For peak period, peak direction trips, the average toll rate was $4.79, a 56 cent increase from last quarter.
- The spring 2019 quarter is returning to the trend of increasing peak period rates.

Average peak period, peak direction toll rates

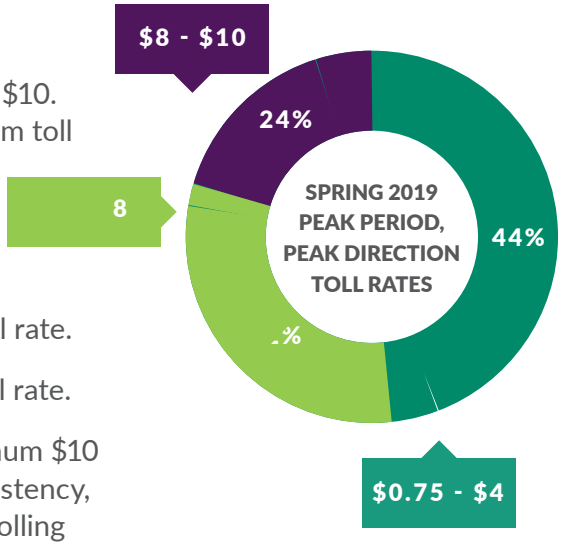
OCTOBER 1, 2015 - JUNE 30, 2019



Maximum Toll

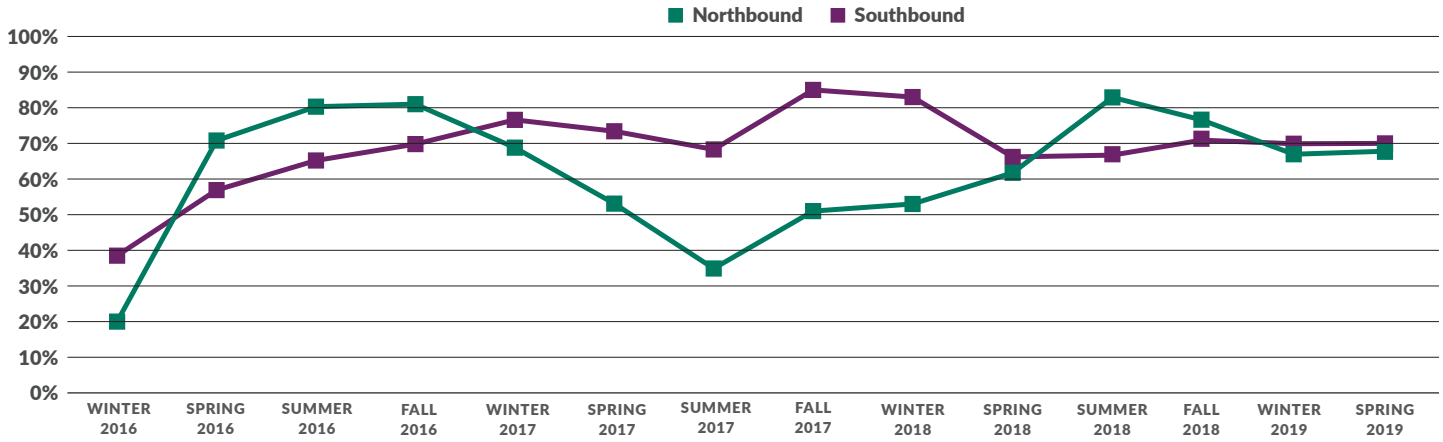
WSDOT tracks the instances where the express toll lanes reached $10. In spring 2019, the proportion of drivers who paid the $10 maximum toll rate was:

- 8.5 percent for all tolled trips.
- 15.1 percent for peak period, peak direction trips.
  - ✓ 15.5 percent of northbound peak period trips paid the $10 toll rate.
  - ✓ 14.7 percent of southbound peak period trips paid the $10 toll rate.



The chart below represents the percentage of days that the maximum $10 toll rate was displayed during the peak period by quarter. For consistency, percentages for each quarter are calculated based on the current tolling hours before and after the hours of operation were changed in March 2016.

Percent of weekdays with $10 rate by quarter



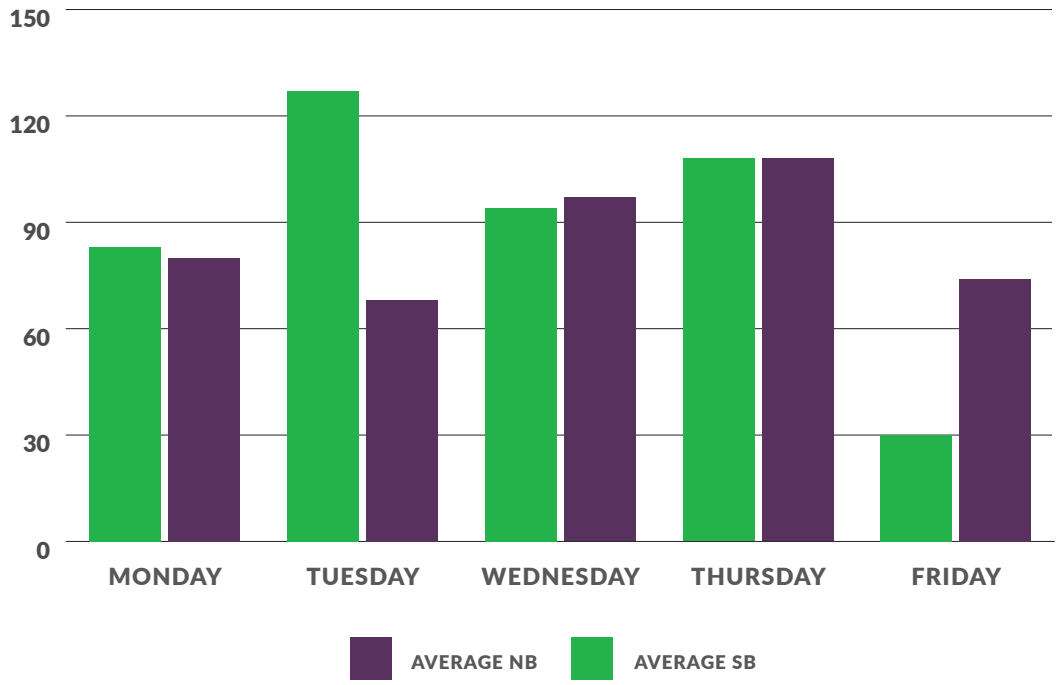
Though tolls reached the maximum most weekdays this spring, they did not remain at that price for long. The following chart shows how many minutes on average the lanes were at the $10 maximum.

Southbound commutes on Tuesdays saw the longest $10 maximum, remaining at that price for an average of 125 minutes. However, Friday commutes heading south saw a $10 toll for only 30 minutes.

The northbound peaks were more consistent, with the lanes displaying the maximum between 65 and 110 minutes on average.

Minutes at $10 during peak periods (longest trip)

SPRING 2019



APPENDIX A: LEGISLATIVE PERFORMANCE MEASURES

In its 2011 authorization of the I-405 express toll lanes (RCW 47.56.880), the Legislature directed WSDOT to monitor and report on seven performance metrics on a quarterly basis.

LEGISLATIVE MONITORING REQUIREMENT	REPORT SECTION REFERENCE
a. Whether the express toll lanes maintain speeds of 45 miles per hour at least 90 percent of the time during peak periods.	Page 4. Includes percent of time the express toll lanes are moving traffic at 45 miles per hour or faster.
b. Whether the average traffic speed changed in the general purpose lanes.	Page 3 - 5. Includes average speed and travel time trends for the general purpose lanes.
c. Whether transit ridership changed.	Page 6. Includes preliminary transit ridership and travel time findings.
d. Whether the actual use of the express toll lanes is consistent with the projected use.	We have exceeded original forecasts and will no longer be reporting.
e. Whether the express toll lanes generated sufficient revenue to pay for all I-405 express toll lane operating costs.	Page 7. Includes preliminary revenue and expenditure results.
f. Whether travel times and volumes have increased or decreased on adjacent local streets and state highways.	This data is only reported on every 6 months. For the most recent information, please refer to the 42 month report.
g. Whether the actual gross revenues are consistent with projected gross revenues as identified in the fiscal note for EHB 1382 distributed by the Office of Financial Management on March 15, 2011.	We have far exceeded the original forecasts and will no longer be reporting on this, unless we fall below forecasts.

Legislative Performance Measures

The legislature added reporting requirements during the 2016 budget process detailed in ESHB 2524 209 (7), and in the 2019 budget process in ESHB 1160 209 (8). These subsequent reporting requirements address travel times and volumes for 10 specific travel segments along the I-405 express toll lanes corridor. This appendix provides a high-level summary of the travel time data and links to electronic copies of the detailed travel time and volume data. The Legislature requested average and, at minimum, 90th percentile travel times. Consistent with WSDOT methodology and the requirements of the proviso, this report includes 95th percentile travel times.

ESHB 2524 209 (7) states:

> **The department must provide quarterly reports to the transportation committees of the legislature on the Interstate 405 express toll lane project performance measures listed in RCW 47.56.880(4). These reports must include:**
>
> **(a) Information on the travel times and travel time reliability (at a minimum, average and 90th percentile travel times) maintained during peak and nonpeak periods in the express toll lanes and general purpose lanes for both the entire corridor and commonly made trips in the corridor including, but not limited to, northbound from Bellevue to Rose Hill, state route number 520 at NE 148th to Interstate 405 at state route number 522, Bellevue to Bothell (both NE 8th to state route number 522 and NE 8th to state route number 527), and a trip internal to the corridor (such as NE 85th to NE 160th) and similar southbound trips;**
>
> **(b) A month-to-month comparison of travel times and travel time reliability for the entire corridor and commonly made trips in the corridor as specified in (a) of this subsection since implementation of the express toll lanes and, to the extent available, a comparison to the travel times and travel time reliability prior to implementation of the express toll lanes;**
>
> **(c) Total express toll lane and total general purpose lane traffic volumes, as well as per lane traffic volumes for each type of lane (i) compared to total express toll lane and total general purpose lane traffic volumes, as well as per lane traffic volumes for each type of lane, on this segment of Interstate 405 prior to implementation of the express toll lanes and (ii) compared to total express toll lane and total general purpose lane traffic volumes, as well as per lane traffic volumes for each type of lane, from month to month since implementation of the express toll lanes; and**
>
> **(d) Underlying congestion measurements, that is, speeds, that are being used to generate the summary graphs provided, to be made available in a digital file format.**

ESHB 1160 209 (8) states:

> **(a) The department shall compile monthly data on the number of Washington state patrol enforcement hours on each facility and the percentage of time during peak hours that speeds are at or above forty-five miles per hour on each facility.**

The Legislature directed WSDOT to examine travel times along specific segments of the I-405 express toll lanes corridor. The following table lists these travel segments and their corresponding mileposts. A map of the express toll lanes with milepost markers is included for reference at the end of this appendix.

Legislative segments requested and corresponding mileposts

	LEGISLATIVE REQUEST	PROVIDED TRAVEL TIMES	MISSING GP DATA[1]	MISSING ETL DATA[1]	NOTES
1	Interstate 405 Northbound Bellevue to Rose Hill	(MP 13.92) Bellevue to (MP 20.22) Rose Hill			
2	Interstate 405 Southbound Rose Hill to Bellevue	(MP 20.22) Rose Hill to (MP 13.92) Bellevue	July 2015	May, June, July 2015	
3	State Route 520 Westbound at NE 148th to Interstate 405 Northbound at State Route 522	(SR 520 MP 9.11) SR 520 @ 148th to (I-405 MP 23.51) SR 522	Sept 2015	Aug, Sept 2015	EB and WB sensor at 148th not located in same place
4	Interstate 405 Southbound at State Route 522 to State Route 520 Eastbound at NE 148th	(I-405 MP 23.51) SR 522 to (SR 520 MP 9.35) SR 520 @ 148th			EB and WB sensor at 148th not located in same place
5	Interstate 405 Northbound Bellevue to Bothell (State Route 522)	(MP 13.92) Bellevue to (MP 23.51) SR 522	Sept 2015	Aug, Sept 2015	
6	Interstate 405 Southbound Bothell (State Route 522) to Bellevue	(MP 23.51) SR 522 to (MP 13.92) Bellevue		May, June, Sept 2015	
7	Interstate 405 Northbound Bellevue to Bothell (State Route 527)	(MP 13.92) Bellevue to (MP 26.16) SR 527			
8	Interstate 405 Southbound Bothell (State Route 527) to Bellevue	(MP 26.16) SR 527 to (MP 13.92) Bellevue		May, June 2015	
9	Northbound Trip Internal to the Corridor (such as NE 85th to NE 160th)	(MP 17.99) NE 85th to (MP 24.39) Beardslee Blvd	Sept, Dec 2015	Sept, Dec 2015	Insufficient data availability @ NE 160th
10	Southbound Trip Internal to the Corridor (such as NE 85th to NE 160th)	(MP 24.39) Beardslee Blvd to (MP 17.99) NE 85th	Sept, Dec 2015	Sept, Dec 2015	Insufficient data availability @ NE 160th

[1] Loop data is not available in various locations due to construction activity. This has resulted in incalculable travel times for certain months.

Note: Monthly average and 95th percentile travel times provided for both general purpose and express toll lanes for the morning Peak (5AM - 9AM), Midday Period (9 AM - 3PM), and PM Peak (3PM - 7PM)

Note: The legislature requested average and 90th percentile travel times. Direction was received from OFM to report the 95th percentile.

Detailed General Purpose Lane Travel Time Data

After 45 months of I-405 express toll lanes operation, several sections of the general purpose lanes have experienced improved speed and reliability compared to before tolling.

The largest improvements in travel times occur on northbound I-405 during the evening peak period between Bothell and Lynnwood. Travel times in this section degraded until April 2017 when the peak-use shoulder lane opened, which significantly improved travel times and reliability.

Projects that have added capacity in the that section, such as the toll-funded peak use shoulder lane, have improved speeds in the general purpose and express toll lanes. This additional general purpose capacity frees up room for vehicles, allowing for faster speeds and shorter travel times. However, as vehicle volumes continue to increase, the peak-use shoulder will only serve as an interim improvement. General purpose lane speeds in the that section have been steadily decreasing from an average 46 mph in summer 2017 after the shoulder lane opened, to 41 mph in spring 2019.

Speeds in the southbound general purpose lanes, from Lynnwood to Bothell, continue to fluctuate during the morning peak period, and have not seen consistent improvements. When the express toll lanes first opened in fall 2015 drivers were averaging speeds of 28 mph. But by late 2017 those speeds decreased to the 21-23 mph average the lanes experienced prior to tolling. Since then the average speeds have continued to range between 21 and 27 mph.

The southbound dual lane section between Bothell and Bellevue shows faster, more reliable speeds during the morning peak period when compared to pretolling. However, general purpose travel times and reliability in the afternoon peak period have progressively declined in recent months, due to a higher traffic demand in the area between Bellevue and NE 116th St.

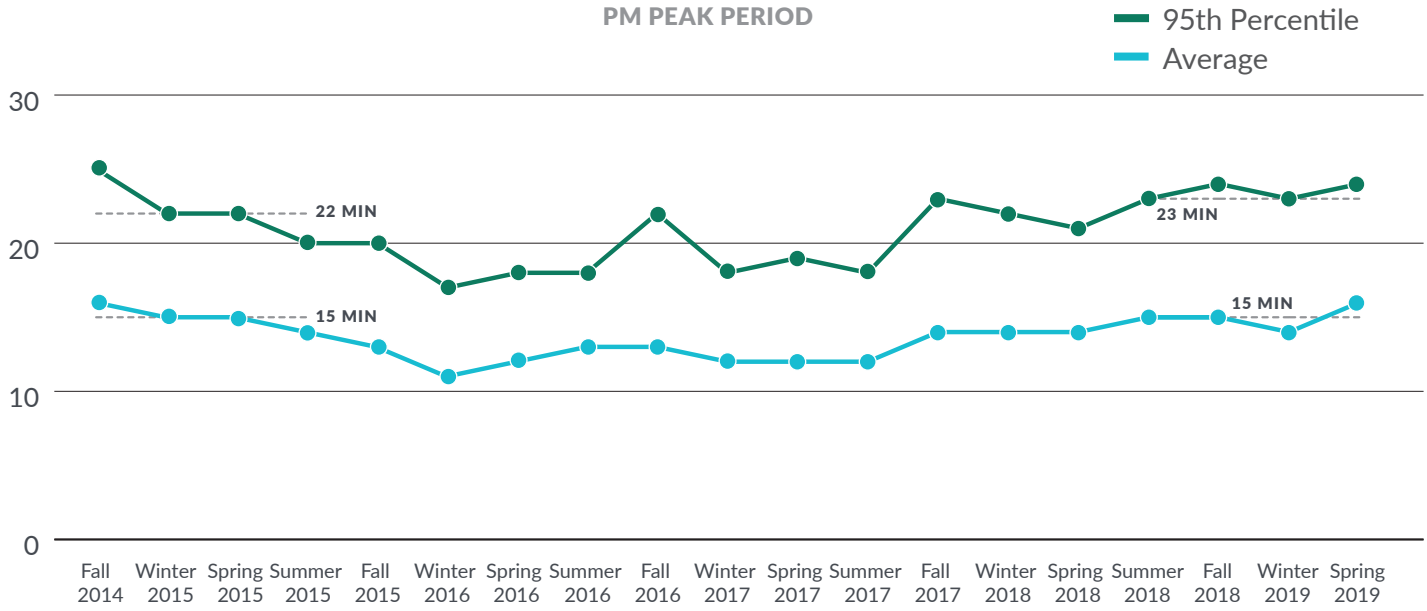
More detailed data can be found on WSDOT's website at:
www.wsdot.wa.gov/Tolling/405/library.htm.

