

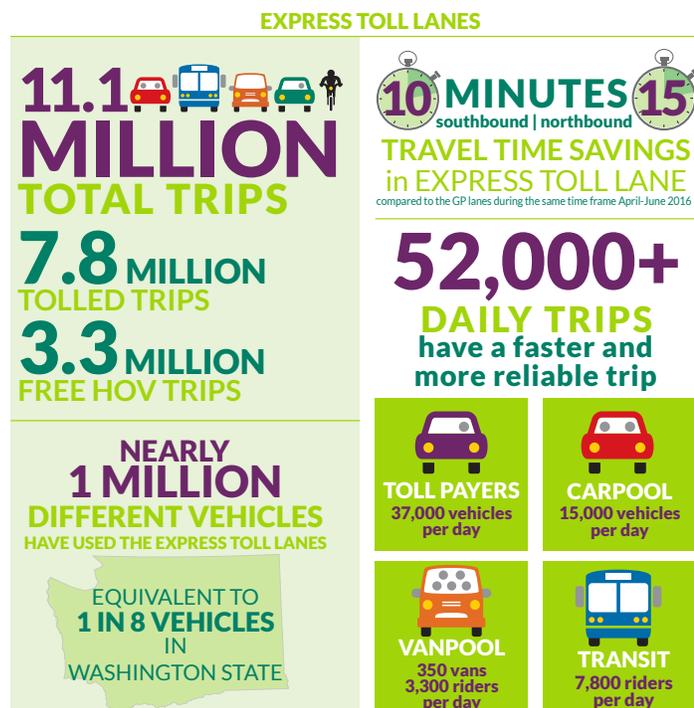
I-405 Express Toll Lanes Nine Month Update

1. Spring 2016 (April 1 - June 30, 2016)

THIS REPORT COVERS DATA FROM SPRING 2016 (APRIL - JUNE 2016) IN COMPARISON TO SPRING 2015 (APRIL - JUNE 2015) AND IN SOME REPORT SECTIONS, TO WINTER 2016 (JANUARY - MARCH 2016).

The Washington State Department of Transportation (WSDOT) launched 17 miles of express toll lanes on Interstate 405 between the cities of Bellevue and Lynnwood on September 27, 2015. This update includes data and observations from months seven through nine (April - June 2016) of the first year of operations. In addition to updated data, this update also includes legislatively required data outlined the 2016 Supplemental Transportation Budget (ESHB 2524), provided for the first time in the attached appendix. WSDOT will also deliver a one-year report at the end of 2016, and quarterly performance reports through 2017.

Background: The Puget Sound Regional Council projected that nearly one million people will move to the region in the next 25 years, with a high concentration in areas served by I-405. I-405 has long been considered one of the state's most congested corridors with the HOV lanes often as congested as the general purpose lanes. In 2011, the state Legislature authorized express toll lanes on I-405 between NE 6th Street in Bellevue and I-5 in Lynnwood to provide a more reliable trip for transit, vanpools and carpools. The lanes provide a choice for non-carpool drivers to pay a toll for a faster trip when they need it and to create a sustainable solution to keep traffic moving. More detailed project history can be found on WSDOT's website at www.wsdot.wa.gov/Projects/I405/.



Express toll lanes highlights from the first nine-months of operations, the green column on the left indicates cumulative data since the lanes opened on Sept. 27, 2015. The data on the right hand side of the infographic is from the April-June 2016 months of operation.

2. Nine month performance summary

Overall, demand for the express toll lanes has been steadily increasing over the first nine months of operation, with nearly one million drivers making more than 11 million trips.

During spring 2016 (April 1 - June 30, 2016), data shows the I-405 express toll lanes provided 52,000 faster, more reliable trips each weekday for 37,000 toll paying customers and 15,000 toll exempt carpools and motorcycles. The lanes also provided more reliable trips each weekday for over 3,000 vanpool riders, and nearly 8,000 bus riders. **Drivers choosing to use the express toll lanes during spring 2016 saved an average of 12 minutes during peak commute times compared to the general purpose traffic, for an average toll of \$2.72.** In addition, from January – June 2016, the I-405 express toll lanes **met or exceeded the state mandated HOV lane speed requirement of 45 mph, 91 percent of the time during peak travel periods.**¹

WSDOT was funded to complete improvements on I-405 last September, and built a new lane between Bellevue and south of the SR 522 interchange in Bothell. North of SR 522, the amount of lane capacity was unchanged.

Before adding the new lane from Bellevue to Bothell, northbound traffic would bottleneck south in the Kirkland area during the afternoon peak period. Since WSDOT added the new lane and launched express toll lanes, the corridor is moving more vehicles through this area faster. On average, volumes are up to 17 percent higher during the northbound peak commute (5-9 a.m. and 3-7 p.m.) compared to before express toll lanes.

But when this much larger wave of cars reaches Bothell, where the road narrows, a pre-existing bottleneck causes significant congestion. Further north at the already congested SR 527 interchange, where nearly 1,000 cars an hour are merging into already full northbound I-405 lanes during afternoon rush hour, worsening already existing backups. This section of roadway does not have sufficient capacity to handle the volume of cars that travel through the area due to continued population growth.

Northbound trips in all lanes between SR 522 and SR 527 have experienced slower speeds since the express toll lanes opened. This slowing is caused both by the merge at SR 527 and by the reduction of northbound lanes from five to three after SR 522. However, even at slower speeds, the express toll lane is still moving more vehicles through the full corridor than the previous HOV lane. For example, for northbound travel near SR 522, the express toll lane is moving about 35 percent more vehicles during peak periods than the HOV lane in 2015.

In response to ongoing feedback from drivers, agency partners, and elected officials, WSDOT is working to expedite several adjustments to improve I-405 traffic performance; specifics are discussed in Section 4 of this report.

¹The legislative metric requires WSDOT to keep vehicle speeds in the express toll lanes 45 mph or faster during peak periods. This metric is reported each quarter for the most recent six month period.

3. 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 portion of the system with two lanes in each direction between Bellevue and Bothell is referred to as the **dual-lane section**. The 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**.
- Carpools with enough occupants may use the express toll lanes for free with a Flex Pass set to HOV mode. The **HOV requirement**, set by the Transportation Commission, allows cars with three or more occupants to travel toll-free during peak travel times on weekdays (5-9 a.m. and 3-7 p.m.) and vehicles with two or more occupants to travel toll-free on weekdays from 9 a.m. to 3 p.m.
- In March 2016, WSDOT and the Transportation Commission changed the hours of operation so that the express toll lanes only operate on **weekdays between 5 a.m. and 7 p.m.** During all other days and times the lanes are **open to all** general purpose traffic.
- At nine months of operations, the I-405 express toll lanes are still in a “**ramp-up**” period. There are more than 30 express toll lane systems around the United States and in each case it has taken up to a year for traffic patterns to stabilize as drivers adjust. The length of a ramp-up period varies in relationship to both complexity of the express toll lane system, and how familiar drivers are with similar toll facilities. WSDOT anticipated a ramp-up period of up to one year after the launch of the I-405 express toll lanes.

4. Operational improvements

Result of changes to hours of toll operation

In February 2016, Gov. Jay Inslee and the state Legislature requested WSDOT make changes to the I-405 express toll lanes system, including the hours of operation. After careful evaluation, WSDOT and the Transportation Commission agreed that effective March 18, 2016, tolling on the express toll lanes would only be in effect on weekdays from 5 a.m. to 7 p.m. On weeknights, weekends and six major holidays, the express toll lanes are free and open to all traffic.

Prior to making a change to the hours of operation, weekend traffic volumes were lower in the express toll lanes than the previous HOV lanes. Likely reasons are that on weekends there are a higher number of infrequent I-405 drivers, and in part because there were not as many weekend days for weekend drivers to adjust. In the three months since the new hours of operation took effect, WSDOT observed weekend traffic performance similar to conditions before tolling began. Average weekend speeds have returned to 60 miles per hour for the full corridor, improving up to 4 miles per hour compared to fall 2015. Weeknight (7-8 p.m.) travel times and speeds have remained unchanged since the change in hours of operations when comparing spring 2016 to winter 2016. Weeknight travel times have shown a slight improvement in spring 2016 compared to spring 2015 before tolling began.

“I want to thank the governor for his leadership in accelerating this I-405 traffic relief project by six months. Working together, we can keep advancing positive change that will alleviate congestion on I-405.”