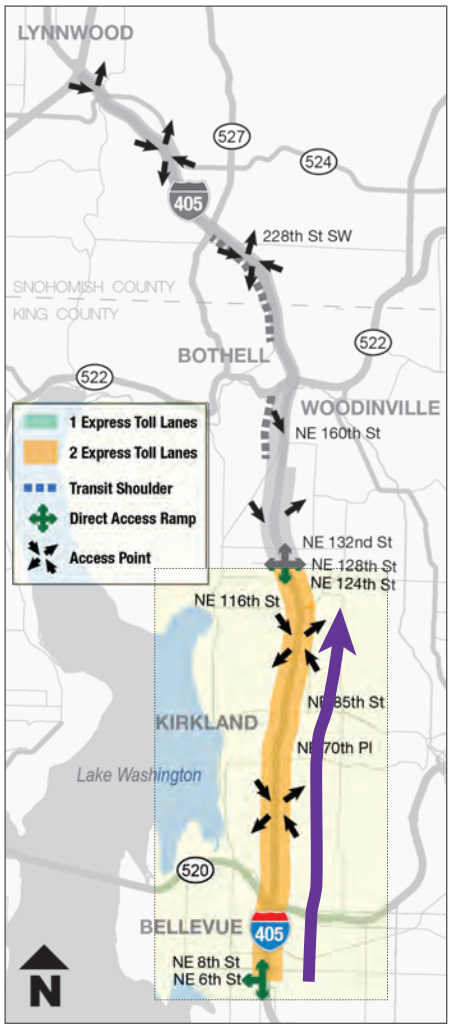
1.

TRAVEL TIMES

NORTHBOUND I-405 FROM BELLEVUE TO NE 116TH

PM PEAK PERIOD



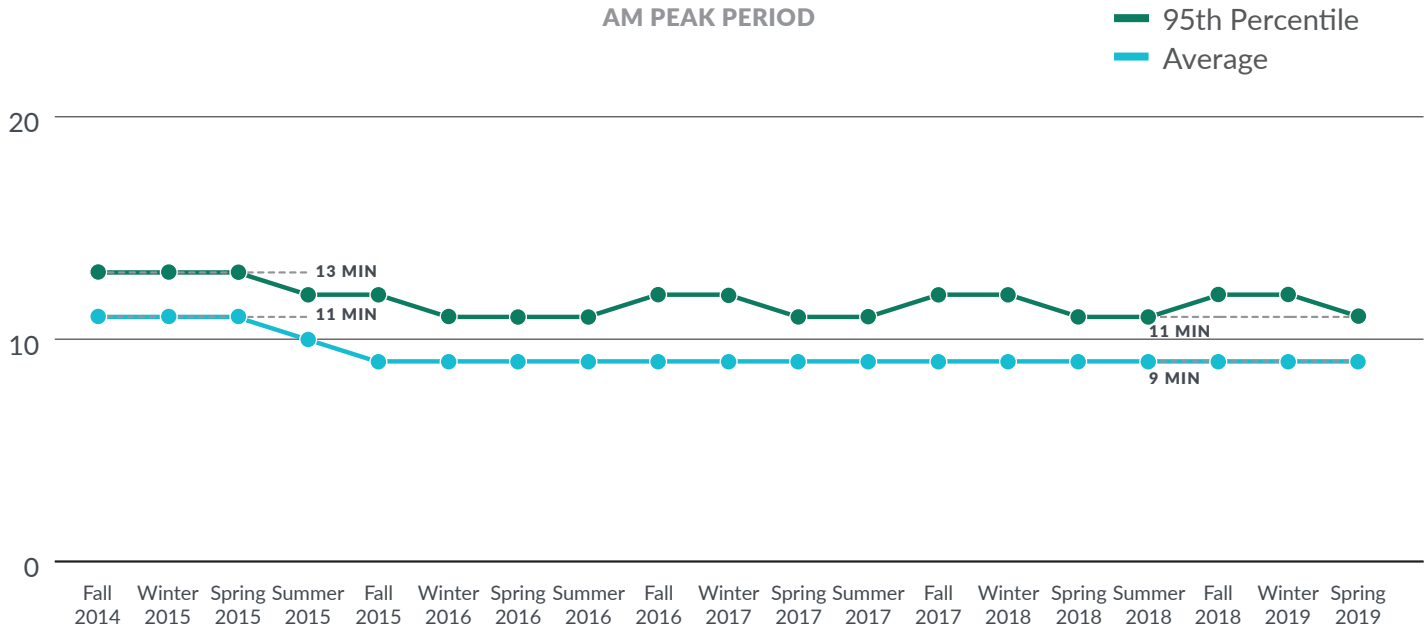


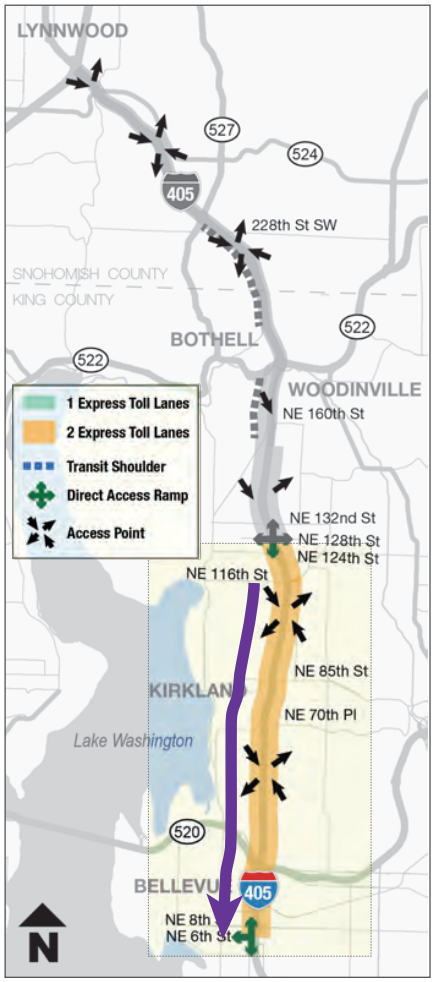
2.

TRAVEL TIMES

SOUTHBOUND I-405 FROM NE 116TH TO BELLEVUE

AM PEAK PERIOD



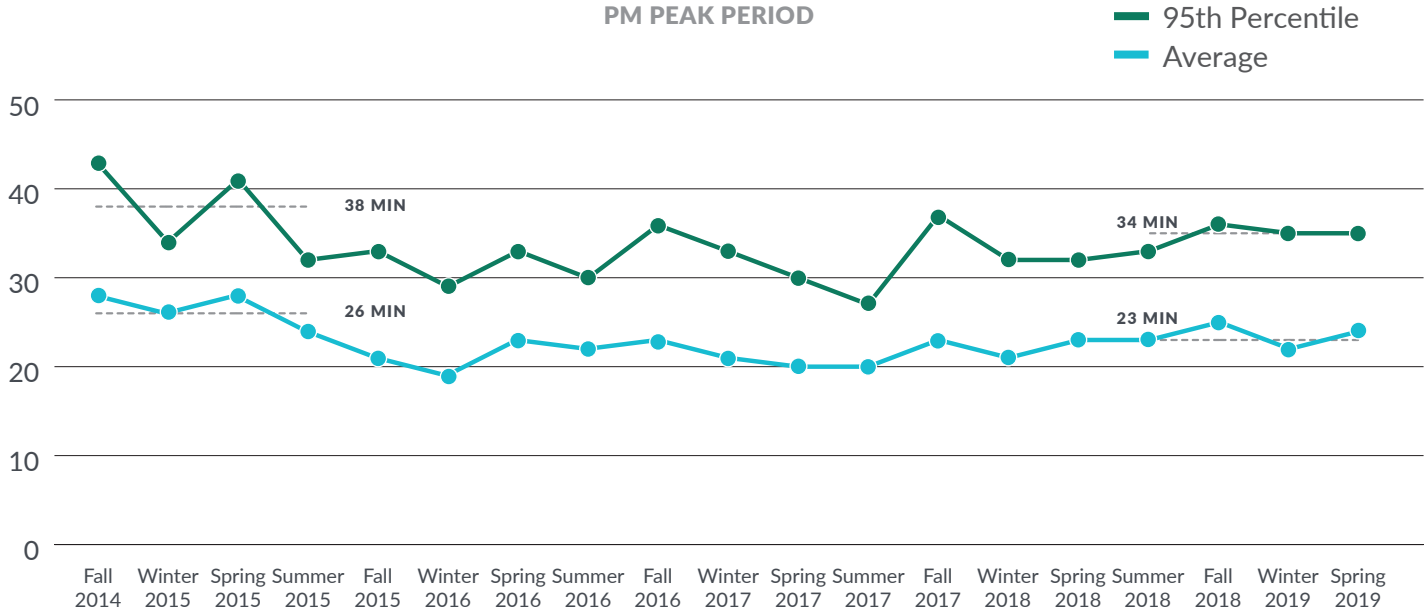


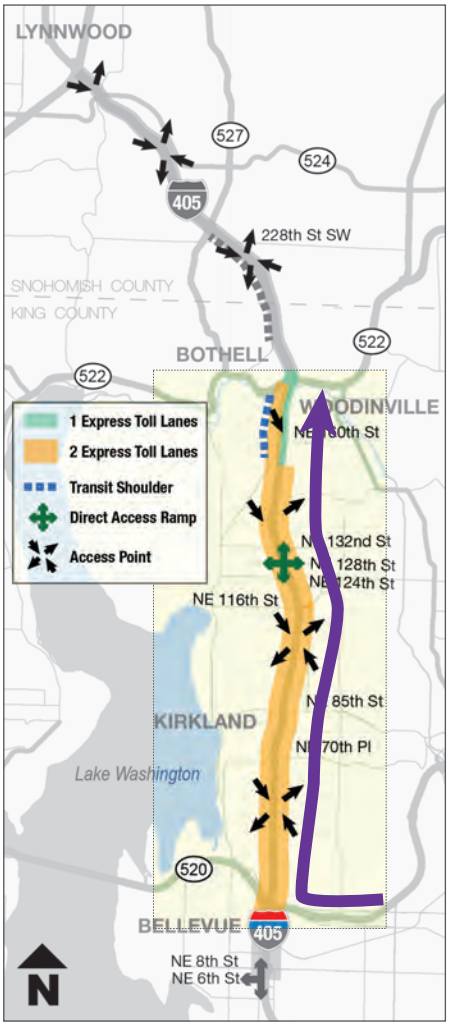
3.

TRAVEL TIMES

WESTBOUND SR 520 AT 148TH AVE NE TO NORTHBOUND I-405 AT SR 522

PM PEAK PERIOD



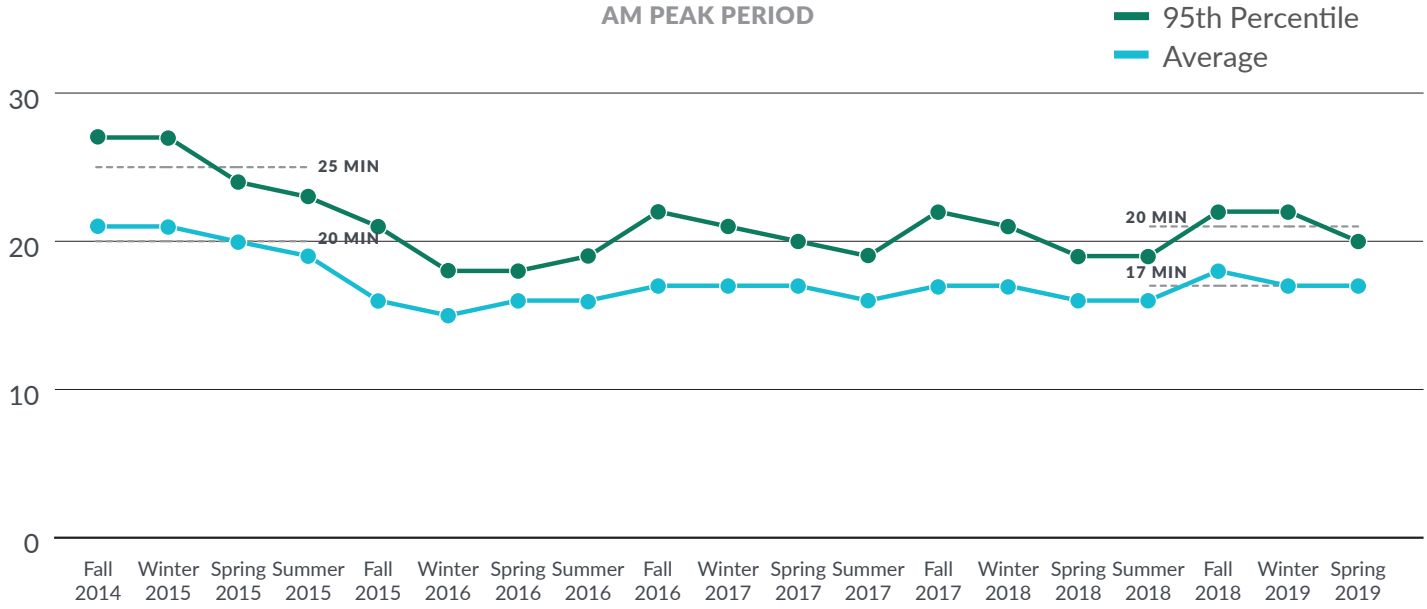


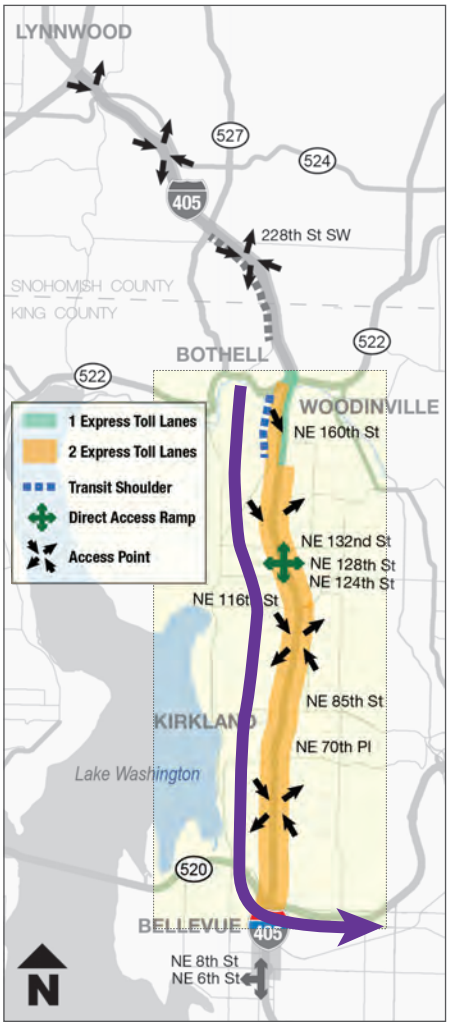
4.

TRAVEL TIMES

SOUTHBOUND I-405 AT SR 522 TO EASTBOUND SR 520 AT 148TH AVE NE

AM PEAK PERIOD



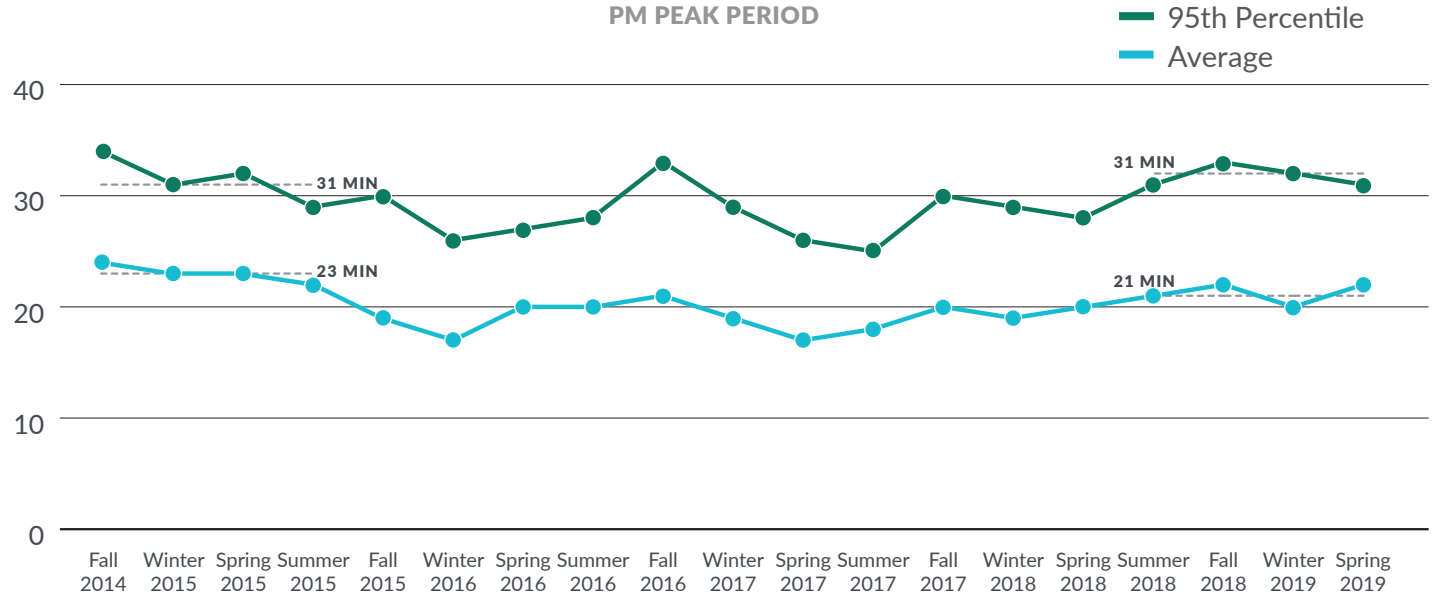


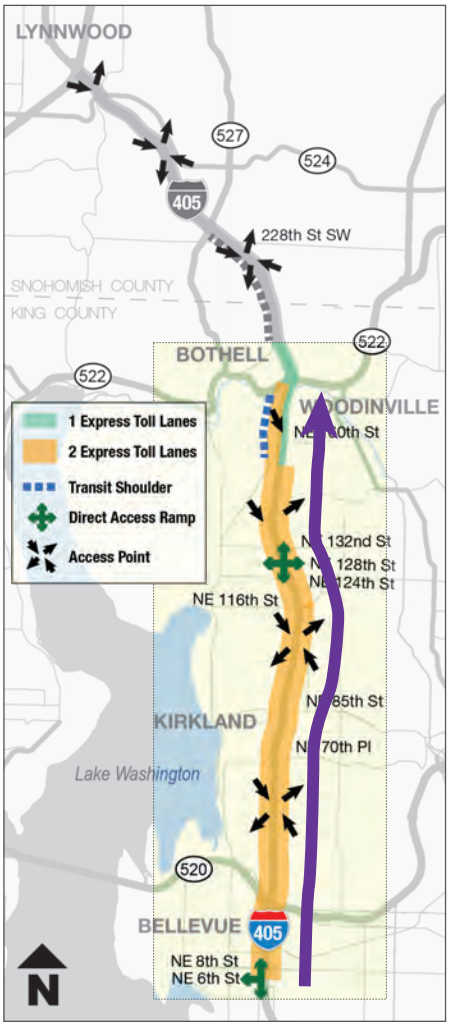
5.

TRAVEL TIMES

NORTHBOUND I-405 FROM BELLEVUE TO SR 522

PM PEAK PERIOD



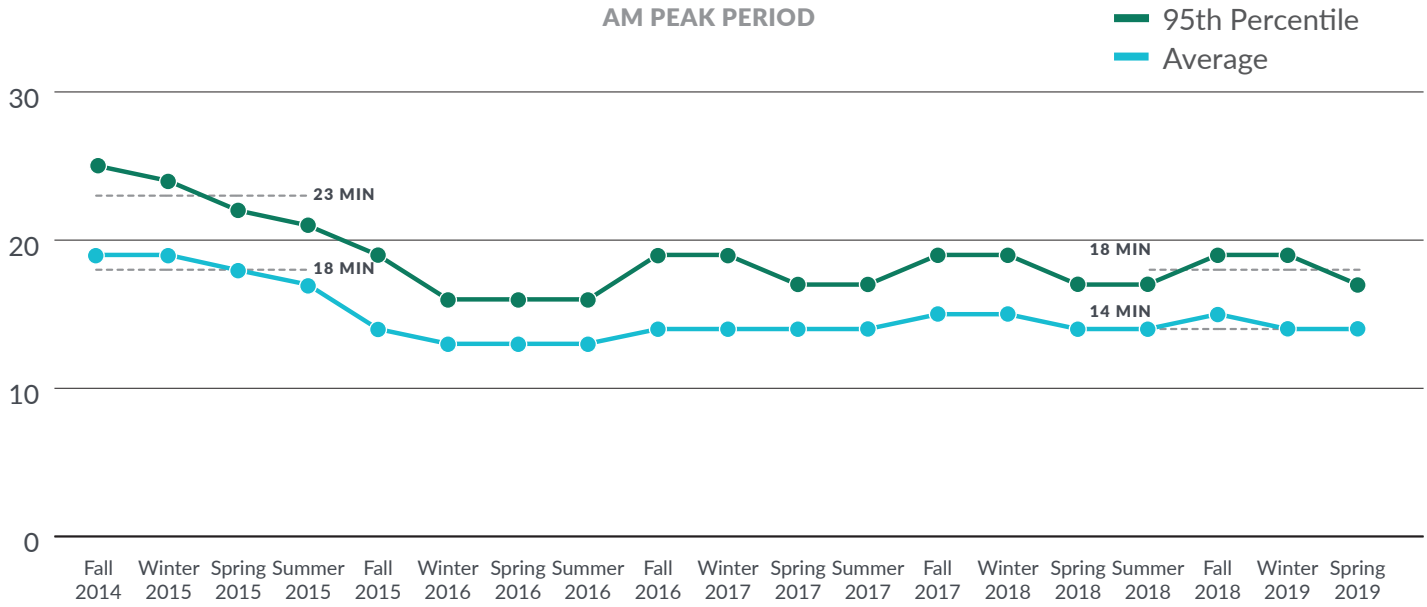


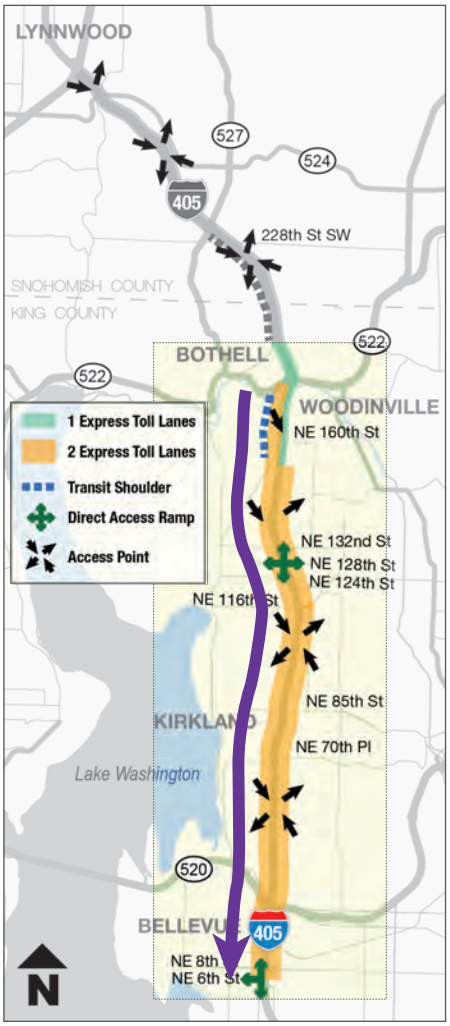
6.

TRAVEL TIMES

SOUTHBOUND I-405 FROM SR 522 TO BELLEVUE

AM PEAK PERIOD



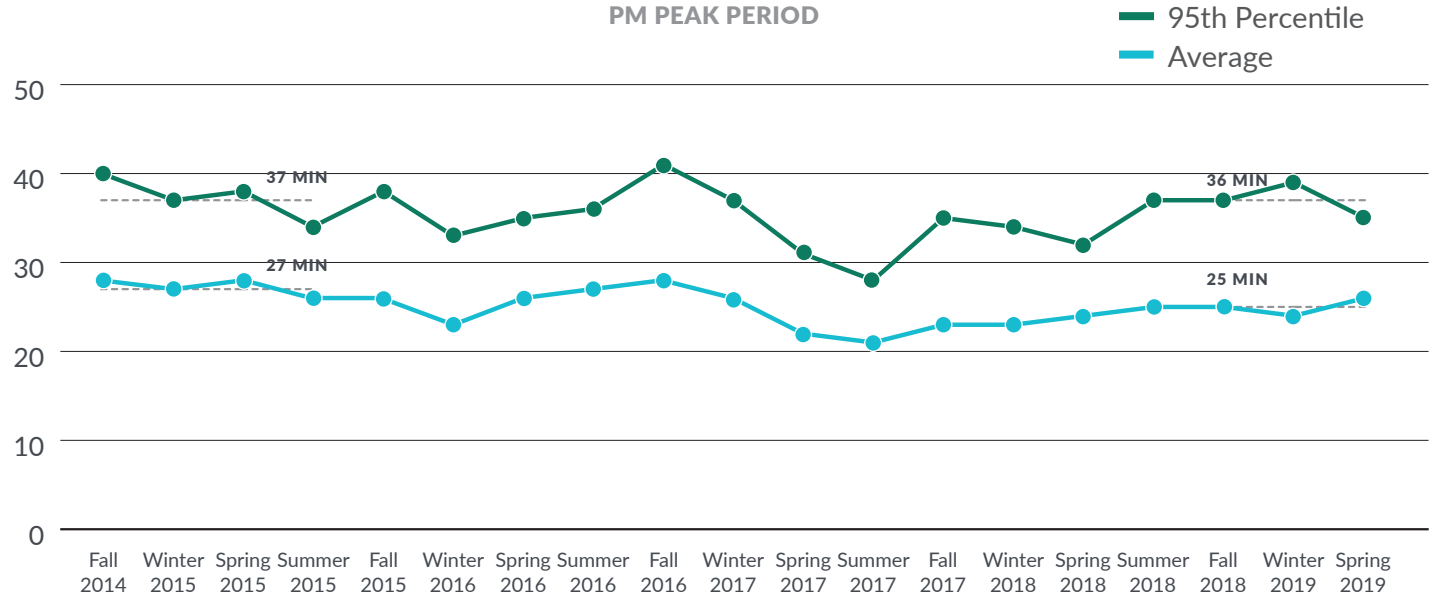


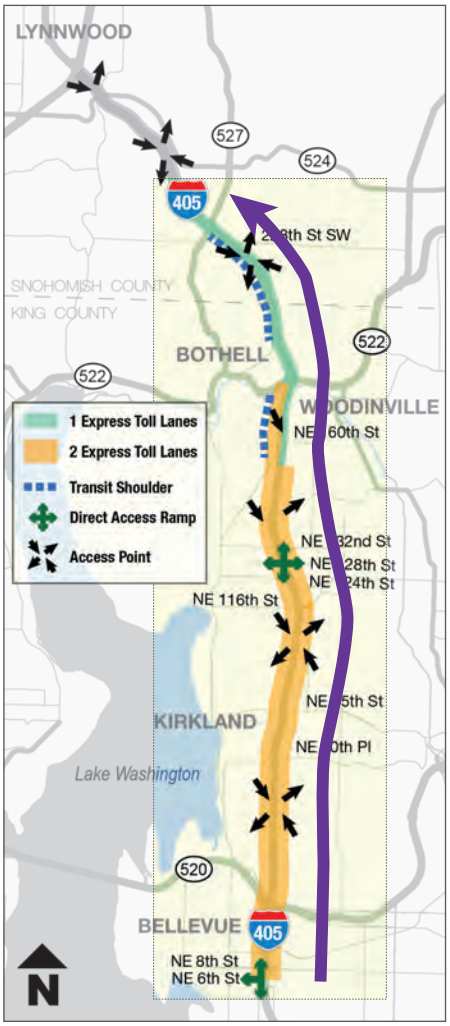
7.

TRAVEL TIMES

NORTHBOUND I-405 FROM BELLEVUE TO SR 527

PM PEAK PERIOD



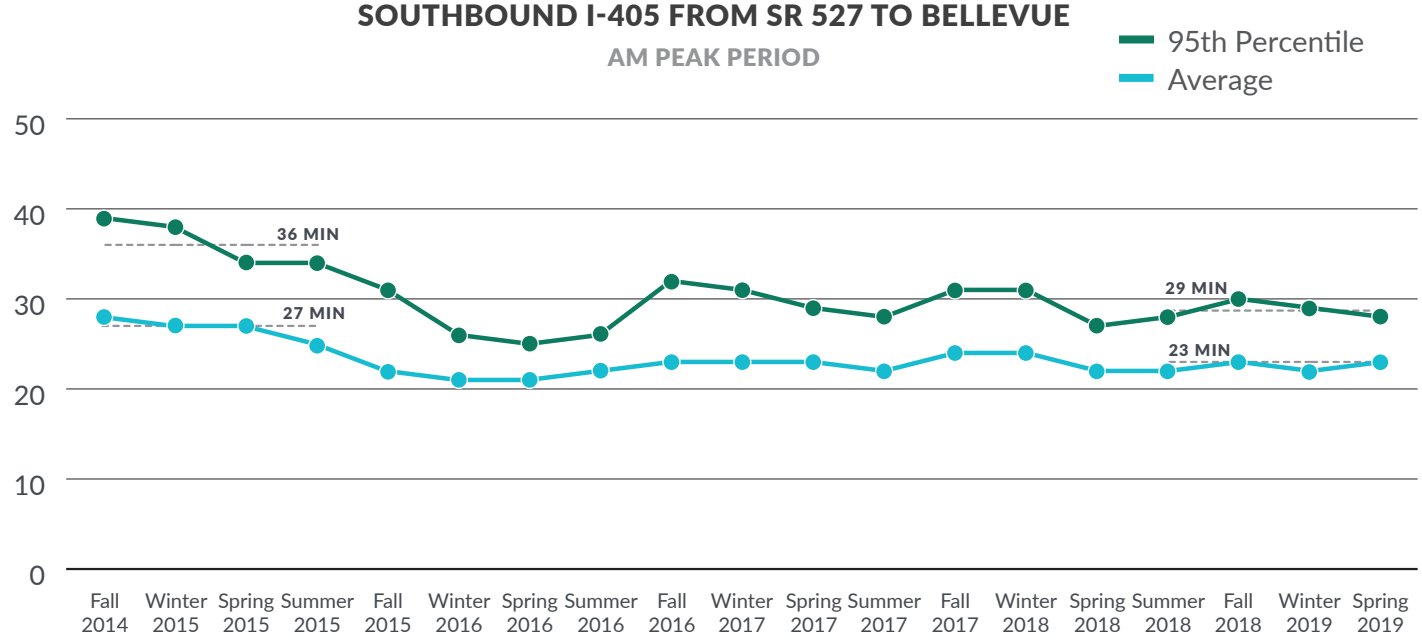


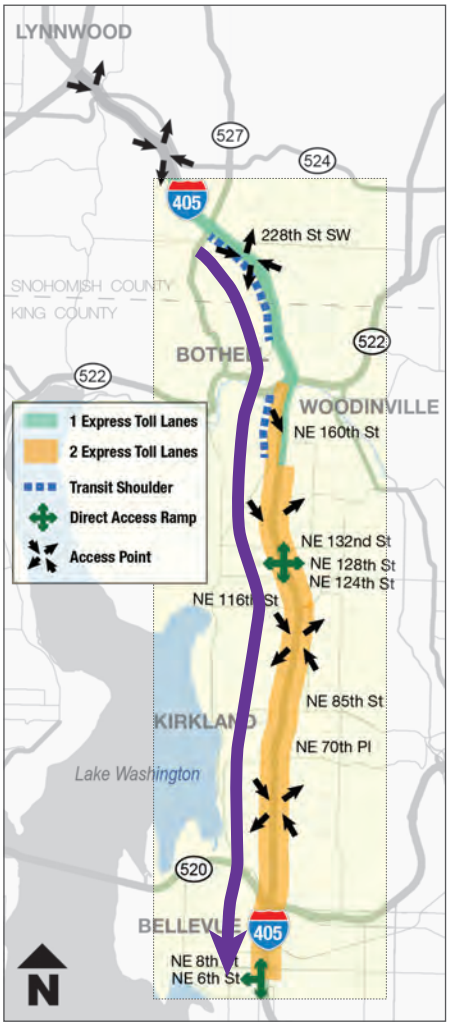
8.