– Bothell Mayor Andy Rheame
in a letter to the Washington State Transportation Commission on July 15, 2016.

Upcoming express toll lanes improvement

Northbound trips in the single-lane section between SR 522 and SR 527 have experienced slower speeds since the express toll lanes opened. With more drivers than originally forecasted using the express toll lanes, WSDOT was able to use I-405 toll revenue to fund and proceed with adding a peak-use shoulder lane that will operate on the right shoulder of northbound I-405 between SR 527 and I-5. WSDOT plans to convert the right shoulder into a general purpose lane during peak commutes to help alleviate congestion in the single-lane section. The peak-use shoulder lane is expected to open to traffic in summer 2017.

5. Legislative performance measures

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

These performance metrics are listed below with observational updates on each metric.

✓ Meeting Objectives & Accomplishments

<p>IMPROVE SPEED AND RELIABILITY</p> <ul style="list-style-type: none"> ✓ Express toll lane speeds are 45 mph or faster 91 percent of the time during peak periods ✓ Travel times improved for all full length trips with the exception of trips in the northbound general purpose lanes during the evening peak commute 	<p>DEMONSTRATED ABILITY TO COVER OPERATING EXPENSES </p> <ul style="list-style-type: none"> ✓ Express toll lanes on track to generate revenue to cover operating costs ✓ Express toll lane usage is 11 percent above projected use with 52,000 daily weekday trips
<p>LOCAL STREETS BENEFIT</p> <ul style="list-style-type: none"> ✓ Adjacent local streets and state highways travel times and volumes have not changed much since before tolling, monitoring is ongoing 	<p>INCREASE TRANSIT AND VANPOOL RIDERSHIP</p> <ul style="list-style-type: none"> ✓ Ridership has increased for King County Metro (approx. 8 percent) and Community Transit (+3 percent) ✓ Vanpool ridership remains strong for both King County Metro and Community Transit with 350+ vans and 3,300+ riders per day 

For more in-depth findings, the table below matches each legislative metric with a corresponding section of this update.

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.*	See Section 9 – 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.	See Section 7 – Includes average speed and travel time trends for the general purpose lanes.
c. Whether transit ridership changed.	See Section 15 – Includes preliminary transit ridership and travel time findings.
d. Whether the actual use of the express toll lanes is consistent with the projected use.	See Section 6, 11 – Includes comparison of forecasted and reported express toll lane trips.
e. Whether the express toll lanes generated sufficient revenue to pay for all I-405 express toll lane operating costs.*	See Section 12 – Includes preliminary revenue and expenditure results.
f. Whether travel times and volumes have increased or decreased on adjacent local streets and state highways.	See Section 14 – Includes overview of local agency coordination and arterial traffic monitoring.
g. Whether the actual gross revenues are consistent with projected gross revenues as identified in the fiscal note for Engrossed House Bill No. 1382 distributed by the office of financial management on March 15, 2011.	See Section 13 – Includes comparison of the preliminary revenue findings to the 2011 fiscal note.

**Note: per the legislative direction, the revenue and express toll lane speed requirements must be achieved within the first two years of operations.*

The legislature added a number of additional reporting requirements during the 2016 budget process detailed in ESHB 2524 209 (7). These subsequent reporting requirements address 10 specific travel segments along the corridor and are included as Appendix A.

6. Express toll lane trip trends

Demand for the express toll lanes is higher than forecasted, with over 11 million trips in the first nine months. Overall, *Good To Go!* pass-based trips (toll exempt and *Good To Go!* pass combined) made up about 76 percent of weekday express toll lane trips, similar to winter 2016.

There are three categories of trips:

- **Toll exempt:** Carpools² traveling toll-free with a Flex Pass set to HOV mode, and motorcycles with a motorcycle pass.
- **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 toll per trip.
- ***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.

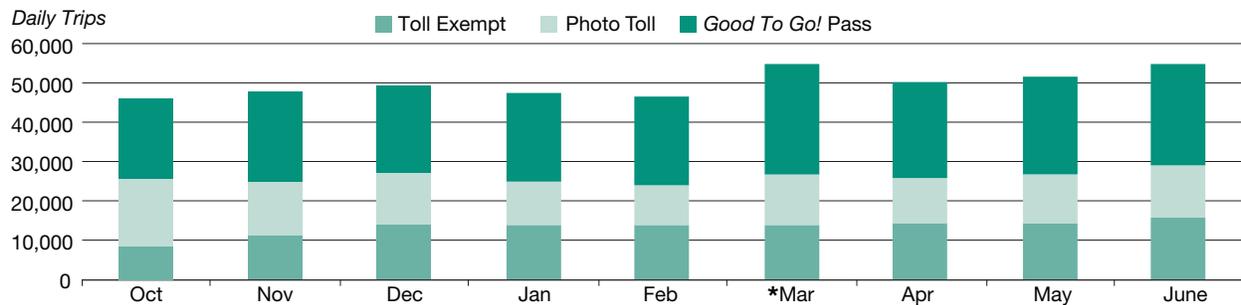
Weekday express toll usage has been steadily increasing. In spring 2016, the express toll lanes carried, on average, more weekday trips during the new hours of operation (5 a.m. and 7 p.m.) than the same lanes carried during winter 2016 operating 24 hours a day.

Both toll exempt HOV trips and toll paying trips have increased. During spring 2016, data shows the I-405 express toll lanes provided faster, more reliable commutes each day for an average of 37,000 toll-paying customers and nearly 15,000 toll exempt trips each day (not including vanpools and bus trips).

² Toll exempt carpools have three or more passengers during peak periods (Monday through Friday, 5-9 a.m. and 3-7 p.m.), and two or more passengers all other operating hours.

On average, toll paying trips using a *Good To Go!* pass are the most common. Relative to the prior six months of toll operations, spring 2016 express toll lane trips showed increases in the number of average weekday HOV and tolled trips, even with the reduced hours of toll operations.

Average Weekday Trips by Type October 1, 2015 to June 30, 2016



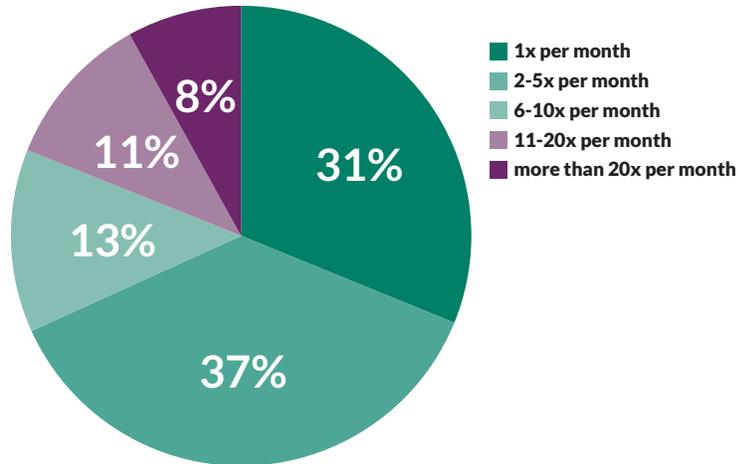
*On March 18, 2016, the hours of operation changes from 24 hours a day/7 days a week to Monday through Friday 5 a.m. to 7 p.m.

Comparison of the split of express toll lane trip types relative to the average daily trip total on weekdays.

During spring 2016, toll exempt trips made up about 28 percent of weekday express toll lane trips on average. This is consistent with usage patterns seen in winter 2016, meaning that HOV usage has increased at the same rate as toll paying usage. The remaining 72 percent of trips include solo drivers as well as vehicles with two person carpools, during peak periods when the carpool requirement is three persons.

Overall, *Good To Go!* pass-based trips (toll exempt and *Good To Go!* pass combined) made up about 76 percent of weekday express toll lane trips, down slightly from 78 percent in winter 2016.