TRAVEL TIMES

SOUTHBOUND I-405 FROM SR 527 TO BELLEVUE

AM PEAK PERIOD



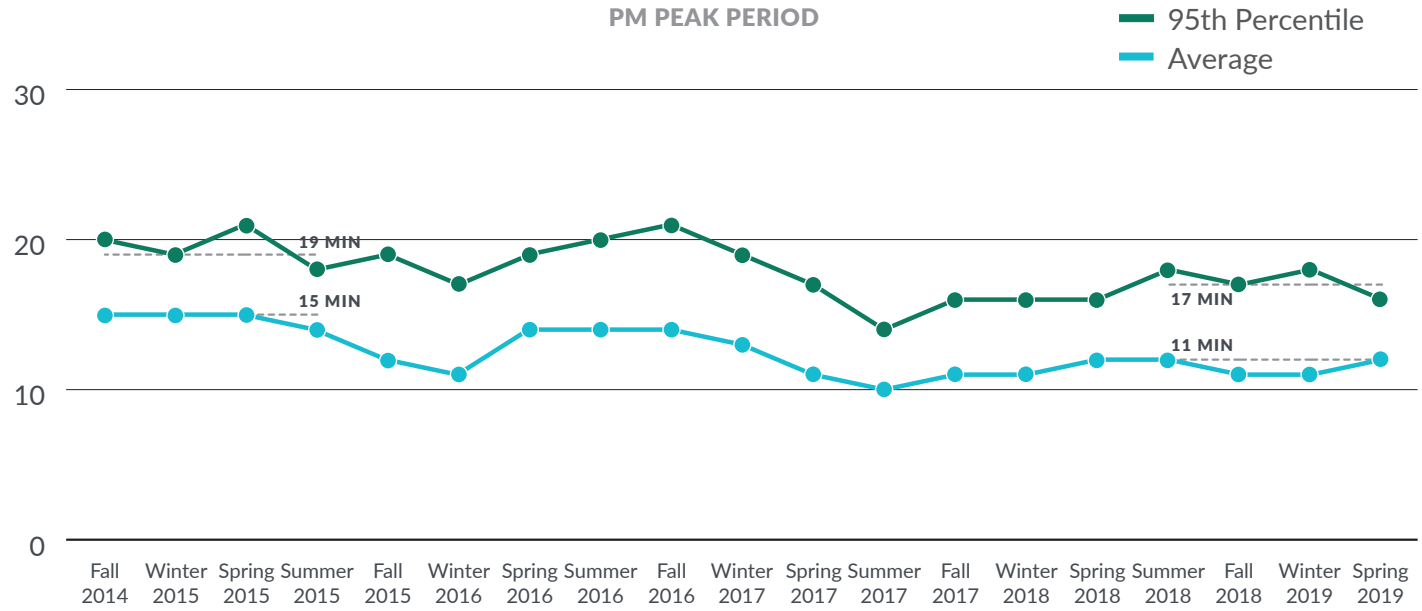


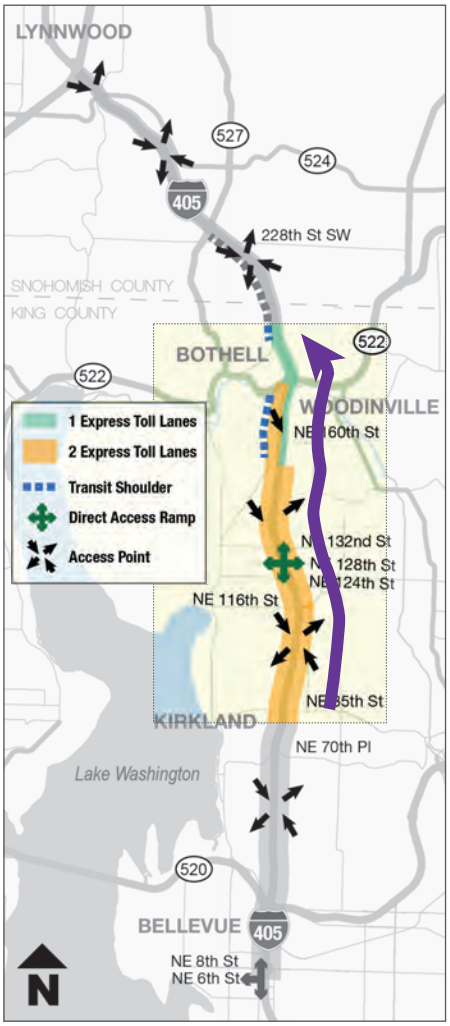
9.

TRAVEL TIMES

NORTHBOUND I-405 FROM NE 85TH TO NE 195TH

PM PEAK PERIOD



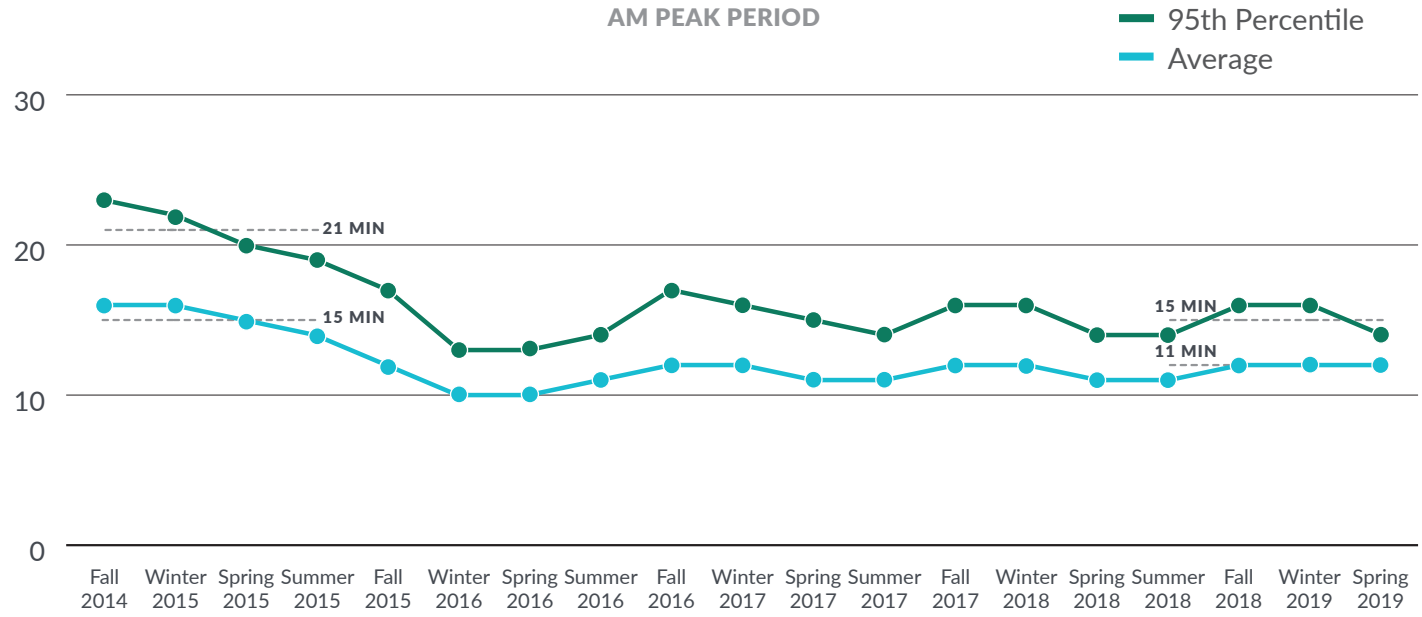


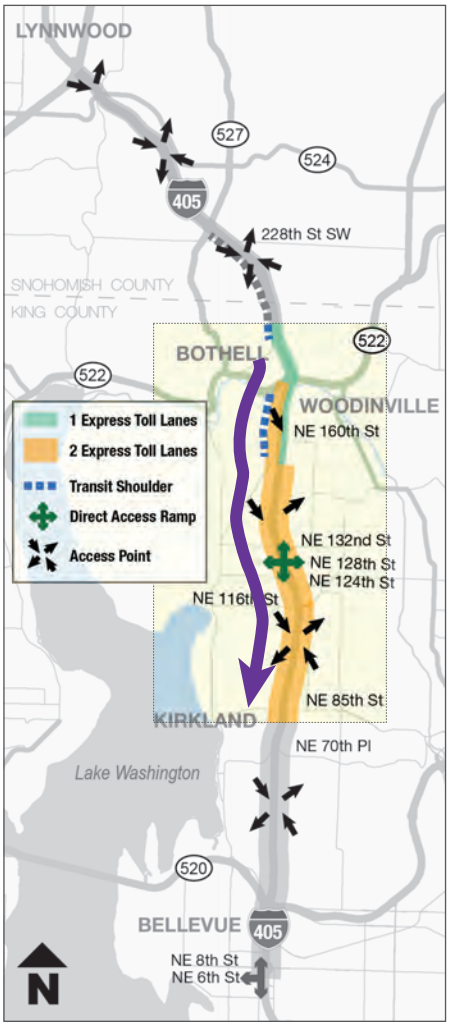
10.

TRAVEL TIMES

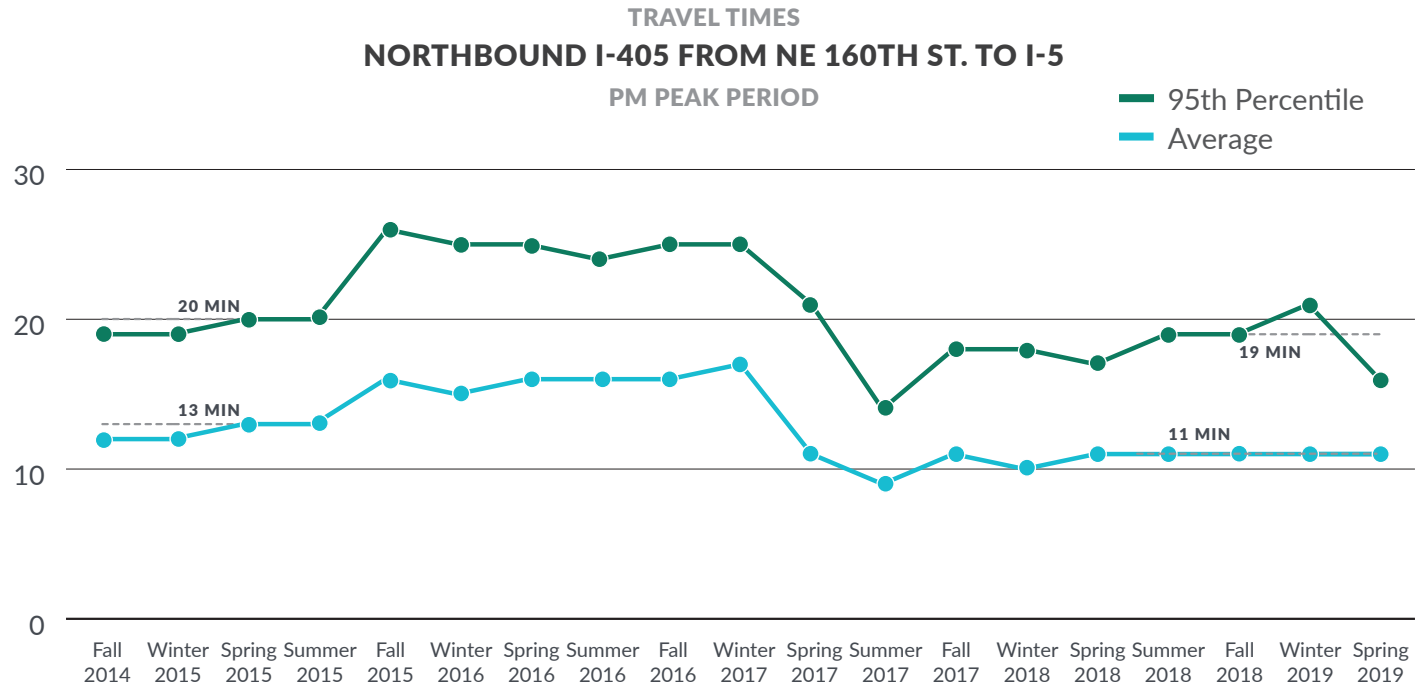
SOUTHBOUND I-405 FROM NE 195TH TO NE 85TH