Average Monthly Travel Frequency for Good To Go! Pass Holders
April 1, 2016 to June 30, 2016



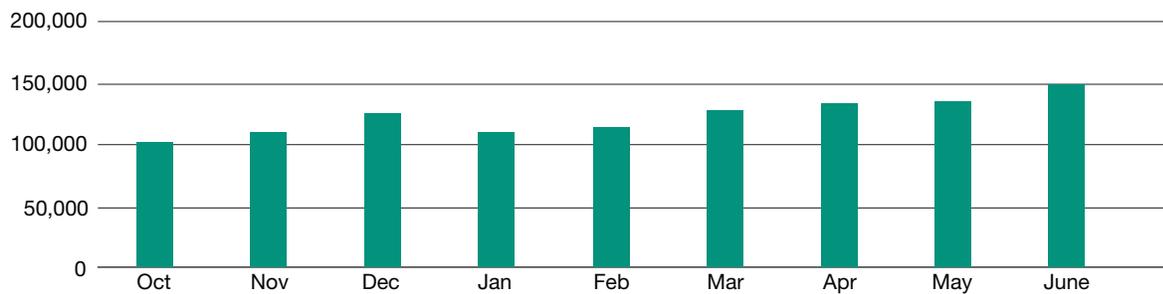
Comparison of the frequency of drivers using the express toll lanes by measure of unique Good To Go! passes.

WSDOT analyzed trip data to determine how often each individual driver used the express toll lanes in this reporting period. This analysis includes both tolled and toll-exempt trips for vehicles with an active *Good To Go!* pass during hours of operations.

- 31 percent of drivers were occasional users of the express toll lanes, making just one trip a month during spring 2016. 37 percent of drivers were semi-frequent users of the express toll lanes making between two and five trips a month.
- 13 percent of drivers frequently used the express toll lanes between 6 and 10 trips a month.
- 19 percent of drivers were highly frequent users, making 11 or more trips a month.

This shows that drivers use the express toll lanes when they need them, with about a third of users falling into each category of occasional, semi-frequent and frequent/highly frequent use.

Unique Passes by Month October 1, 2015 to June 30, 2016



Number of drivers using the express toll lanes by measure of unique Good To Go! passes.

Since opening WSDOT has seen an increase in the number of unique *Good To Go!* passes and vehicles using the express toll lanes. Overall, demand for the express toll lanes has been steadily increasing over the first nine months of operation, with nearly one million drivers making more than 11 million trips. The increase in unique I-405 express toll lane users during the month of December is likely related to increased travel around the holidays.

7. Corridor travel times, average speeds and corridor reliability

For this update, spring (April to June) 2016 volumes, speeds, and travel times were analyzed and compared to spring 2015. (Note: No adjustments for holidays or irregular traffic events were made in these comparisons.) In most areas between Bellevue and Lynnwood, I-405 is moving more vehicles at faster speeds, resulting in increased reliability during the peak commute periods. The express toll lanes move vehicles an average of three mph faster than the old HOV lanes during the southbound morning peak period and 10 mph faster during the northbound evening peak period compared to spring 2015. Overall, the express toll lanes continue to provide travel time savings relative to the general purpose lanes. Additionally, WSDOT has observed peak period travel time savings across all lanes between Bellevue and Bothell.

Individual experiences may vary, and not all areas have experienced travel speed improvements. Although the dual-lane section experienced faster travel times for both general purpose lanes and express toll lanes, limited capacity between SR 522 and I-5 has resulted in slightly longer peak commute travel times for the express toll lanes in both directions and the northbound general purpose lanes as compared to spring 2015.

The table below compares peak period average speeds for the entire corridor from spring 2015 to spring 2016.

Spring 2016 average weekday peak period speeds improved or stayed the same across all lanes compared to spring 2015 for the full corridor trip.

	Southbound Morning Peak			Northbound Evening Peak		
	Spring 2015	Spring 2016	Change	Spring 2015	Spring 2016	Change
General Purpose average speed (mph)	28	34	21%	28	28	0%
Express toll lanes average speed (mph)	51	54	5%	42	52	24%

Weekday travel times for southbound general purpose lanes and express toll lanes

Drivers headed southbound from Lynnwood to Bellevue during the morning commute (5-9 a.m.) in spring 2016 experienced an average travel time improvement of five minutes in the general purpose lanes and one minute in the express toll lanes compared to the general purpose lanes and HOV lane in spring 2015, respectively.

- Average travel times in the general purpose lanes improved by two minutes from Lynnwood to Bothell and by three minutes from Bothell to Bellevue compared to the same trips in the general purpose lanes in spring 2015.
- In the express toll lanes, average travel times from Lynnwood to Bothell were one minute slower than the HOV lanes compared to spring 2015. Average travel times from Bothell to Bellevue were two minutes faster compared to spring 2015.

During the spring 2016 weekday morning peak period, the express toll lanes saved southbound drivers traveling the full length of the express toll lanes corridor an average of 10 minutes over the same trip in the general purpose lanes.

Weekday travel times for northbound general purpose lanes and express toll lanes

Drivers headed northbound through the full corridor from Bellevue to Lynnwood during the evening commute (3-7 p.m.) experienced similar travel times in the general purpose lanes and an average travel time improvement of four minutes in the express toll lanes compared to spring 2015.

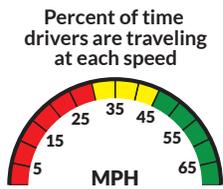
- For the general purpose lanes, average spring 2016 travel times were three minutes faster from Bellevue to Bothell and three minutes slower from Bothell to Lynnwood.
- In the express toll lanes, average spring 2016 travel times were five minutes faster than the 2015 HOV lanes in the dual-lane section from Bellevue to Bothell and one minute slower in the single-lane section of the corridor from Bothell to Lynnwood.

During the spring 2016 weekday evening peak period, the express toll lanes saved northbound drivers traveling the full length of the express toll lanes corridor an average of 15 minutes over the same trip in the general purpose lanes.

Corridor Reliability

When WSDOT launched the express toll lanes, one goal was to bring back reliability to the HOV lanes. Providing more reliability allows drivers to have a more predictable trip and a new choice to get out of congestion when they really need to. The graphs below show that the express toll lanes provide consistent reliability. WSDOT will continue to monitor average speeds and overall corridor reliability.

Express toll lanes bring back corridor reliability to peak commute travel periods



	Jan. - June 2015	Jan. - June 2016
Northbound (3-7pm)		
General Purpose		
HOV/ETL		
Volume Increase 2015 to 2016	1% to 17% (depending on location)	
Southbound (5-9am)		
General Purpose		
HOV/ETL		
Volume Increase 2015 to 2016	7% to 20% (depending on location)	

8. Weekday volumes

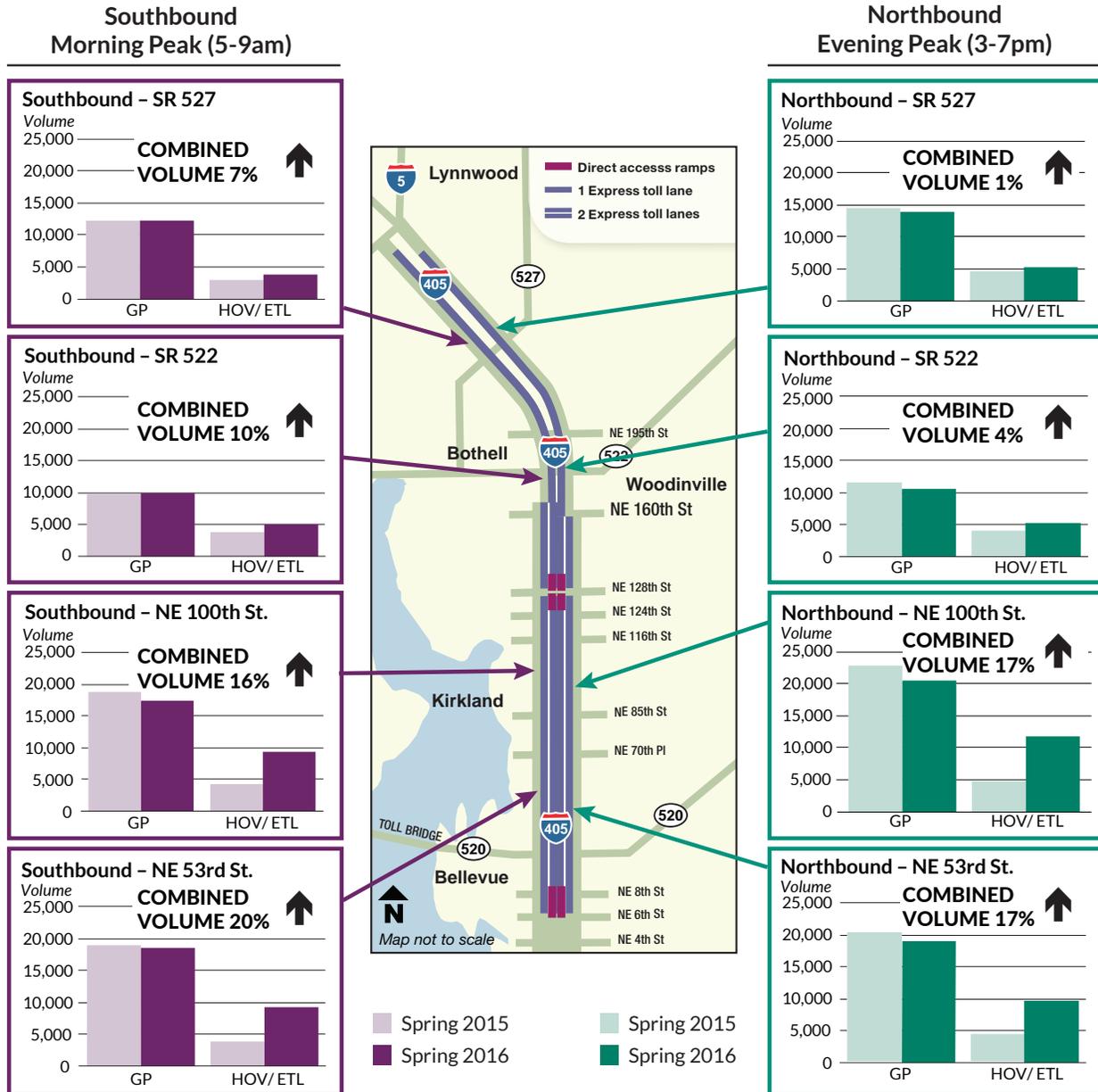
Using sensors in the roadway, WSDOT collected traffic counts on the stretch of I-405 and on and off-ramps between Bellevue and Lynnwood. Volumes were reported at eight sample locations: four in the northbound direction and four in the southbound direction.

WSDOT observed the following trends for weekday peak period traffic volumes, comparing spring 2016 to spring 2015:

- Because the express toll lanes are moving more vehicles during peak periods, overall, the entire corridor is carrying higher traffic volumes compared to spring 2015.
- During the evening commute, the northbound single-lane section of the express toll lane carried greater volume than the HOV lane prior to tolling.
- General purpose lane volumes showed slight decreases during the peak periods in multiple locations as more vehicles use the express toll lanes, especially along the dual-lane section which resulted in increased speeds.

The graphs on the next page illustrate the peak period, peak direction trends for the eight sample volume locations.

I-405 Peak Period Traffic Volumes at Sample Locations – Spring 2015 vs Spring 2016

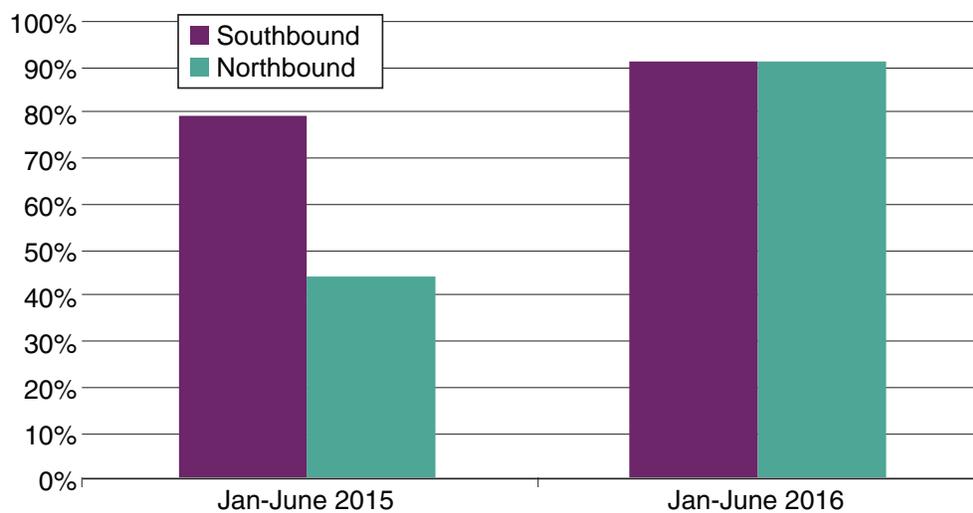


9. Percent of time express toll lanes are meeting 45 miles per hour

One goal of the express toll lanes is to keep peak period (Monday through Friday, 5-9 a.m. and 3-7 p.m.) traffic flowing at a speed of at least 45 mph 90 percent of the time, giving drivers an option for a reliable trip when they need it most. The Federal Highway Administration requires that ETL performance be monitored closely. To provide consistent reporting for FHWA, WSDOT reports this metric in six month intervals. The express toll lanes met the target goal of 45 mph an average of 91 percent of the time for the past 6 months (January – June 2016).

After launch, WSDOT closely monitored traffic operations and toll rate algorithm trends, making several adjustments to the algorithm to improve responsiveness and reliability. These changes resulted in improved express toll lane speeds during peak periods. WSDOT will continue to evaluate operations and look for improvements to provide travel time reliability.

I-405 HOV and Express Toll Lane Performance Percentage of Peak Period when speeds are > 45 miles per hour



The express toll lanes met the target goal of 45 mph an average of 91 percent of the time since the start of operations.

As of nine months of operation, the express toll lanes have met the target goal of 45 mph an average of 90 percent of the time. At the same time, more drivers are choosing to use the express toll lanes, causing toll rates to reach the \$10 maximum more often and for longer durations. Speeds drop below 45 mph frequently when at the maximum toll rate if drivers continue to choose to pay the maximum rate to enter the lane. WSDOT will continue to monitor this trend and make adjustments as necessary.

10. Toll rates

In March 2015, the Transportation Commission approved a minimum toll rate of 75 cents and a maximum of \$10. Toll rates adjust with the goal of keeping the express toll lane flowing at 45 miles per hour 90 percent of the time, taking into account volumes in the express toll lanes and the general purpose lanes.

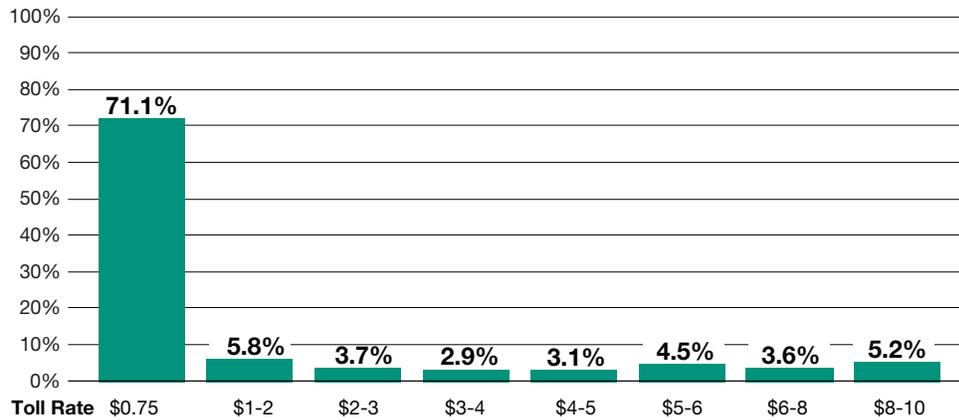
During spring 2016, the average toll rate for all toll trips throughout the day was \$1.93. For the same timeframe, the average toll for peak period, peak direction trips was \$2.72. WSDOT has observed a trend between increased use of the express toll lanes and rising average toll rates since the express toll lanes opened. Overall, 83 percent of tolls were \$4 or less, and over 70 percent of toll transactions were for the minimum rate of 75 cents.

Heavy demand from drivers, combined with the limited capacity in the single express toll lane stretch during peak commute times, often causes toll rates to reach the maximum rate of \$10.

Over the last nine months, WSDOT tracked the instances where the express toll lanes reached \$10. Typically, each time the toll rate reached the maximum, it was because of heavy congestion caused by strong demand from drivers and capacity constraints in the single-lane section between Bothell and Lynnwood. Other factors that contribute to hitting the maximum toll rate include weather, disabled vehicles in the general purpose or express toll lanes, and collisions. Toll rates for spring 2016 can be found on the following page.