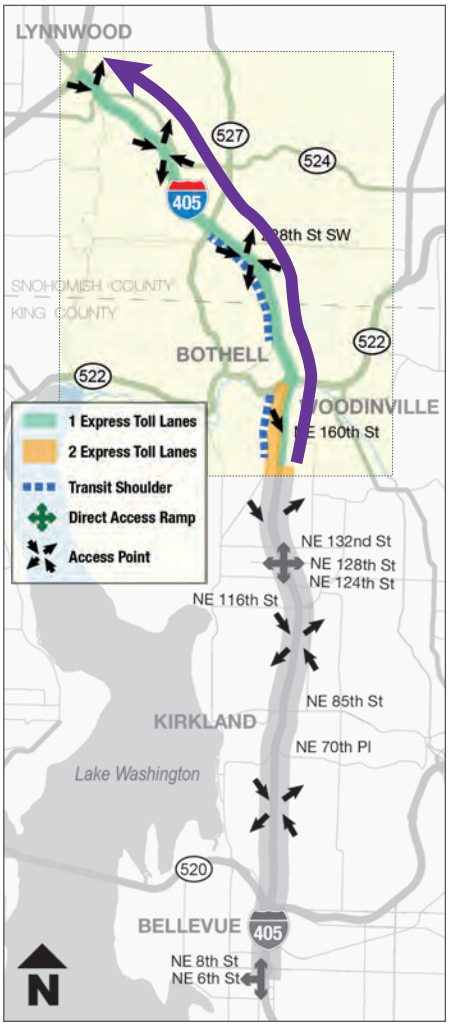
AM PEAK PERIOD



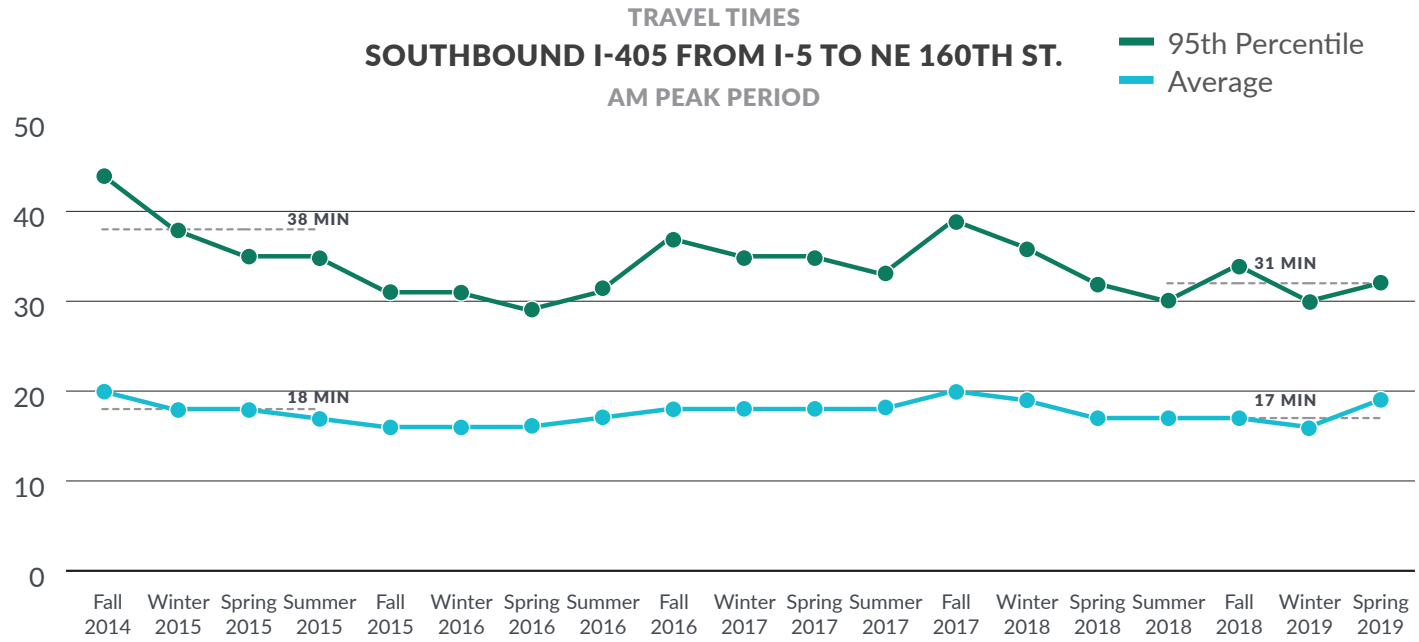


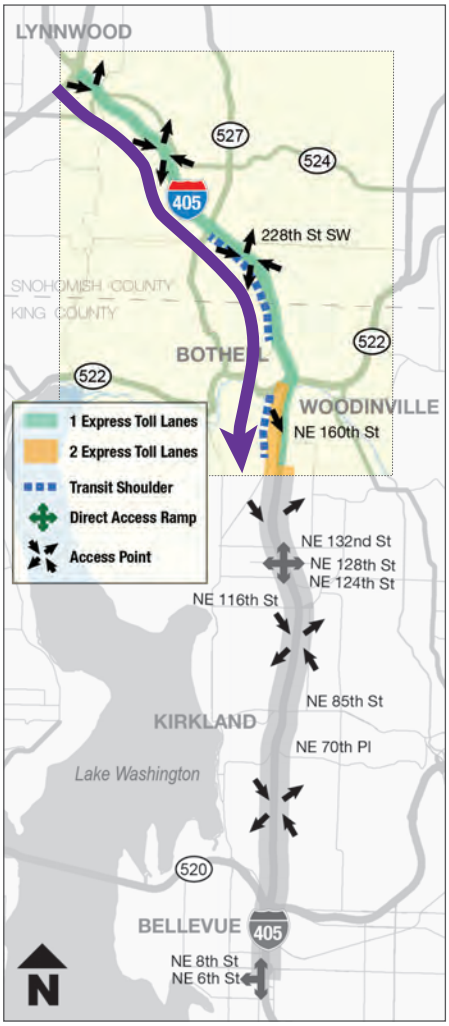
ADDITIONAL EXAMPLE





ADDITIONAL EXAMPLE





Detailed Volume Data

- The following pages contain a summary of the requested volume data. Due to the large quantity and detail of volume data requested for each travel segment, the rest of this data will be provided on WSDOT's website at www.wsdot.wa.gov/Tolling/405/library.htm.
- The appendix volume data summarizes volume totals by peak hour, peak period, daily total, direction, lane and by month from October 2014 through June 2019 at four screen line locations along the corridor. During the first 45 months of express toll lane operations, all four locations saw average volume growth compared to the year prior to express toll lane operations. The rate of growth was higher during the peak periods in the peak direction than the daily volume rate of growth. The rate of growth was also higher at the locations between Bellevue and Bothell than between Bothell and Lynnwood. The locations between Bellevue and Bothell clearly showed greater growth during the first year of operations than the second year. However the locations between Bothell and Lynnwood displayed a mix of trends over the two years. Most notably, the southbound AM peak period primarily grew in the first year of operations, while northbound PM peak period primarily grew in the second year of operations. The evening peak period data collected after April 2017 includes the operation of the peak-use shoulder lane.

Detailed Speed Data

- Due to the large amount and detail of the speed data requested for each travel segment, this data will be provided on WSDOT's website at: www.wsdot.wa.gov/Tolling/405/library.htm
- Data summary: Monthly average, 5th percentile, and 95th percentile speeds (miles per hour) along I-405 in 5 minute increments from October 2014 to June 2019 Speeds are summarized in two segments: the southern corridor (downtown Bellevue to SR 522) and the northern corridor (SR 522 to Swamp Creek). They are also summarized for the full length in the HOV/express toll lanes and the general purpose lanes.

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Oct	2014	Mainline	17,663	23,017	59,002	82,576
		HOV	4,301	4,850	10,402	10,812
		Total	21,964	27,867	69,404	93,388
	2015	Mainline	16,434	19,738	68,482	79,251
		ETL	7,622	8,755	16,053	14,538
		Total	24,056	28,493	84,535	93,789
	Total Change (2015 2014)		2,092	626	15,131	401
Nov	2014	Mainline	17,144	21,508	68,851	81,400
		HOV	3,932	4,565	12,511	11,345
		Total	21,076	26,073	81,362	92,745
	2015	Mainline	15,357	18,946	63,552	73,567
		ETL	7,490	8,865	16,220	14,663
		Total	22,847	27,811	79,772	88,230
	Total Change (2015 2014)		1,771	1,738	-1,590	4,515
Dec	2014	Mainline	16,511	21,553	68,468	80,554
		HOV	3,507	4,504	12,859	10,968
		Total	20,018	26,057	81,327	91,522
	2015	Mainline	15,235	18,490	65,204	75,996
		ETL	6,576	8,452	16,502	15,581
		Total	21,811	26,942	81,706	91,577
	Total Change (2015 2014)		1,793	885	379	55
Jan	2015	Mainline	17,262	22,217	68,380	80,996
		HOV	3,950	4,609	11,343	10,426
		Total	21,212	26,826	79,723	91,422
	2016	Mainline	15,730	19,042	65,432	76,350
		ETL	8,019	9,205	17,236	15,321
		Total	23,749	28,247	82,668	91,671
	Total Change (2016 2015)		2,537	1,421	2,945	249

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Feb	2015	Mainline	18,152	23,283	67,434	80,586
		HOV	4,158	4,623	11,436	9,653
		Total	22,310	27,906	78,870	90,239
	2016	Mainline	17,038	19,918	68,765	79,759
		ETL	8,617	9,869	18,133	16,026
		Total	25,655	29,787	86,898	95,785
	Total Change (2016 2015)		3,345	1,881	8,028	5,546
Mar	2015	Mainline	18,539	**22,839**	72,882	85,870
		HOV	4,293	4,836	12,122	11,115
		Total	22,832	27,675	85,004	96,985
	2016	Mainline	17,359	20,000	69,351	79,866
		ETL	9,117	10,513	20,076	18,242
		Total	26,476	30,513	89,427	98,108
	Total Change (2016 2015)		3,644	2,838	4,423	1,123
Apr	2015	Mainline	19,022	22,890	73,793	85,949
		HOV	4,197	4,838	12,769	11,660
		Total	23,219	27,728	86,562	97,609
	2016	Mainline	17,505	20,568	69,840	74,820
		ETL	9,100	10,896	21,405	18,570
		Total	26,605	31,464	91,245	93,390
	Total Change (2016 2015)		3,386	3,736	4,683	4,219
May	2015	Mainline	18,265	22,625	72,807	85,565
		HOV	4,190	4,794	13,665	11,840
		Total	22,455	27,419	86,472	97,405
	2016	Mainline	16,980	20,698	69,152	84,522
		ETL	9,182	11,990	21,812	22,335
		Total	26,162	32,688	90,964	106,857
	Total Change (2016 2015)		3,707	5,269	4,492	9,452
Jun	2015	Mainline	19,028	23,427	74,338	88,340
		HOV	4,462	4,981	14,387	12,535
		Total	23,490	28,408	88,725	100,875
	2016	Mainline	17,672	20,693	69,964	85,705
		ETL	9,540	12,537	24,201	24,586
		Total	27,212	33,230	94,165	110,291
	Total Change (2016 2015)		3,722	4,822	5,440	9,416

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Jul	2015	Mainline	18,697	23,398	74,231	89,503
		HOV	4,257	4,897	14,735	12,653
		Total	22,954	28,295	88,966	102,156
	2016	Mainline	16,812	20,397	69,454	84,960
		ETL	8,576	12,081	23,948	23,893
		Total	25,388	32,478	93,402	108,853
	Total Change (2016 2015)		2,434	4,183	4,436	6,697
Aug	2015	Mainline	18,633	22,896	74,145	88,103
		HOV	4,298	4,812	15,132	12,763
		Total	22,931	27,708	89,277	100,866
	2016	Mainline	17,510	20,683	70,068	85,514
		ETL	9,375	12,677	25,064	24,690
		Total	26,885	33,360	95,132	110,204
	Total Change (2016 2015)		3,954	5,652	5,855	9,338
Sep	2015	Mainline	17,763	23,025	71,767	85,595
		HOV	3,994	4,566	11,755	10,132
		Total	21,757	27,591	83,522	95,727
	2016	Mainline	16,589	20,618	67,817	83,428
		ETL	9,335	12,478	24,104	24,152
		Total	25,924	33,096	91,921	107,580
	Total Change (2016 2015)		4,167	5,505	8,399	11,853
Oct	2015	Mainline	16,434	19,738	68,482	79,251
		ETL	7,622	8,755	16,053	14,538
		Total	24,056	28,493	84,535	93,789
	2016	Mainline	16,540	20,598	66,729	82,580
		ETL	9,708	12,459	23,975	23,434
		Total	26,248	33,057	90,704	106,014
	Total Change (2016 2015)		2,192	4,564	6,169	12,225
Nov	2015	Mainline	15,357	18,946	63,552	73,567
		ETL	7,490	8,865	16,220	14,663
		Total	22,847	27,811	79,772	88,230
	2016	Mainline	15,916	19,888	65,746	81,248
		ETL	8,957	11,648	23,290	22,950
		Total	24,873	31,536	89,036	104,198
	Total Change (2016 2015)		2,026	3,725	9,264	15,968

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Dec	2015	Mainline	15,235	18,490	65,204	75,996
		ETL	6,576	8,452	16,502	15,581
		Total	21,811	26,942	81,706	91,577
	2016	Mainline	16,210	19,588	65,620	81,107
		ETL	9,284	12,257	24,024	23,577
		Total	25,494	31,845	89,644	104,684
	Total Change (2016 2015)		3,683	4,903	7938	13,107
Jan	2016	Mainline	15,730	19,042	65,432	76,350
		ETL	8,019	9,205	17,236	15,321
		Total	23,749	28,247	82,668	91,671
	2017	Mainline	16,374	20,661	65,794	81,035
		ETL	9,038	11,972	21,846	22,077
		Total	25,412	32,633	87,640	103,112
	Total Change (2017 2016)		1,663	4,386	4,972	11,441
Feb	2016	Mainline	17,038	19,918	68,765	79,759
		ETL	8,617	9,869	18,133	16,026
		Total	25,655	29,787	86,898	95,785
	2017	Mainline	16,117	19,944	64,383	79,389
		ETL	9,092	11,859	22,912	22,956
		Total	25,209	31,803	87,295	102,345
	Total Change (2017 2016)		446	2,016	397	6,560
Mar	2016	Mainline	17,359	20,000	69,351	79,866
		ETL	9,117	10,513	20,076	18,242
		Total	26,476	30,513	89,427	98,108
	2017	Mainline	16,984	20,726	67,585	83,419
		ETL	10,130	12,615	25,301	24,356
		Total	27,114	33,341	92,886	107,775
	Total Change (2017 2016)		638	2,828	3,459	9,667
Apr	2016	Mainline	17,505	20,568	69,840	74,820
		ETL	9,100	10,896	21,405	18,570
		Total	26,605	31,464	91,245	93,390
	2017	Mainline	17,173	21,366	68,899	85,444
		ETL	10,120	12,619	25,060	24,692
		Total	27,293	33,985	93,959	110,136
	Total Change (2017 2016)		688	2,521	2,714	16,746

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
May	2016	Mainline	16,980	20,698	69,152	84,522
		ETL	9,182	11,990	21,812	22,335
		Total	26,162	32,688	90,964	106,857
	2017	Mainline	16,932	21,161	68,485	85,044
		ETL	10,019	12,942	25,526	25,782
		Total	26,951	34,103	94,011	110,826
	Total Change (2017 2016)		789	1,415	3,047	3,969
Jun	2016	Mainline	17,672	20,693	69,964	85,705
		ETL	9,540	12,537	24,201	24,586
		Total	27,212	33,230	94,165	110,291
	2017	Mainline	17,362	21,026	70,000	87,110
		ETL	10,188	13,751	27,847	27,414
		Total	27,550	34,777	97,847	114,524
	Total Change (2017 2016)		338	1,547	3,682	4,233
Jul	2016	Mainline	16,812	20,397	69,454	84,960
		ETL	8,576	12,081	23,948	23,893
		Total	25,388	32,478	93,402	108,853
	2017	Mainline	16,488	20,895	69,575	85,995
		ETL	9,207	12,861	27,057	26,607
		Total	25,695	33,756	96,632	112,602
	Total Change (2017 2016)		307	1,278	3,230	3,749
Aug	2016	Mainline	17,510	20,683	70,068	85,514
		ETL	9,375	12,677	25,064	24,690
		Total	26,885	33,360	95,132	110,204
	2017	Mainline	17,470	21,509	70,940	87,151
		ETL	9,832	13,482	27,658	27,178
		Total	27,302	34,991	98,598	114,329
	Total Change (2017 2016)		417	1,631	3,466	4,125

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Sep	2016	Mainline	16,589	20,618	67,817	83,428
		ETL	9,335	12,478	24,104	24,152
		Total	25,924	33,096	91,921	107,580
	2017	Mainline	16,523	21,319	68,411	84,558
		ETL	9,645	13,325	26,281	26,422
		Total	26,168	34,644	94,692	110,980
	Total Change (2017 2016)		244	1,548	2,771	3,400
Oct	2016	Mainline	16,540	20,598	66,729	82,580
		ETL	9,708	12,459	23,975	23,434
		Total	26,248	33,057	90,704	106,014
	2017	Mainline	16,891	21,096	67,776	83,869
		ETL	10,278	13,667	26,427	26,746
		Total	27,169	34,763	94,203	110,615
	Total Change (2017 2016)		921	1,706	3,499	4,601
Nov	2016	Mainline	15,916	19,888	65,746	81,248
		ETL	8,957	11,648	23,290	22,950
		Total	24,873	31,536	89,036	104,198
	2017	Mainline	15,200	20,194	64,316	80,727
		ETL	9,198	12,553	25,888	25,594
		Total	24,398	32,747	90,204	106,321
	Total Change (2017 2016)		475	1,211	1,168	2,123
Dec	2016	Mainline	16,210	19,588	65,620	81,107
		ETL	9,284	12,257	24,024	23,577
		Total	25,494	31,845	89,644	104,684
	2017	Mainline	15,295	19,857	65,179	79,785
		ETL	8,491	11,871	24,640	24,876
		Total	23,786	31,728	89,819	104,661
	Total Change (2017 2016)		-1,708	-117	175	-23

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Jan	2017	Mainline	16,374	20,661	65,794	81,035
		ETL	9,038	11,972	21,846	22,077
		Total	25,412	32,633	87,640	103,112
	2018	Mainline	15,795	20,036	64,180	79,661
		ETL	9,479	12,681	24,266	24,503
		Total	25,274	32,717	88,446	104,164
	Total Change (2018 2017)		-138	84	806	1,052
Feb	2017	Mainline	16,117	19,944	64,383	79,389
		ETL	9,092	11,859	22,912	22,956
		Total	25,209	31,803	87,295	102,345
	2018	Mainline	16,472	20,745	66,663	82,469
		ETL	9,685	13,057	24,287	24,919
		Total	26,157	33,802	90,950	107,388
	Total Change (2018 2017)		948	1,999	3,655	5,043
Mar	2017	Mainline	16,984	20,726	67,585	83,419
		ETL	10,130	12,615	25,301	24,356
		Total	27,114	33,341	92,886	107,775
	2018	Mainline	16,960	21,253	68,954	84,854
		ETL	10,261	13,914	26,143	26,623
		Total	27,221	35,167	95,097	111,477
	Total Change (2018 2017)		107	1,826	2,211	3,702
Apr	2017	Mainline	17,173	21,366	68,899	85,444
		ETL	10,120	12,619	25,060	24,692
		Total	27,293	33,985	93,959	110,136
	2018	Mainline	17,446	20,861	69,378	84,990
		HOV	9,940	13,626	25,477	26,357
		Total	27,386	34,487	94,855	111,347
	Total Change (2018 2017)		93	502	896	1,211

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
May	2017	Mainline	16,932	21,161	68,485	85,044
		ETL	10,019	12,942	25,526	25,782
		Total	26,951	34,103	94,011	110,826
	2018	Mainline	16,934	20,640	69,253	85,770
		HOV	9,907	13,591	26,593	27,037
		Total	26,841	34,231	95,846	112,807
	Total Change (2018 2017)		-110	128	1,835	1,981
Jun	2017	Mainline	17,362	21,026	70,000	87,110
		ETL	10,188	13,751	27,847	27,414
		Total	27,550	34,777	97,847	114,524
	2018	Mainline	17,499	20,700	70,632	87,839
		HOV	10,134	13,742	28,181	28,771
		Total	27,633	34,442	98,813	116,610
	Total Change (2018 2017)		83	-335	966	2,086
Jul	2017	Mainline	16,488	20,895	69,575	85,995
		ETL	9,207	12,861	27,057	26,607
		Total	25,695	33,756	96,632	112,602
	2018	Mainline	16,764	19,855	69,446	85,145
		HOV	9,205	13,098	27,447	27,945
		Total	25,969	32,953	96,893	113,090
	Total Change (2018 2017)		274	803	261	488
Aug	2017	Mainline	17,470	21,509	70,940	87,151
		ETL	9,832	13,482	27,658	27,178
		Total	27,302	34,991	98,598	114,329
	2018	Mainline	17,513	20,636	71,166	86,646
		HOV	9,687	13,280	27,960	28,181
		Total	27,200	33,916	99,126	114,827
	Total Change (2018 2017)		-102	-1,075	528	498

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Sep	2017	Mainline	16,523	21,319	68,411	84,558
		ETL	9,645	13,325	26,281	26,422
		Total	26,168	34,644	94,692	110,980
	2018	Mainline	16,465	20,700	68,182	84,635
		HOV	9,775	13,423	26,339	27,091
		Total	26,240	34,123	94,521	111,726
	Total Change (2018 2017)		72	521	-171	746
Oct	2017	Mainline	16,891	21,096	67,776	83,869
		ETL	10,278	13,667	26,427	26,746
		Total	27,169	34,763	94,203	110,615
	2018	Mainline	16,758	20,807	67,619	84,490
		HOV	10,244	13,589	26,211	26,998
		Total	27,002	34,396	93,830	111,488
	Total Change (2018 2017)		-167	367	373	873
Nov	2017	Mainline	15,200	20,194	64,316	80,727
		ETL	9,198	12,553	25,888	25,594
		Total	24,398	32,747	90,204	106,321
	2018	Mainline	15,519	19,775	65,606	81,835
		HOV	9,215	12,467	25,526	25,882
		Total	24,734	32,242	91,132	107,717
	Total Change (2018 2017)		336	-505	928	1,396
Dec	2017	Mainline	15,295	19,857	65,179	79,785
		ETL	8,491	11,871	24,640	24,876
		Total	23,786	31,728	89,819	104,661
	2018	Mainline	14,938	19,655	64,548	79,975
		HOV	8,062	11,367	24,577	24,561
		Total	23,000	31,022	89,125	104,536
	Total Change (2018 2017)		-786	-706	694	-125

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Jan	2018	Mainline	15,795	20,036	64,180	79,661
		ETL	9,479	12,681	24,266	24,503
		Total	25,274	32,717	88,446	104,164
	2019	Mainline	16,020	20,508	65,366	81,495
		HOV	9,317	12,768	23,931	24,998
		Total	25,337	33,276	89,297	106493
	Total Change (2019 2018)		63	559	851	2,329
Feb	2018	Mainline	16,472	20,745	66,663	82,469
		ETL	9,685	13,057	24,287	24,919
		Total	26,157	33,802	90,950	107,388
	2019	Mainline	14,544	17,521	57,117	70,419
		HOV	7,584	9,922	20,634	20,996
		Total	22,128	27,443	77,751	91,415
	Total Change (2019 2018)		4,029	6,359	13,199	-15,973
Mar	2018	Mainline	16,960	21,253	68,954	84,854
		ETL	10,261	13,914	26,143	26,623
		Total	27,221	35,167	95,097	111,477
	2019	Mainline	16,786	20,799	67,617	84,575
		HOV	10,281	13,633	26,151	26,856
		Total	27,067	34,432	93,768	11,1431
	Total Change (2019 2018)		-154	-735	-1,329	46

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			NE 100th (Dual Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)	Daily Total (SB)	Daily Total (NB)
Apr	2018	Mainline	17,446	20,861	69,378	84,990
		ETL	9,940	13,626	25,477	26,357
		Total	27,386	34,487	94,855	111,347
	2019	Mainline	17,225	20,927	68,493	84,812
		HOV	10,177	13,485	26,032	26,885
		Total	27,402	34,412	94,525	111,697
	Total Change (2019 2018)		16	-75	-330	350
May	2018	Mainline	16,934	20,640	69,253	85,770
		ETL	9,907	13,591	26,593	27,037
		Total	26,841	34,231	95,846	112,807
	2019	Mainline	16,742	20,257	67,954	84,750
		HOV	9,950	13,294	26,822	27,368
		Total	26,692	33,551	94,776	112,118
	Total Change (2019 2018)		-149	680	-1,070	689
Jun	2018	Mainline	17,499	20,700	70,632	87,839
		ETL	10,134	13,742	28,181	28,771
		Total	27,633	34,442	98,813	116,610
	2019	Mainline	17,408	20,077	69,780	86,144
		HOV	10,210	13,809	28,205	28,539
		Total	27,618	33,886	97,985	114,683
	Total Change (2019 2018)		-15	556	828	-1,927

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Oct	2014	Mainline	10,841	14,319	51,987	53,767
		HOV	3,126	4,450	8,644	8,976
		Total	13,967	18,769	60,631	62,743
	2015	Mainline	11,773	13,483	53,876	55,295
		ETL	3,269	4,773	7,741	7,231
		Total	15,042	18,256	61,617	62,526
	Total Change (2015 2014)		1,075	513	986	-217
Nov	2014	Mainline	10,665	13,653	50,239	52,349
		HOV	2,681	4,127	8,976	8,789
		Total	13,346	17,780	59,215	61,138
	2015	Mainline	11,047	13,103	52,034	53,390
		ETL	3,226	4,474	8,121	7,256
		Total	14,273	17,577	60,155	60,646
	Total Change (2015 2014)		927	-203	940	492
Dec	2014	Mainline	10,586	13,544	50,562	52,184
		HOV	2,331	4,041	9,005	8,120
		Total	12,917	17,585	59,567	60,304
	2015	Mainline	10,845	12,846	52,300	53,035
		ETL	2,710	4,170	7,882	7,285
		Total	13,555	17,016	60,182	60,320
	Total Change (2015 2014)		638	569	615	16
Jan	2015	Mainline	11,308	14,025	51,460	52,184
		HOV	2,522	3,985	7,565	8,120
		Total	13,830	18,010	59,025	60,304
	2016	Mainline	11,234	13,241	51,804	52,504
		ETL	3,306	4,362	7,715	7,201
		Total	14,540	17,603	59,519	59,705
	Total Change (2016 2015)		710	407	494	599
Feb	2015	Mainline	11,864	14,539	53,269	53,944
		HOV	2,665	4,290	8,046	8,467
		Total	14,529	18,829	61,315	62,411
	2016	Mainline	12,085	13,846	54,020	54,992
		ETL	3,431	4,642	8,251	7,684
		Total	15,516	18,488	62,271	62,676
	Total Change (2016 2015)		987	341	956	265

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Mar	2015	Mainline	11,937	14,681	49,388	50,728
		HOV	2,819	4,269	7,975	7,963
		Total	14,756	18,950	57,363	58,691
	2016	Mainline	12,240	14,076	54,019	55,254
		ETL	3,736	4,986	9,264	8,683
		Total	15,976	19,062	63,283	63,937
	Total Change (2016 2015)		1,220	112	5,920	5,246
Apr	2015	Mainline	12,277	14,506	54,498	54,996
		HOV	2,725	4,411	8,892	9,704
		Total	15,002	18,917	63,390	64,700
	2016	Mainline	12,433	13,952	54,906	56,333
		ETL	3,806	5,178	10,571	9,722
		Total	16,239	19,130	65,477	66,055
	Total Change (2016 2015)		1,237	213	2,087	1,355
May	2015	Mainline	11,929	14,182	54,062	55,279
		HOV	2,802	4,502	9,746	9,573
		Total	14,731	18,684	63,808	64,852
	2016	Mainline	11,990	13,670	54,741	55,531
		ETL	3,820	5,141	10,532	9,973
		Total	15,810	18,811	65,273	65,504
	Total Change (2016 2015)		1,079	127	1,465	652
Jun	2015	Mainline	12,225	14,166	55,328	56,319
		HOV	3,095	4,887	10,683	10,793
		Total	15,320	19,053	66,011	67,112
	2016	Mainline	12,260	13,865	55,920	56,902
		ETL	4,012	5,373	11,468	10,740
		Total	16,272	19,238	67,388	67,642
	Total Change (2016 2015)		952	185	1,377	530
Jul	2015	Mainline	12,440	14,016	56,522	56,423
		HOV	2,797	4,781	10,698	11,386
		Total	15,237	18,797	67,220	67,809
	2016	Mainline	11,761	13,432	54,902	55,848
		ETL	3,699	5,121	11,909	10,812
		Total	15,460	18,553	66,811	66,660
	Total Change (2016 2015)		223	-244	409	-1,149

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Aug	2015	Mainline	12,445	14,210	56,452	56,206
		HOV	2,925	4,685	10,755	11,346
		Total	15,370	18,895	67,207	67,552
	2016	Mainline	12,155	13,573	55,115	55,947
		ETL	4,035	5,268	12,364	11,170
		Total	16,190	18,841	67,479	67,117
	Total Change (2016 2015)		820	-54	272	435
Sep	2015	Mainline	11,603	13,984	53,381	54,701
		HOV	2,820	4,286	8,897	8,964
		Total	14,423	18,270	62,278	63,665
	2016	Mainline	11,177	13,640	52,915	54,656
		ETL	3,950	5,125	11,567	10,450
		Total	15,127	18,765	64,482	65,106
	Total Change (2016 2015)		704	495	2,204	1,441
Oct	2015	Mainline	11,773	13,483	53,876	55,295
		ETL	6,269	4,773	7,741	7,231
		Total	18,042	18,256	61,617	62,526
	2016	Mainline	11,186	13,643	51,919	53,482
		ETL	4,020	5,127	11,039	10,534
		Total	15,206	18,770	62,958	64,016
	Total Change (2016 2015)		-2,836	514	1,341	1,490
Nov	2015	Mainline	11,047	13,103	52,034	53,390
		ETL	3,226	4,474	8,121	7,256
		Total	14,273	17,577	60,155	60,646
	2016	Mainline	10,724	13,296	51,492	52,930
		ETL	3,540	4,807	10,866	10,279
		Total	14,264	18,103	62,358	63,209
	Total Change (2016 2015)		-9	526	2,203	2,563
Dec	2015	Mainline	10,845	12,846	52,300	53,035
		ETL	2,710	4,170	7,882	7,285
		Total	13,555	17,016	60,182	60,320
	2016	Mainline	10,915	13,433	51,169	53,155
		ETL	3,769	4,914	11,126	10,252
		Total	14,684	18,347	62,295	63,407
	Total Change (2016 2015)		1,129	1,331	2,113	3,087

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Jan	2016	Mainline	11,234	13,241	51,804	52,504
		ETL	3,306	4,362	7,715	7,201
		Total	14,540	17,603	59,519	59,705
	2017	Mainline	11,440	13,473	51,395	51,891
		ETL	3,609	4,829	9,906	9,833
		Total	15,049	18,302	61,301	61,724
	Total Change (2017 2016)		509	699	1,782	2,019
Feb	2016	Mainline	12,085	13,846	54,020	54,992
		ETL	3,431	4,642	8,251	7,684
		Total	15,516	18,488	62,271	62,676
	2017	Mainline	11,248	13,197	50,733	51,471
		ETL	3,681	4,740	10,329	10,219
		Total	14,929	17,937	61,062	61,690
	Total Change (2017 2016)		-587	551	-1,209	-986
Mar	2016	Mainline	12,240	14,076	54,019	55,254
		ETL	3,736	4,986	9,264	8,683
		Total	15,976	19,062	63,283	63,937
	2017	Mainline	11,535	13,292	53,175	52,949
		ETL	3,943	5,163	11,739	11,122
		Total	15,478	18,455	64,914	64,071
	Total Change (2017 2016)		498	607	1,631	134
Apr	2016	Mainline	12,433	13,952	54,906	56,333
		ETL	3,806	5,178	10,571	9,722
		Total	16,239	19,130	65,477	66,055
	2017	Mainline	11,912	15,641	54,023	56,908
		ETL	3,897	4,989	11,367	11,579
		Total	15,809	20,630	65,390	68,487
	Total Change (2017 2016)		430	1,500	87	2,432

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
May	2016	Mainline	11,990	13,670	54,741	55,531
		ETL	3,820	5,141	10,532	9,973
		Total	15,810	18,811	65,273	65,504
	2017	Mainline	11,675	15,684	53,901	55,572
		ETL	3,930	4,655	11,585	10,657
		Total	15,605	20,339	65,486	66,229
	Total Change (2017 2016)		-205	1,528	213	725
Jun	2016	Mainline	12,260	13,865	55,920	56,902
		ETL	4,012	5,373	11,468	10,740
		Total	16,272	19,238	67,388	67,642
	2017	Mainline	11,805	15,373	55,261	57,850
		ETL	4,074	4,993	12,732	11,493
		Total	15,879	20,366	67,993	69,343
	Total Change (2017 2016)		-393	1,128	605	1,701
Jul	2016	Mainline	11,761	13,432	54,902	55,848
		ETL	3,699	5,121	11,909	10,812
		Total	15,460	18,553	66,811	66,660
	2017	Mainline	11792	15,723	54,399	57,083
		ETL	3970	4,867	11,910	11,206
		Total	15762	20,590	66,309	68,289
	Total Change (2017 2016)		302	2,037	-502	1,629
Aug	2016	Mainline	12,155	13,573	55,115	55,947
		ETL	4,035	5,268	12,364	11,170
		Total	16,190	18,841	67,479	67,117
	2017	Mainline	11,953	15,768	55,688	57,721
		ETL	3,992	4,939	13,261	11,562
		Total	15,945	20,707	68,949	69,283
	Total Change (2017 2016)		-245	1,866	1,470	2,166

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Sep	2016	Mainline	11,177	13,640	52,915	54,656
		ETL	3,950	5,125	11,567	10,450
		Total	15,127	18,765	64,482	65,106
	2017	Mainline	11,326	15,904	53,689	56,433
		ETL	3,940	4,852	12,365	10,960
		Total	15,266	20,756	66,054	67,393
	Total Change (2017 2016)		139	1,991	1,572	2,287
Oct	2016	Mainline	11,761	13,432	54,902	55,848
		ETL	3,699	5,121	11,909	10,812
		Total	15,460	18,553	66,811	66,660
	2017	Mainline	11,466	16,043	53,147	56,213
		ETL	4,175	5,040	12,162	10,845
		Total	15,641	21,083	65,309	67,058
	Total Change (2017 2016)		181	2,530	-1,502	398
Nov	2016	Mainline	12,155	13,573	55,115	55,947
		ETL	4,035	5,268	12,364	11,170
		Total	16,190	18,841	67,479	67,117
	2017	Mainline	10,374	15,203	51,099	54,157
		ETL	3,588	4,705	11,842	10,644
		Total	13,962	18,347	62,941	64,801
	Total Change (2017 2016)		2,228	1,067	4,538	-2,316
Dec	2016	Mainline	10,915	13,433	51,169	53,155
		ETL	3,769	4,914	11,126	10,252
		Total	14,684	18,765	62,295	63,407
	2017	Mainline	10,465	14,811	51,323	53,550
		ETL	3,321	4,510	11,344	10,547
		Total	13,786	19,321	62,667	64,097
	Total Change (2017 2016)		898	974	372	690

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Jan	2017	Mainline	11,440	13,473	51,395	51,891
		ETL	3,609	4,829	9,906	9,833
		Total	15,049	18,302	61,301	61,724
	2018	Mainline	10,941	15,037	50,679	53,152
		HOV	3,608	4,673	10,719	10,001
		Total	14,549	19,710	61,398	63,153
	Total Change (2018 2017)		-500	1,408	97	1,429
Feb	2017	Mainline	11,248	13,197	50,733	51,471
		ETL	3,681	4,740	10,329	10,219
		Total	14,929	17,937	61,062	61,690
	2018	Mainline	11,381	15,816	52,677	55,302
		HOV	3,706	4,737	10,787	10,062
		Total	15,087	20,553	63,464	65,364
	Total Change (2018 2017)		158	2,616	2,402	3,674
Mar	2017	Mainline	11,535	13,292	53,175	52,949
		ETL	3,943	5,163	11,739	11,122
		Total	15,478	18,455	64,914	64,071
	2018	Mainline	11,681	16,111	54,271	56,829
		HOV	3,965	4,961	11,655	10,542
		Total	15,646	21,072	65,926	67,371
	Total Change (2018 2017)		168	2,617	1,012	3,300
Apr	2017	Mainline	17,173	21,366	68,899	85,444
		ETL	10,120	12,619	25,060	24,692
		Total	27,293	33,985	93,959	110,136
	2018	Mainline	17,446	20,861	69,378	84,990
		HOV	9,940	13,626	25,477	26,357
		Total	27,386	34,487	94,855	111,347
	Total Change (2018 2017)		93	502	896	1,211