Percent of I-405 Toll Trips by Rate Category

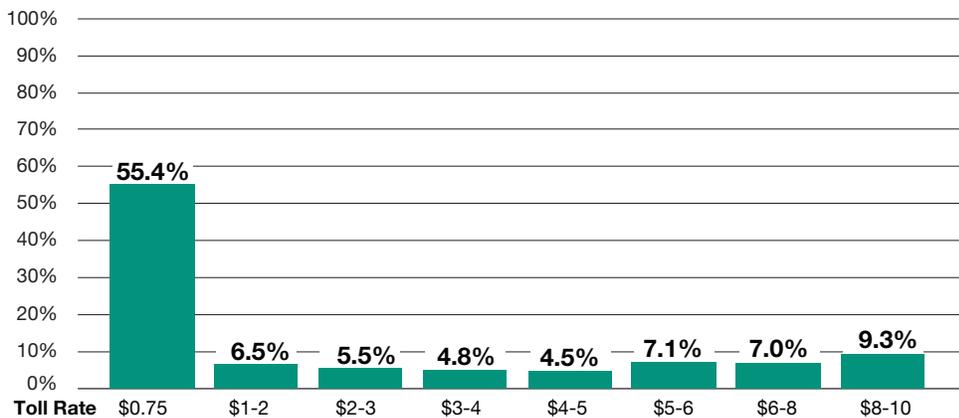
April 1, 2016 through June 30, 2016



The chart above shows the average Good To Go! pass toll rates for all tolled trips in both directions during spring 2016.

Percent of Peak Period I-405 Toll Trips by Rate Category

April 1, 2016 through June 30, 2016



The chart above shows the average Good To Go! pass toll rates for peak period, peak direction trips (southbound 5-9 a.m. and northbound 3-7 p.m.) during spring 2016.

11. Forecast versus actual use

Spring 2016 traffic volumes in the I-405 express toll lanes exceeded the nine-month forecast. The number of toll trips (with and without a *Good To Go!* pass) continued to be higher than forecast, while the number of toll exempt carpool trips were lower than forecast.

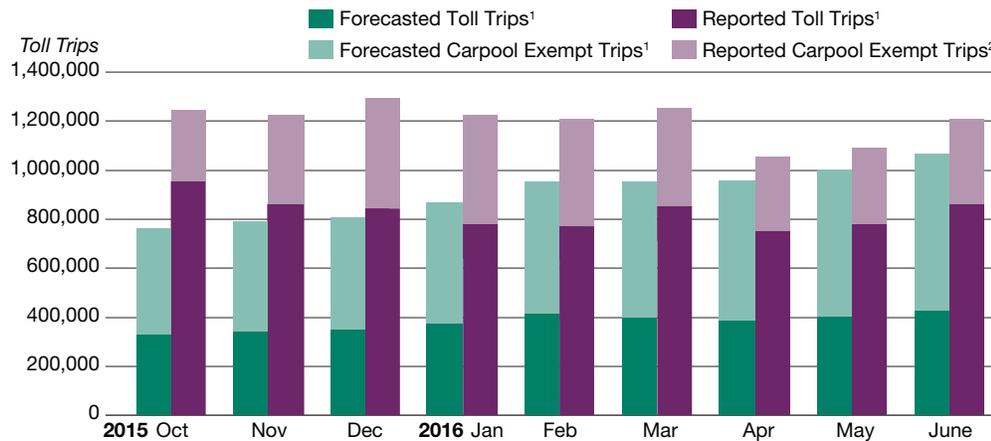
WSDOT completed a planning level traffic and revenue study in 2012 which included annual toll and toll exempt trips, as well as a toll revenue forecast. Annual forecasts were developed taking into consideration the one-year ramp-up period for express toll lanes and the seasonal shifts in traffic volumes. The ramp-up factor is associated to the period of time it takes drivers to become familiar with the facility and obtain a *Good To Go!* pass and account. The seasonality factor is derived from historical I-405 general purpose lane traffic data, which provides an indication of monthly travel behavior on the roadway. Beginning in July 2016, WSDOT will use a revised forecast that was developed in early 2016 and adopted in June 2016. The new forecast will contain updated traffic and revenue projections based on actual express toll lane operations through spring 2016.

Some potential reasons that the planning level study from 2012 express toll lane trip forecast varied from the actual trips include:

- WSDOT is one of the first agencies to offer a Pay By Mail option for express toll lanes so comparative information was limited.
- The forecast was completed in 2012, before recent strong growth in the regional economy, specifically on the east side of Lake Washington, contributed to the increase in overall traffic on I-405.
- I-405 provides one of the first operational examples in the United States of variable carpool requirements by time of day, another area where comparative information was limited.

The chart below shows monthly forecasts from the 2012 planning level study as compared to actual express toll lane trips.

Forecasted and Reported I-405 Express Toll Lane Trips



Notes:

- 1 March 18 - June 30, 2016 Forecast values based on EAG Scenario C Revised with the Following Key Assumptions:
 \$0.25 Pay By Plate Fee | \$2 Pay By Mail Toll Increment | \$0.75 Fixed Minimum Toll | No Tolling Nights (7:00PM-5:00AM) and Weekends | 3+ Free for 8 Hours Peak | 2+ Free Off-Peak
- October 1, 2015 - March 17, 2016 Forecast values based on EAG Scenario C Revised with the Following Key Assumptions:
 \$0.25 Pay By Plate Fee | \$2 Pay By Mail Toll Increment | \$0.75 Fixed Minimum Toll | 24/7 Operations | 3+ Free for 8 Hours Peak | 2+ Free Off-Peak
- 2 Reported values are based on total monthly trips adjusted for non-revenue and duplicate trips. HOV volumes include operations during toll hours only.
- 3 Trips by payment method are based on values extracted from the monthly Toll Business Report and are subject to change as transactions are resolved.

12. Express toll lane revenue and expenses

The state Legislature decided I-405 express toll lane revenue should cover facility operation and maintenance costs, and any additional revenue beyond operational costs will be reinvested back in to the I-405 corridor. Toll revenue is appropriated by the Legislature and monitored by the Office of Financial Management. With more drivers than originally forecasted using the express toll lanes, WSDOT is able to make an early investment with I-405 toll revenue to fund and proceed with adding a peak-use shoulder lane that will operate on the right shoulder of northbound I-405 between SR 527 and I-5, as mentioned in Section 4.

As of June 30, 2016, the I-405 express toll lanes generated \$15.7 million in revenue, including \$12.3 million toll revenue, \$1.7 million in *Good To Go!* passes sold, \$1.1 million in civil penalty revenue, and \$0.6 million in other revenues. Operation and maintenance costs were \$5.9 million. The increase in operations, maintenance and equipment cost in spring 2016 was anticipated. The increase was primarily due to costs that were previously covered by capital funds through winter 2016 that now are being paid by toll revenue. The change was planned and took place when the system was formally accepted by WSDOT in late winter 2016.

13. Comparison of actual and projected gross revenue

The fiscal note for Engrossed House Bill No. 1382 distributed by the Office of Financial Management on March 15, 2011 estimated that gross toll revenue for the express toll lanes for the first nine-month period of operations would range from \$5.4 million to \$18 million under the scenario in which three-person carpools were exempt from tolls.

The actual gross toll revenue for the first nine-month period was \$12.3 million, consistent with March 2011 estimate.

The fiscal note was developed before the Transportation Commission adopted the I-405 express toll lanes policies. Some of the assumptions (such as the hours of operation or the maximum toll rate) in the fiscal note were different from current tolling policies. Below is a brief summary of main assumption differences:

	Fiscal Note Assumption	Adopted Policy
Minimum Toll	\$1.00	\$0.75
Maximum Toll	No toll cap	\$10.00
Hours of Operation	5 am to 8 pm 7-days a week	5 am to 7 pm, Monday through Friday ¹
Toll Occupancy Exemption	HOV 3+	HOV 3+ during weekday peak hours ² ; HOV 2+ during weekday off peak hours.

Notes:

¹ From September 27, 2015 to March 17, 2016, I-405 ETLs operated 24 hours per day. Starting from March 18, 2016, tolls are waived for night-time (7 pm to 5 am), weekends, and major holidays.

² Weekday peak hours: 5-9 am & 3-7 pm.