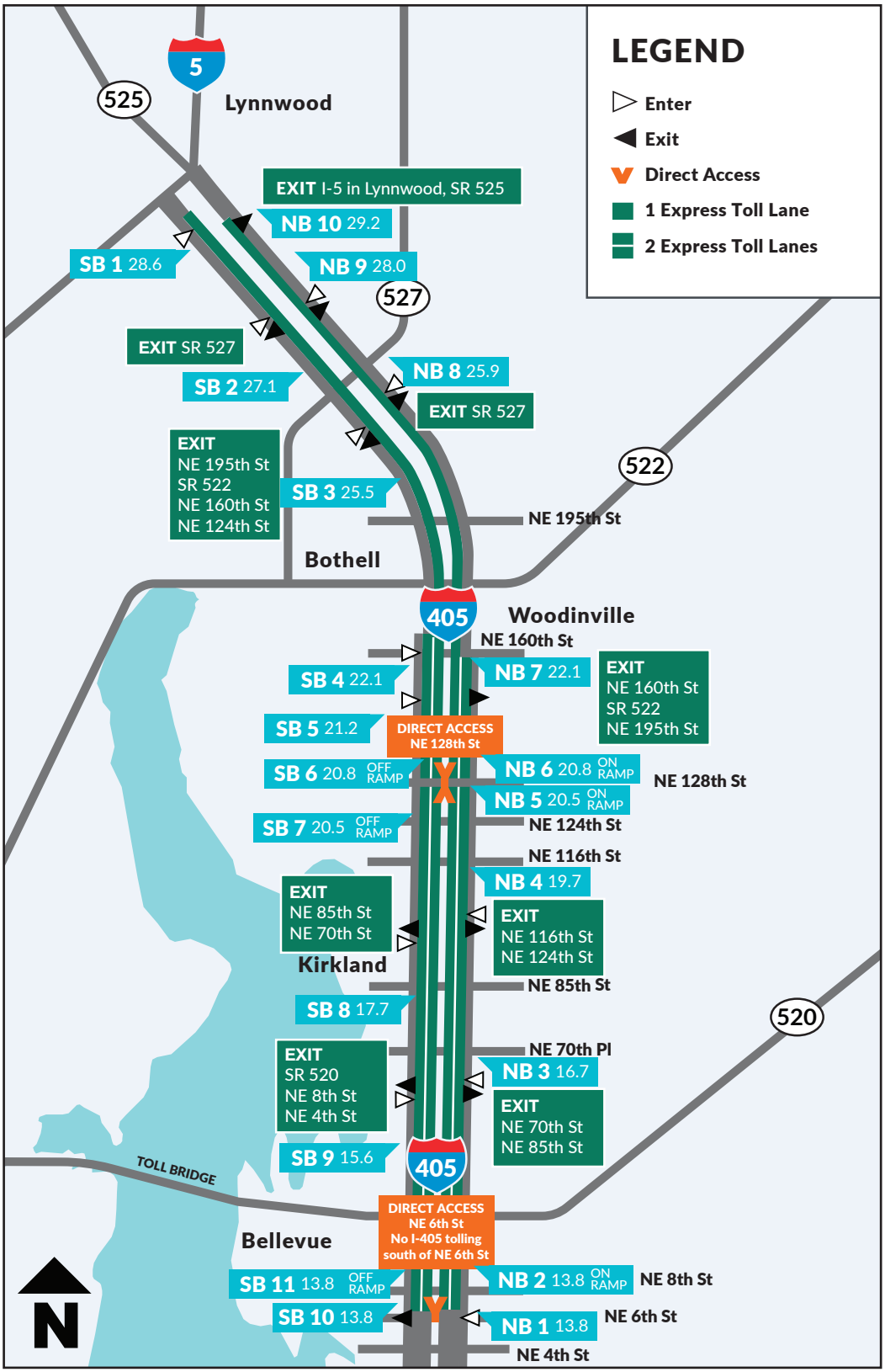
AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
May	2017	Mainline	16,932	21,161	68,485	85,044
		ETL	10,019	12,942	25,526	25,782
		Total	26,951	34,103	94,011	110,826
	2018	Mainline	16,934	20,640	69,253	85,770
		HOV	9,907	13,591	26,593	27,037
		Total	26,841	34,231	95,846	112,807
	Total Change (2018 2017)		-110	128	1,835	1,981
Jun	2017	Mainline	11,805	15,373	55,261	57,850
		ETL	4,074	4,993	12,732	11,493
		Total	15,879	20,366	67,993	69,343
	2018	Mainline	12,190	16,129	56,384	59,154
		HOV	4,052	5,068	13,037	11,805
		Total	16,242	21,197	69,421	70,959
	Total Change (2018 2017)		363	831	1,428	1,616
Jul	2017	Mainline	11,792	15,723	54,399	57,083
		ETL	3,970	4,867	11,910	11,206
		Total	15,762	20,590	66,309	68,289
	2018	Mainline	11,790	15,347	55,358	57,172
		HOV	3,862	4,793	12,925	11,917
		Total	15,652	20,140	68,283	69,089
	Total Change (2018 2017)		-110	450	1,974	800
Aug	2017	Mainline	11,953	15,768	55,688	57,721
		ETL	3,992	4,939	13,261	11,562
		Total	15,945	20,707	68,949	69,283
	2018	Mainline	12,274	15,956	56,710	58,462
		HOV	3,952	4,877	13,258	11,975
		Total	16,226	20,833	69,968	70,437
	Total Change (2018 2017)		281	126	1,019	1,019

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Sept	2017	Mainline	11,326	15,904	53,689	56,433
		ETL	3,940	4,852	12,365	10,960
		Total	15,266	20,756	66,054	67,393
	2018	Mainline	11,743	15,709	54,800	56,638
		HOV	3,964	4,887	12,003	11,180
		Total	15,707	20,596	66,803	67,818
	Total Change (2018 2017)		441	-160	749	425
Oct	2017	Mainline	11,466	16,043	53,147	56,213
		ETL	4,175	5,040	12,162	10,845
		Total	15,641	21,083	65,309	67,058
	2018	Mainline	11,946	12,369	54,109	52,397
		HOV	4,235	8,893	11,867	15,497
		Total	16,181	21,262	65,976	67,894
	Total Change (2018 2017)		540	179	667	836
Nov	2017	Mainline	10,374	15,203	51,099	54,157
		ETL	3,588	4,705	11,842	10,644
		Total	13,962	19,908	62,941	64,801
	2017	Mainline	10,986	11,737	52,784	51,052
		HOV	3,709	8,304	11,584	15,046
		Total	14,695	20,041	64,368	66,098
	Total Change (2018 2017)		733	133	1,427	1,297
Dec	2017	Mainline	10,465	14,811	51,323	53,550
		ETL	3,321	4,510	11,344	10,547
		Total	13,786	19,321	62,667	64,097
	2018	Mainline	10,652	11,615	51,984	49,911
		HOV	3,264	7,672	11,393	14,305
		Total	13,916	19,287	63,377	64,216
	Total Change (2018 2017)		130	-34	710	119

*: PM Mainline data includes Peak Use Shoulder Lane counts starting Apr 2017.

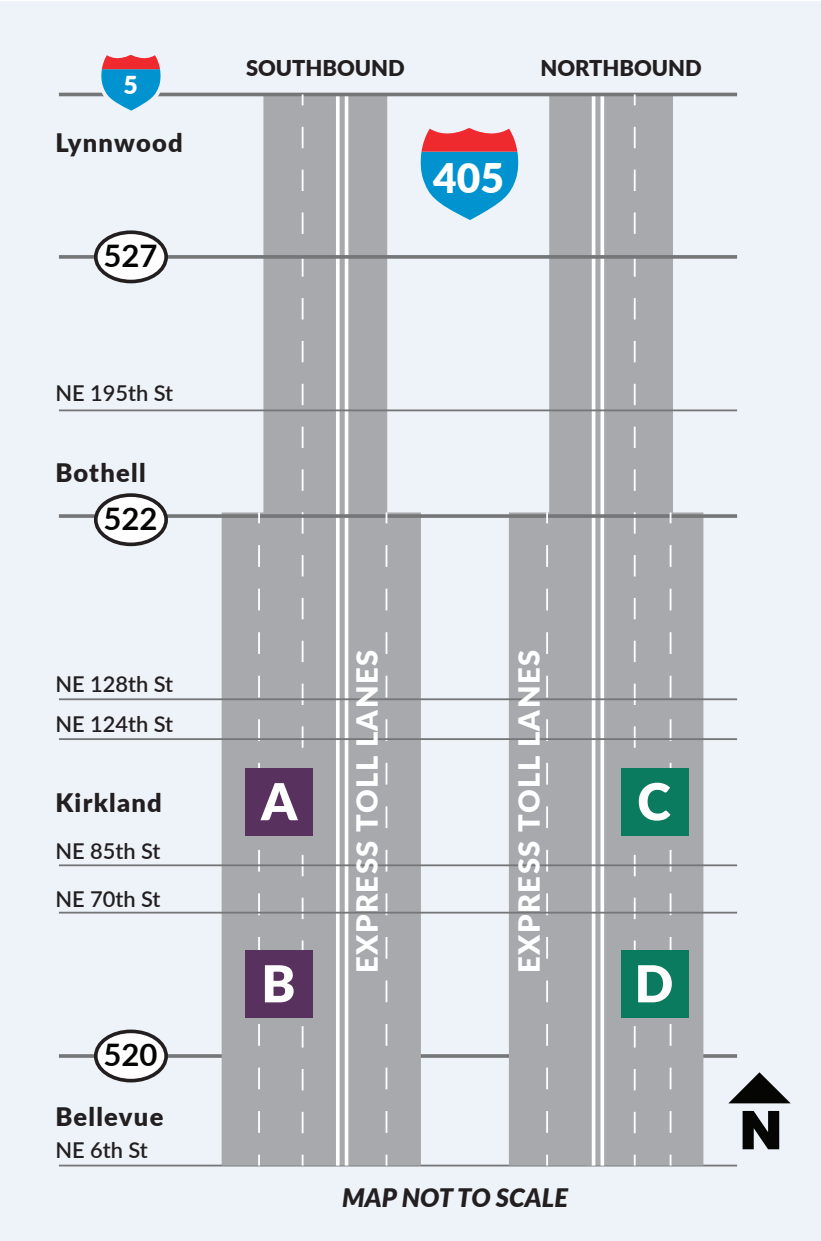
AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Jan	2018	Mainline	10,941	15,037	50,679	53,152
		ETL	36,08	4,673	10,719	10,001
		Total	14,549	19,710	61,398	63,153
	2019	Mainline	11,451	15,740	52,457	54,940
		HOV	37,83	4,702	10,996	10,216
		Total	15,234	20,442	63,453	65,156
	Total Change (2019 2018)		685	732	2,055	2,003
Feb	2018	Mainline	11,381	15,816	52,677	55,302
		ETL	37,06	4,737	10,787	10,062
		Total	15,087	20,553	63,464	65,364
	2019	Mainline	10,273	13,615	45,944	47,969
		HOV	3,193	3,902	9,494	9,191
		Total	13,466	17,517	55,438	57,160
	Total Change (2019 2018)		1,621	-3,036	8,026	-8,204
Mar	2018	Mainline	11,681	16,111	54,271	56,829
		ETL	3,965	4,961	11,655	10,542
		Total	15,646	21,072	65,926	67,371
	2019	Mainline	11,875	16,029	54,207	56,703
		HOV	4,186	4,968	11,688	10,998
		Total	16,061	20,997	65,895	67,701
	Total Change (2019 2018)		415	-75	31	330

AVERAGE WEEKDAY SCREENLINE VOLUMES YEAR TO YEAR COMPARISON - PRE-TOLLING TO PRESENT						
			SR 527 (Single Lane Section)			
			AM Peak (SB, 5-9a)	PM Peak (NB, 3-7p)*	Daily Total (SB)	Daily Total (NB)
Apr	2018	Mainline	12,354	16,106	55,305	57,509
		ETL	3,944	4,962	11,526	10,699
		Total	16,298	21,068	66,831	68,208
	2019	Mainline	12,035	16,132	55,119	57,431
		HOV	4,190	4,974	11,859	11,115
		Total	16,225	21,106	66,978	68,546
	Total Change (2019 2018)		-73	38	147	338
May	2018	Mainline	11,846	15,801	55,122	57,571
		ETL	4,055	5,073	12,273	11,221
		Total	15,901	20,874	67,395	68,792
	2019	Mainline	11,574	15,927	54,671	57,023
		HOV	4,091	4,957	12,118	11,392
		Total	15,665	20,884	66,789	68,415
	Total Change (2019 2018)		-236	10	606	377
Jun	2018	Mainline	12,190	16,129	56,384	59,154
		ETL	4,052	5,068	13,037	11,805
		Total	16,242	21,197	69,421	70,959
	2019	Mainline	11,794	15,998	55,542	58,321
		HOV	4,124	5,182	12,860	12,071
		Total	15,918	21,180	68,402	70,392
	Total Change (2019 2018)		324	-17	-1,019	567


LEGEND
Enter
Exit
Direct Access
1 Express Toll Lane
2 Express Toll Lanes
5
525
Lynnwood
EXIT I-5 in Lynnwood, SR 525
NB 10 29.2
SB 1 28.6
NB 9 28.0
527
EXIT SR 527
SB 2 27.1
NB 8 25.9
EXIT SR 527
EXIT
NE 195th St
SR 522
NE 160th St
NE 124th St
SB 3 25.5
522
NE 195th St
Bothell
405
Woodinville
NE 160th St
SB 4 22.1
NB 7 22.1
EXIT
NE 160th St
SR 522
NE 195th St
SB 5 21.2
DIRECT ACCESS
NE 128th St
SB 6 20.8 OFF RAMP
NB 6 20.8 ON RAMP
NE 128th St
NB 5 20.5 ON RAMP
SB 7 20.5 OFF RAMP
NE 124th St
NE 116th St
NB 4 19.7
EXIT
NE 85th St
NE 70th St
EXIT
NE 116th St
NE 124th St
Kirkland
NE 85th St
SB 8 17.7
520
NE 70th Pl
NB 3 16.7
EXIT
SR 520
NE 8th St
NE 4th St
EXIT
NE 70th St
NE 85th St
SB 9 15.6
405
TOLL BRIDGE
DIRECT ACCESS
NE 6th St
No I-405 tolling
south of NE 6th St
Bellevue
SB 11 13.8 OFF RAMP
NB 2 13.8 ON RAMP
NE 8th St
SB 10 13.8
NB 1 13.8
NE 6th St
NE 4th St
N

APPENDIX B: ADDITIONAL TRAFFIC PERFORMANCE DATA

Using sensors in the roadway, WSDOT collected traffic counts on the stretch of I-405 between Bellevue and Lynnwood. Volumes were reported at eight sample locations: four in the northbound direction and four in the southbound direction. In the dual-lane section, sensors collect traffic data at NE 53rd St and NE 100th St. In the single-lane section, the sensors are located at the I-405 interchanges with SR 522 and SR 527.



To monitor daily vehicle volumes on the portion of the I-405 corridor with dual express toll lanes, WSDOT collected data at NE 100th (markers A and C) and NE 53rd St (markers B and D).

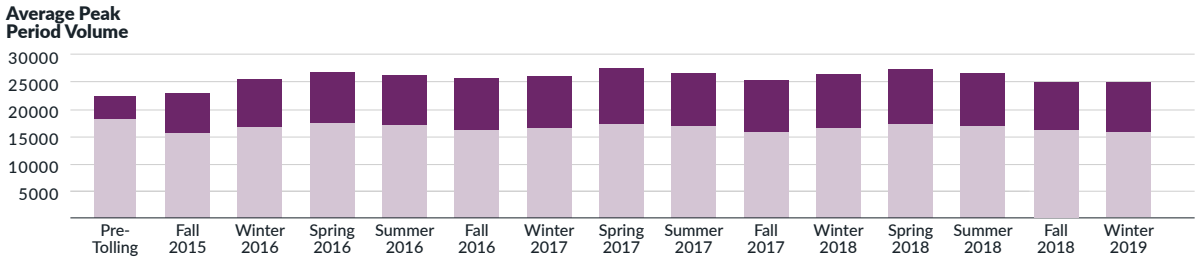
Quarterly average daily volumes for general purpose and express toll lanes at these locations can be viewed on the following page.