14. Local arterial traffic

WSDOT is working with cities along the corridor to monitor the potential effects of express toll lanes on local streets. In May 2016, most jurisdictions reported no noticeable changes to traffic conditions since launch.

In August 2015, WSDOT collected travel times and volumes on arterial routes parallel to I-405, with plans to collect the same data in August 2016 for comparison. Interim volumes and travel times were collected in both February 2016 and May 2016 and showed similar trends compared to the August before tolling conditions.

15. Transit and vanpools

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.

In the first nine months of operations, each transit agency reported increased ridership on routes operating on I-405:

- Community Transit reported an increase in average peak period ridership of approximately three percent and improvement in daily average travel times for most routes, with the exception of Route 424 that travels along I-405 between SR 520 and SR 522, when compared to spring 2015.
- King County Metro reported an increase of approximately eight percent in daily ridership compared to spring 2015. Travel times for King County Metro showed an improvement for most routes, averaging between one and 10 minutes faster for routes that travel the express toll lane corridor.

In addition, King County Metro and Community Transit service more than 350 vanpools and 3,300 users in the corridor. Vanpools are exempt from tolls, and their performance is reflected in the overall performance of the express toll lanes.

16. Enforcement

The Washington State Patrol (WSP) provides enforcement of the I-405 express toll lanes. During spring 2016, troopers issued about 1,500 citations, including citations for drivers crossing over the double white lines, incorrect HOV declaration, and exiting the lane to avoid paying a toll. Overall, the number of citations increased from about 1,000 issued during winter 2016. In spring 2016, WSP had an increased level of enforcement when compared to winter 2016 with about a 50 percent increase in contacts with drivers.

17. Safety

Driver safety is WSDOT's top priority. WSDOT continues to work closely with Washington State Patrol to monitor traffic in both the express toll lanes and regular lanes to see how drivers are adjusting. The first three months of operation were challenging, particularly with the rain conditions being the worst on record, and as drivers adjusted to the new operation. WSDOT has made over a dozen improvements to signage and striping throughout the corridor and is accelerating a congestion relief project in the north end, which we expect will further reduce the occurrence of collisions.

18. Next steps

Over the next six months, WSDOT will continue to compile and report data, make system improvements, and conduct public outreach around the I-405 express toll lanes.

Through the next six months, WSDOT staff will:

- Select a contractor to design and build the peak-use shoulder lane project on northbound I-405 between SR 527 and I-5. The peak-use shoulder lane will help address limited capacity in the single express toll lane section.
- Report traffic volume data for adjacent arterials in October 2016.
- Continue to work with local jurisdictions to gather information about the effects of express toll lanes on local streets, with new data to be collected in August and September 2016.
- Issue one-year report for the I-405 express toll lanes in late 2016.

Appendix A: Additional legislative reporting requirements

The legislature added reporting requirements during the 2016 budget process detailed in ESHB 2524 209 (7). 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.

The Legislature directed WSDOT to examine travel times along specific segments of the I-405 express toll lanes corridor. The table below lists these travel segments and their corresponding mileposts.

Legislative segment 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 e.g., construction activity. This has resulted in incalculable travel times for certain months.

Note: Monthly average and 95th percentile travel times provided for both GP and ETL lanes for the AM 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.

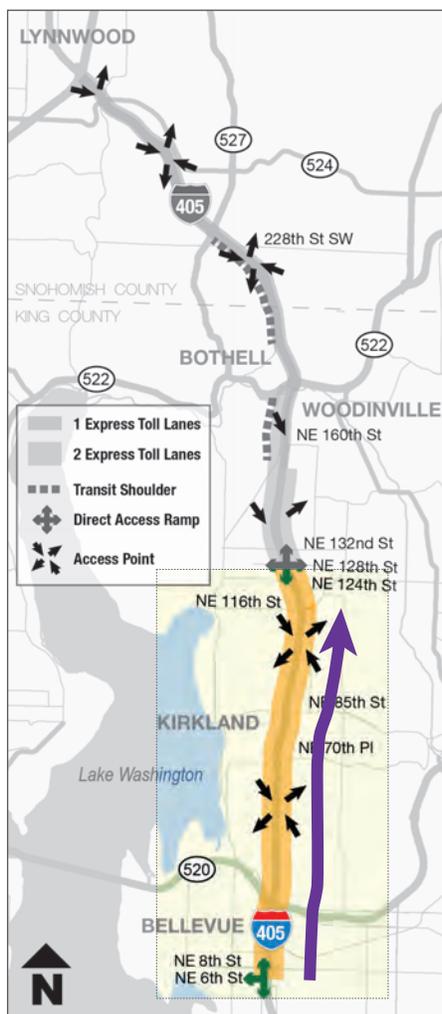
Detailed travel time data

The Legislature directed WSDOT to report on travel times for northbound and southbound I-405 segments. For the segments that we've collected data for, we've seen that:

- Speeds are **faster**
- Travel times have **improved**
- 95th percentile demonstrates **improved reliability**

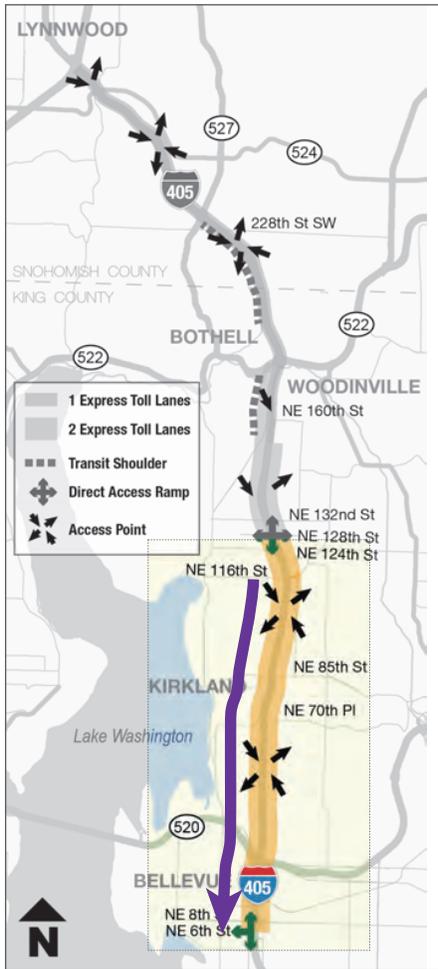
The following tables and graphs provide a summary of the travel time data. On the following pages, each set of roadway segment data is summarized and numbered to correspond to the legislative request detailed in the table on page 29. More detailed data can be found on WSDOT's website at www.wsdot.wa.gov/traffic/nw/405ETL/9_month_report_appendix/

1. Travel Times: Northbound I-405 from Bellevue to NE 116th (PM Peak Period)



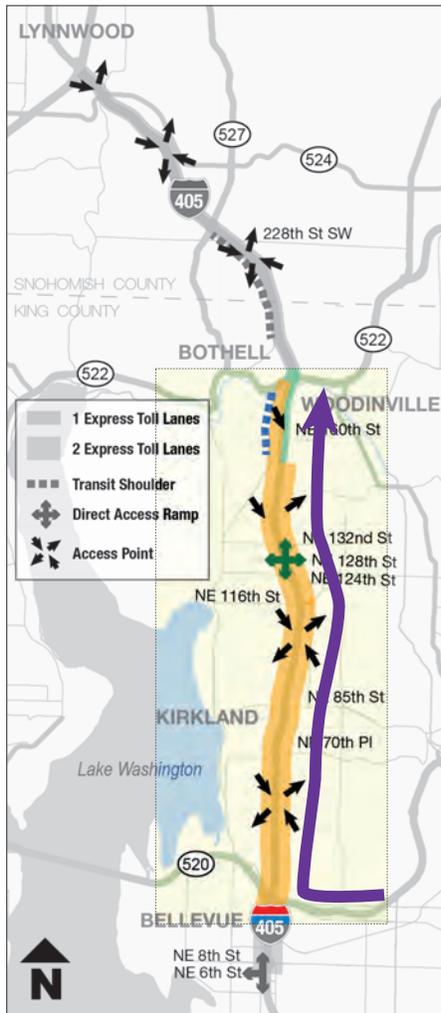
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	16	(24)	3 minutes faster	6 minutes faster
	2015	13	(18)		
Jan	2015	16	(22)	4 minutes faster	4 minutes faster
	2016	12	(18)		
May	2015	16	(23)	4 minutes faster	7 minutes faster
	2016	12	(16)		