Average weekday dual-lane section volumes at sample locations – Oct. 1, 2014-March 31, 2019

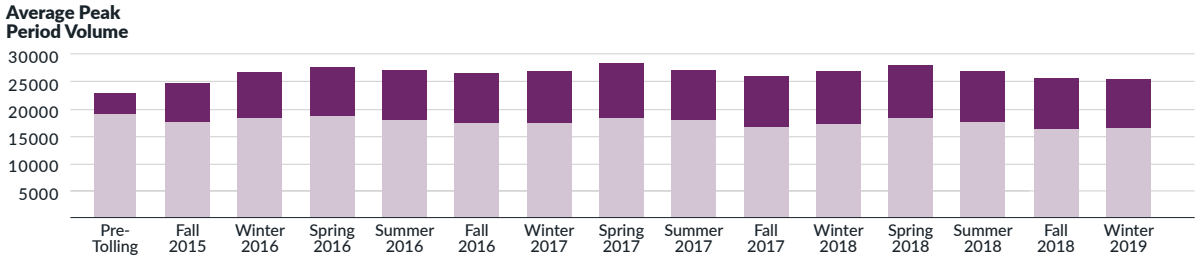
Southbound Morning Peak 5 - 9 am

General purpose lanes | HOV/Express toll lanes

A NE 100th St



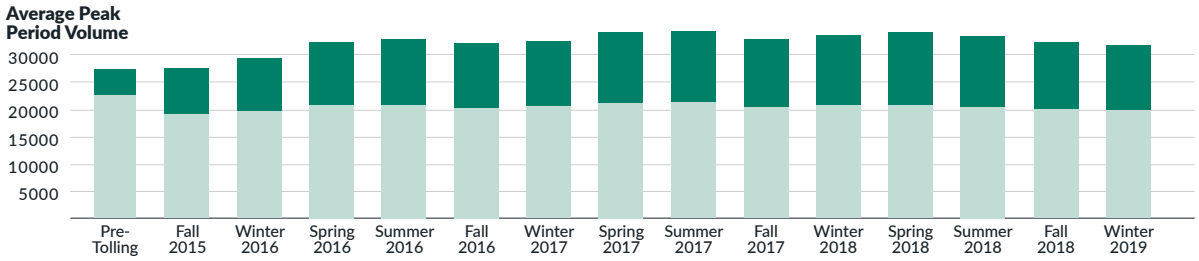
B NE 53rd St



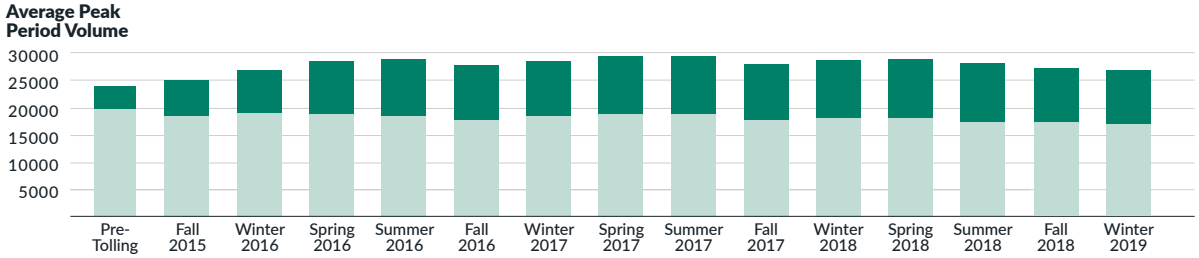
Northbound Evening Peak 3 - 7 pm

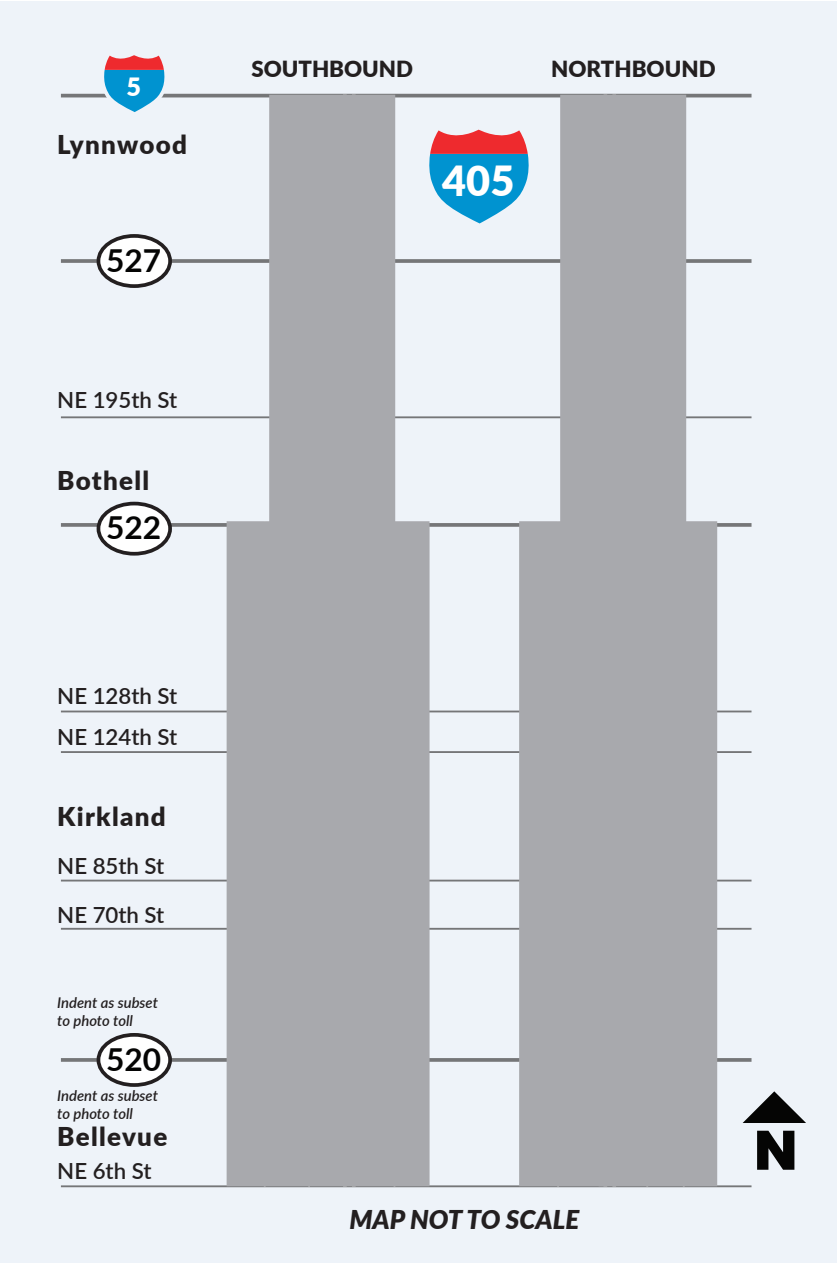
General purpose lanes | HOV/Express toll lanes

C NE 100th St



D NE 53rd St





To monitor daily vehicle volumes on the portion of the I-405 corridor with single express toll lanes, WSDOT collected data at the SR 527 interchange (markers E and G) and SR 522 (markers F and H).

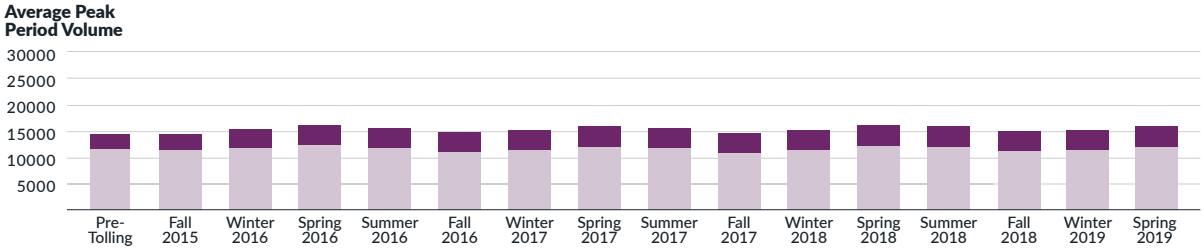
Quarterly average daily volumes for general purpose and express toll lanes at these locations can be viewed on the following page.

Average weekday single-lane section volumes at sample locations – Oct. 1, 2014-Jun. 31, 2019

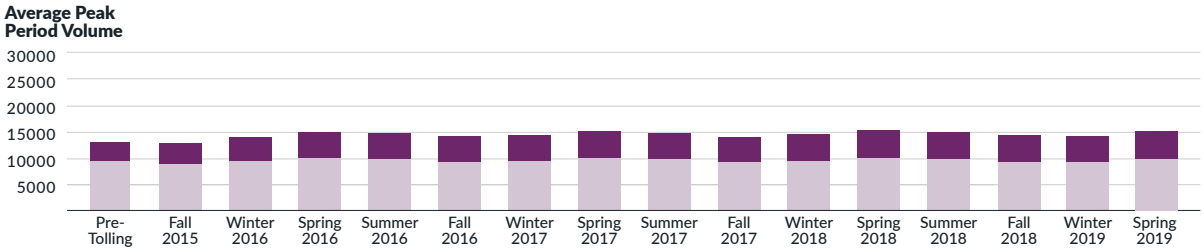
Southbound Morning Peak 5 - 9 am

General purpose lanes | HOV/Express toll lanes

E SR 527



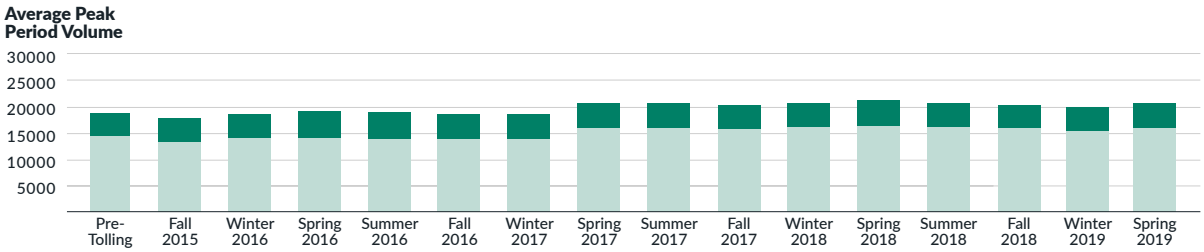
F SR 522



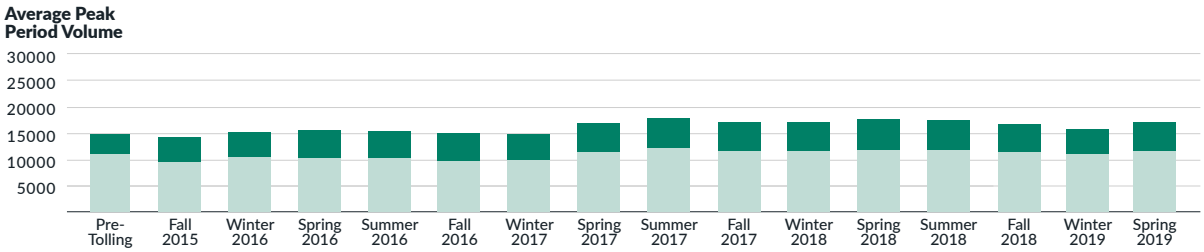
Northbound Evening Peak 3 - 7 pm

General purpose lanes | HOV/Express toll lanes

G SR 527



H SR 522



APPENDIX C: EXPRESS TOLL LANE GUIDE

Operational Parameters

The following parameters define how the express toll lanes operate and are critical to understanding the data and analysis discussed in this report:

- The I-405 express toll lane corridor is made up of single- and dual-lane sections. The 7.9 mile portion of the system with two lanes in each direction between Bellevue and Bothell is referred to as the dual-lane section. The 7.15 mile portion of the system with one express toll lane in each direction between Bothell and I-5 in Lynnwood is referred to as the single-lane section.
- The I-405 express toll lanes operate as a tolled facility on weekdays between 5 a.m. and 7 p.m., except on major holidays. During all other days and times, the lanes are open to all traffic.
- Carpools with enough occupants may use the express toll lanes for free with a Flex Pass set to HOV mode. The carpool occupancy requirement, set by the Transportation Commission, allows vehicles with three or more occupants to travel toll-free during peak periods on weekdays and vehicles with two or more occupants to travel toll-free on weekdays from 9 a.m. to 3 p.m.
- Peak time, peak directions are southbound morning peak period (5 a.m.-9 a.m.) and northbound afternoon peak period (3 p.m.-7 p.m.)
- Trip categories: The following categories define toll trips:
  - ✓ **Toll-exempt:** Buses, vanpools, on-duty emergency vehicles, on-duty incident response and maintenance vehicles, authorized in-service tow trucks, carpools traveling toll-free with a Flex Pass set to HOV mode, and motorcycles with a motorcycle pass.
  - ✓ ***Good To Go!*** pass: Non-carpools that pay a toll using any ***Good To Go!*** pass installed in their vehicle; this method is the most inexpensive way to pay a toll.
  - ✓ **Photo toll:** Vehicles who pay the toll through a photo of the vehicle license plate. There are two types of photo tolling:
  - ✓ **Pay By Plate**: License plates registered to a ***Good To Go!*** account; drivers are charged an additional 25 cent fee per trip.
  - ✓ **Pay By Mail:** Drivers without a ***Good To Go!*** account receive toll bills through the mail for an additional $2 per trip.

How Express Toll Lanes Work

The I-405 express toll lanes were designed to provide faster, more predictable trips for transit, vanpools, carpools and toll-paying vehicles. While some factors, such as collisions, can inhibit the efficiency of the lanes, managing the flow of traffic in and out of the lanes allows the lanes to maintain faster speeds than general purpose lanes during periods of congestion.

WSDOT uses different strategies in the express toll lanes to promote steady speeds and more efficient person throughput, including lane design, vehicle limitations and tolling.

Design

Vehicles and transit can only enter and exit the express toll lanes by using specific access points. Limiting merging points and managing traffic flow through dynamic tolling allows the express toll lanes to maintain more consistent speeds. Drivers do not have to adjust the speeds of their vehicles as often in the express toll lanes to compensate for merging with other vehicles. Some access points have a dashed white line for vehicles to merge in or out. Temporary weave lanes allow vehicles to merge in and out of the express toll lanes with less disruption, allowing the express toll lanes to operate more efficiently. Additionally, there are two direct access ramps that transit, high occupancy vehicles (HOV) and toll-paying drivers can use from NE 6th Street in Bellevue and NE 128th Street in Kirkland to enter the express toll lanes directly.

Vehicle Limitations

WSDOT manages the types of vehicles that can and cannot use the express toll lanes during operational hours. Between 7 p.m. and 5 a.m. and on weekends and holidays, the lanes are open to all vehicles.

Express toll lanes are always free to transit, vanpools and carpools that meet occupancy requirements. During peak hours, vehicles must have at least three occupants and a Flex Pass in order to use the lanes free of charge. The lanes incentivize transit and carpooling by providing faster, more predictable trips without a toll.

Large commercial vehicles, such as trucks over 10,000 pounds gross vehicle weight, are never allowed in the express toll lanes. This is consistent with HOV lane restrictions throughout Washington which are designed to promote more efficient person throughput.

One of the primary goals of the express toll lanes is to improve transit reliability and travel times. The previous HOV lanes often experienced gridlock which interfered with transit efficiency. Limiting the number of vehicles that can use the lanes ensures more reliability for transit riders. Motorcycles can always use the lanes free of cost as long as they have a ***Good To Go!*** motorcycle pass.

Dynamic Tolling

The efficiency of the express toll lanes relies heavily on the dynamic tolling algorithm which determines toll rates for the lanes. The algorithm adjusts toll rates every 5 minutes based on congestion to influence the flow of vehicles into the lanes, ensuring that traffic continues to move smoothly. Toll rates range from 75 cents to $10.

As traffic increases, the toll increases. As traffic subsides, the toll goes down. This process is called “dynamic pricing.” Dynamic pricing works to ensure that the lanes don’t get overloaded with vehicles and become as congested as the general purpose lanes. The tolling system monitors congestion throughout the corridor which is why toll rates can vary for different destinations, or “toll zones.”

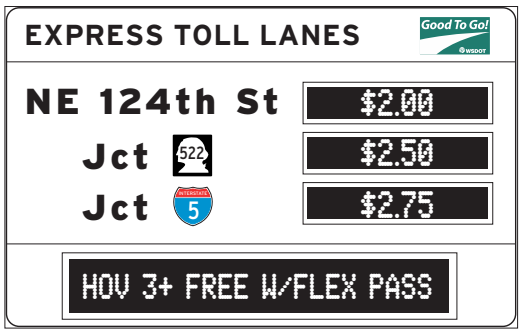
Typically, drivers chose to use the express toll lanes most during peak periods when traffic is heavy. As more vehicles enter, the toll rate goes up. This is why when congestion is at its worst, toll rates increase to the maximum rate.

Transit and qualifying carpools can use the lanes for free. This has the combined benefit of incentivizing carpooling or use of public transportation to avoid paying a toll. When people opt to use these forms of transportation, they reduce the number of cars on the road which in turn helps reduce congestion.

Dynamic pricing is used successfully at other toll facilities around the country, including San Diego, Los Angeles, Miami, Denver, Northern Virginia, the Bay Area and Dallas.

How the Signs Work

The rates displayed on the roadway signs are for vehicles with transponders installed traveling to any point, up to and including the listed destination. Once a vehicle passes a listed destination, the rate for that trip will be based on the rate for the next destination displayed on the sign when you entered. Learn more about how express toll lanes work: www.youtube.com/watch?v=lhwRTz7zxrY&feature=youtu.be.



FOR MORE INFORMATION

Visit GoodToGo405.org or contact us at GoodToGoTolling@wsdot.wa.gov

Title VI Notice to Public It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7090.

Americans with Disabilities Act (ADA) Information This material can be made available in an alternate format by emailing the WSDOT Diversity/ADA Affairs team at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA(4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

18-06-0239