2. Travel Times: Southbound I-405 from NE 116th to Bellevue (AM Peak Period)



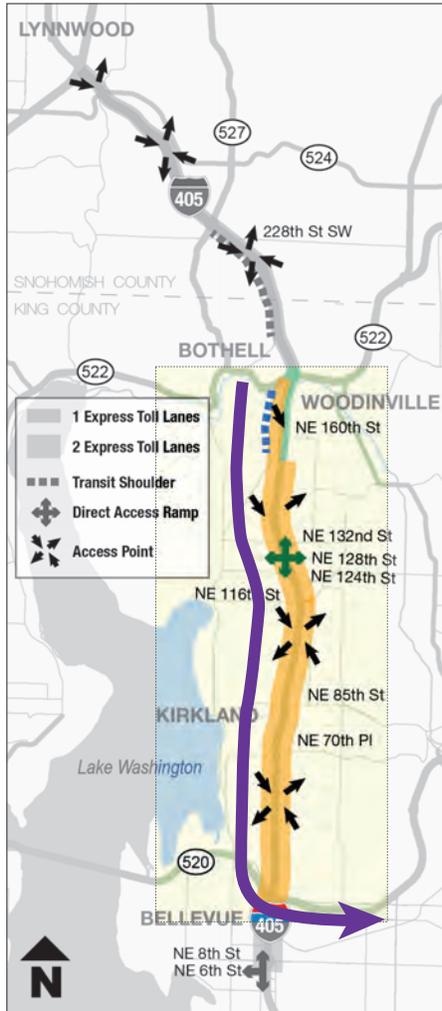
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	12	(13)	2 minutes faster	2 minutes faster
	2015	10	(11)		
Jan	2015	11	(13)	2 minutes faster	1 minute faster
	2016	9	(12)		
May	2015	11	(13)	2 minutes faster	2 minutes faster
	2016	9	(11)		

3. Travel Times: Westbound SR 520 at 148th Ave NE to Northbound I-405 at SR 522 (PM Peak Period)



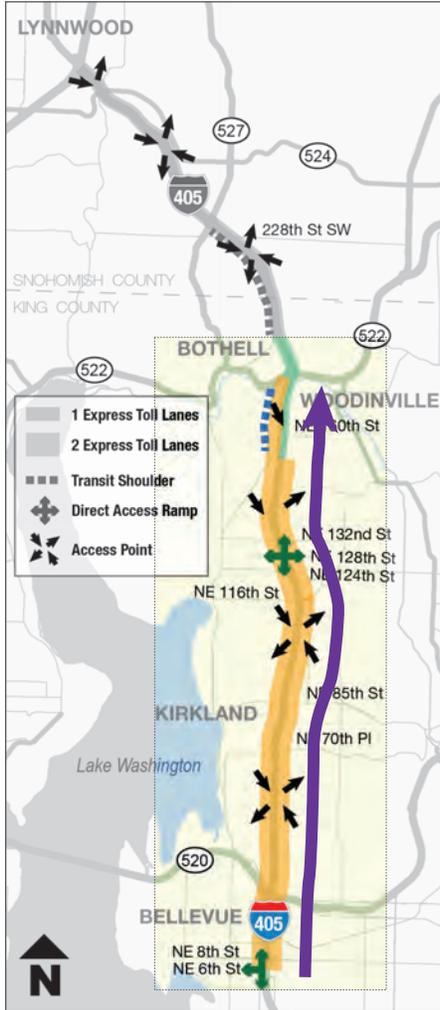
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Reliable	Average
Oct	2014	27	(38)	7 minutes faster	11 minutes faster
	2015	20	(27)		
Jan	2015	26	(32)	6 minutes faster	3 minutes faster
	2016	20	(29)		
May	2015	28	(40)	6 minutes faster	11 minutes faster
	2016	22	(29)		

4. Travel Times: Southbound I-405 at SR 522 to Eastbound SR 520 at 148th Ave NE
(AM Peak Period)



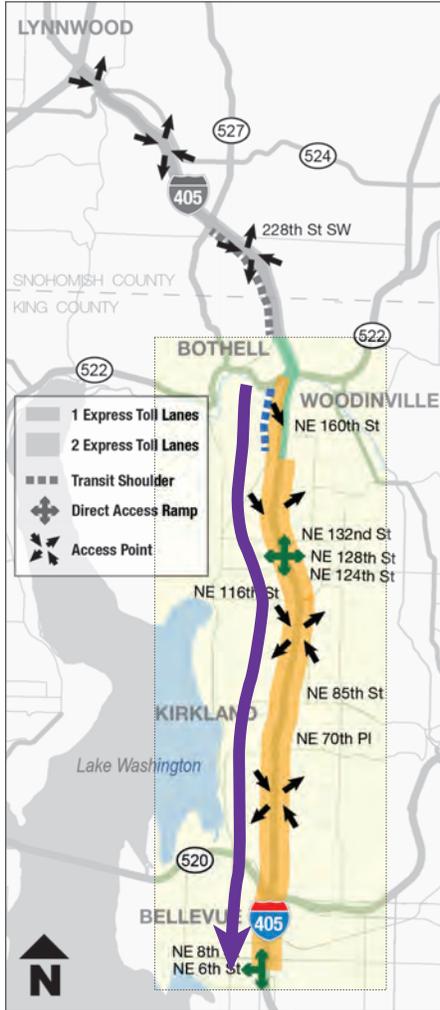
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	23	(27)	5 minutes faster	6 minutes faster
	2015	18	(21)		
Jan	2015	21	(25)	5 minutes faster	5 minutes faster
	2016	16	(20)		
May	2015	21	(24)	5 minutes faster	6 minutes faster
	2016	16	(18)		

5. Travel Times: Northbound I-405 from Bellevue to SR 522 (PM Peak Period)



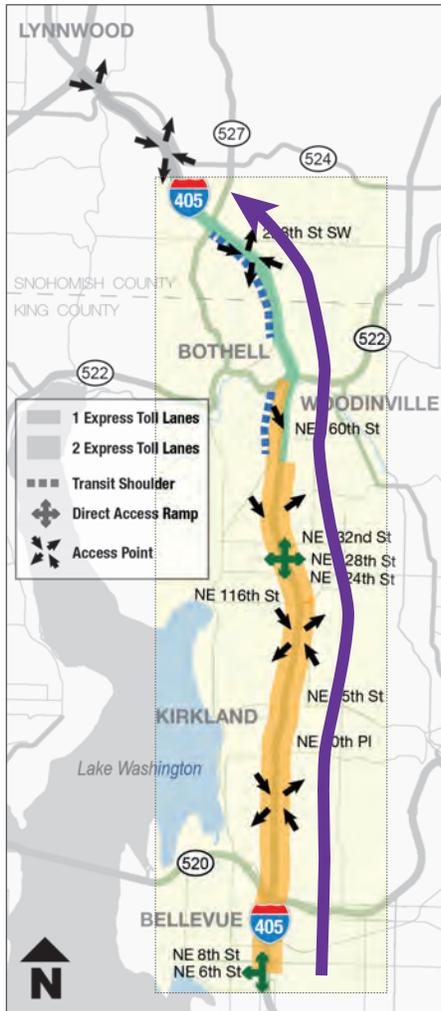
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	24	(23)	3 minutes faster	1 minute faster
	2015	19	(22)		
Jan	2015	24	(31)	3 minutes faster	4 minutes faster
	2016	19	(27)		
May	2015	23	(33)	3 minutes faster	7 minutes faster
	2016	20	(26)		

6. Travel Times: Southbound I-405 from SR 522 to Bellevue (AM Peak Period)



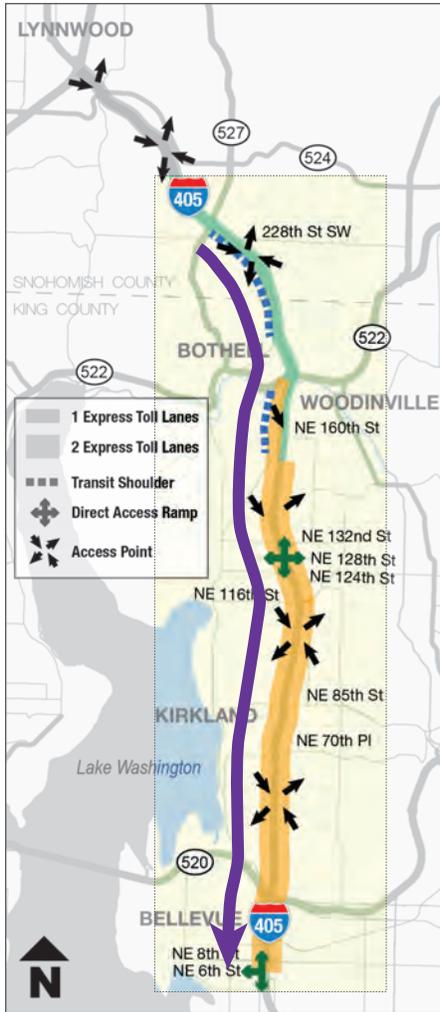
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	21	(25)	2 minutes faster	3 minutes faster
	2015	19	(22)		
Jan	2015	19	(22)	5 minutes faster	5 minutes faster
	2016	14	(17)		
May	2015	19	(22)	5 minutes faster	6 minutes faster
	2016	14	(16)		

7. Travel Times: Northbound I-405 from Bellevue to SR 527 (PM Peak)



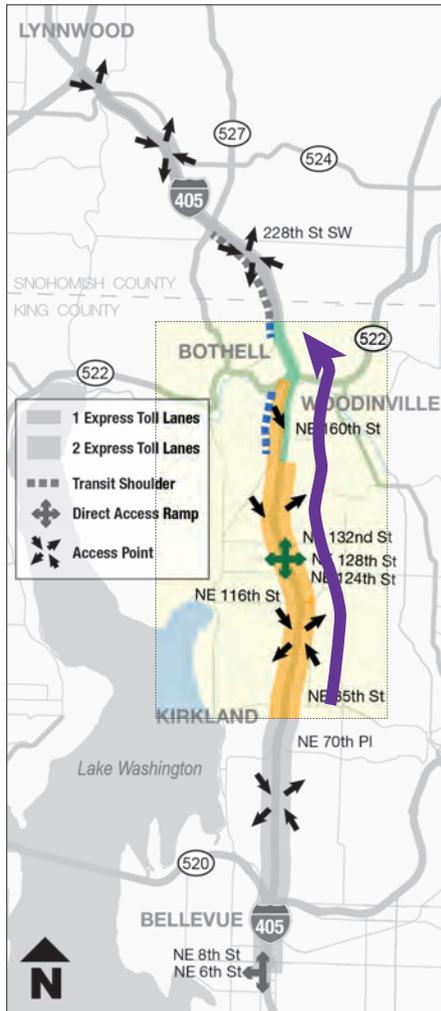
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	28	(38)	2 minutes faster	4 minutes faster
	2015	26	(34)		
Jan	2015	28	(36)	3 minutes faster	1 minute faster
	2016	25	(35)		
May	2015	28	(38)	2 minutes faster	4 minutes faster
	2016	26	(34)		

8. Travel Times: Southbound I-405 from SR 527 to Bellevue (AM Peak Period)



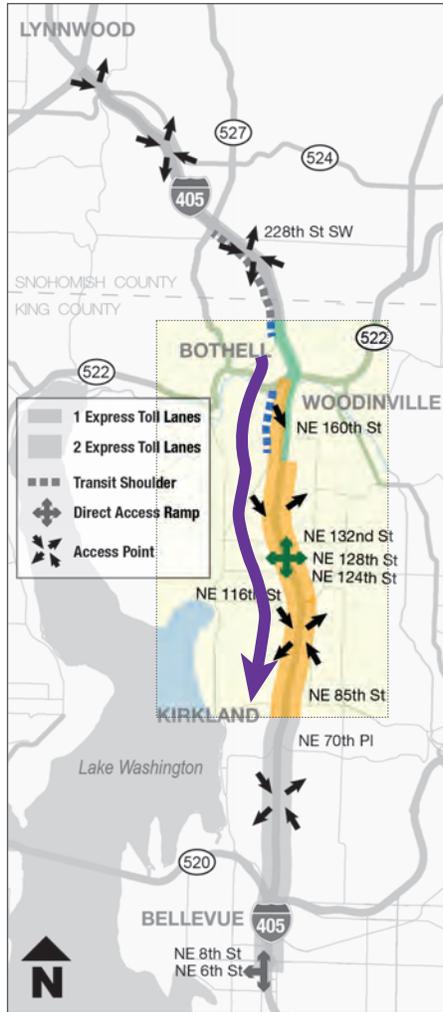
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	33	(40)	9 minutes faster	11 minutes faster
	2015	24	(29)		
Jan	2015	27	(35)	5 minutes faster	6 minutes faster
	2016	22	(29)		
May	2015	28	(34)	7 minutes faster	9 minutes faster
	2016	21	(25)		

9. Travel Times: Northbound I-405 from NE 85th to NE 195th (PM Peak Period)



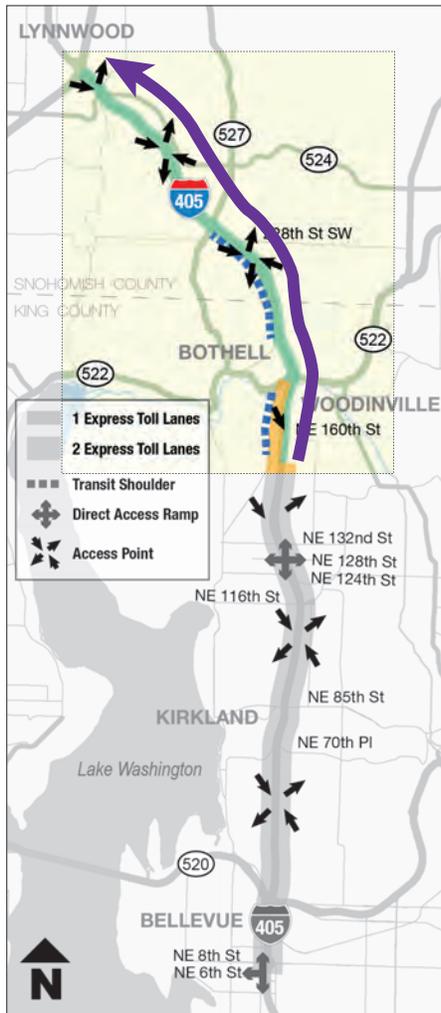
Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	15	(18)	3 minutes faster	1 minute faster
	2015	12	(17)		
Jan	2015	15	(19)	3 minutes faster	2 minutes faster
	2016	12	(17)		
May	2015	15	(19)	1 minute faster	0 minutes faster
	2016	14	(19)		

10. Travel Times: Southbound I-405 from NE 195th to NE 85th (AM Peak Period)



Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	19	(23)	6 minutes faster	6 minutes faster
	2015	13	(17)		
Jan	2015	16	(20)	5 minutes faster	5 minutes faster
	2016	11	(15)		
May	2015	16	(20)	5 minutes faster	7 minutes faster
	2016	11	(13)		

Additional Example: Travel Times: Northbound I-405 from NE 160th St. to I-5 (PM Peak Period)



Timeframe Comparison		General Purpose Lane Travel Times in Minutes		Change in Travel Times in Minutes	
		Average	(95th Percentile)	Average	Reliable
Oct	2014	13	(19)	3 minutes slower	7 minutes slower
	2015	16	(26)		
Jan	2015	12	(20)	4 minutes slower	6 minutes slower
	2016	16	(26)		
May	2015	13	(19)	3 minutes slower	7 minutes slower
	2016	16	(26)		

Detailed volume data

Due to the large amount and detail of the volume data requested for each travel segment, this data will be provided on WSDOT's website at www.wsdot.wa.gov/traffic/nw/405ETL/9_month_report_appendix/

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/traffic/nw/405ETL/9_month_report_appendix/

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 2016. Speeds are summarized in two segments (Southern Corridor- Downtown Bellevue to SR 522 and Northern Corridor – SR 522 to Swamp Creek) and for the full length in the HOV/Express Toll Lanes and the general purpose lanes.

Reference map for locating mileposts along I-405



FOR MORE INFORMATION

Visit [GoodToGo405.org](https://www.GoodToGo405.org) or contact us at GoodToGoTolling@wsdot.wa.gov

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