520 Tolling Implementation Committee
November Scenario Evaluation

Bellevue – November 12, 2008

Seattle – November 13, 2008

Mercer Island – November 17, 2008

Presentation outline

Introduction

- Committee charge
- Feedback from first round of public engagement
- Overview of Scenarios

Where we are now

- Funding target
- Toll ranges
- Revenue ranges
- High level conclusions
- Key Findings

What's next

- Committee schedule
- Public input
- Draft report
- Final report to legislature

520 Tolling Implementation Committee charge

- Evaluate
  - Traffic diversion from 520 to other routes, including 522, and recommend mitigation
  - Advanced tolling technology
  - New applications of emerging technology to better manage traffic

- Explore opportunities to partner with the business community to reduce congestion and contribute financially

- Confer with mayors and city councils

- Conduct public work sessions and open houses to solicit citizen views on tolling the existing 520 bridge, tolling both 90 and 520, providing incentives for transit and carpooling, implementing variable tolling

- Provide a report to the governor and legislature in January 2009

Committee charge - engagement

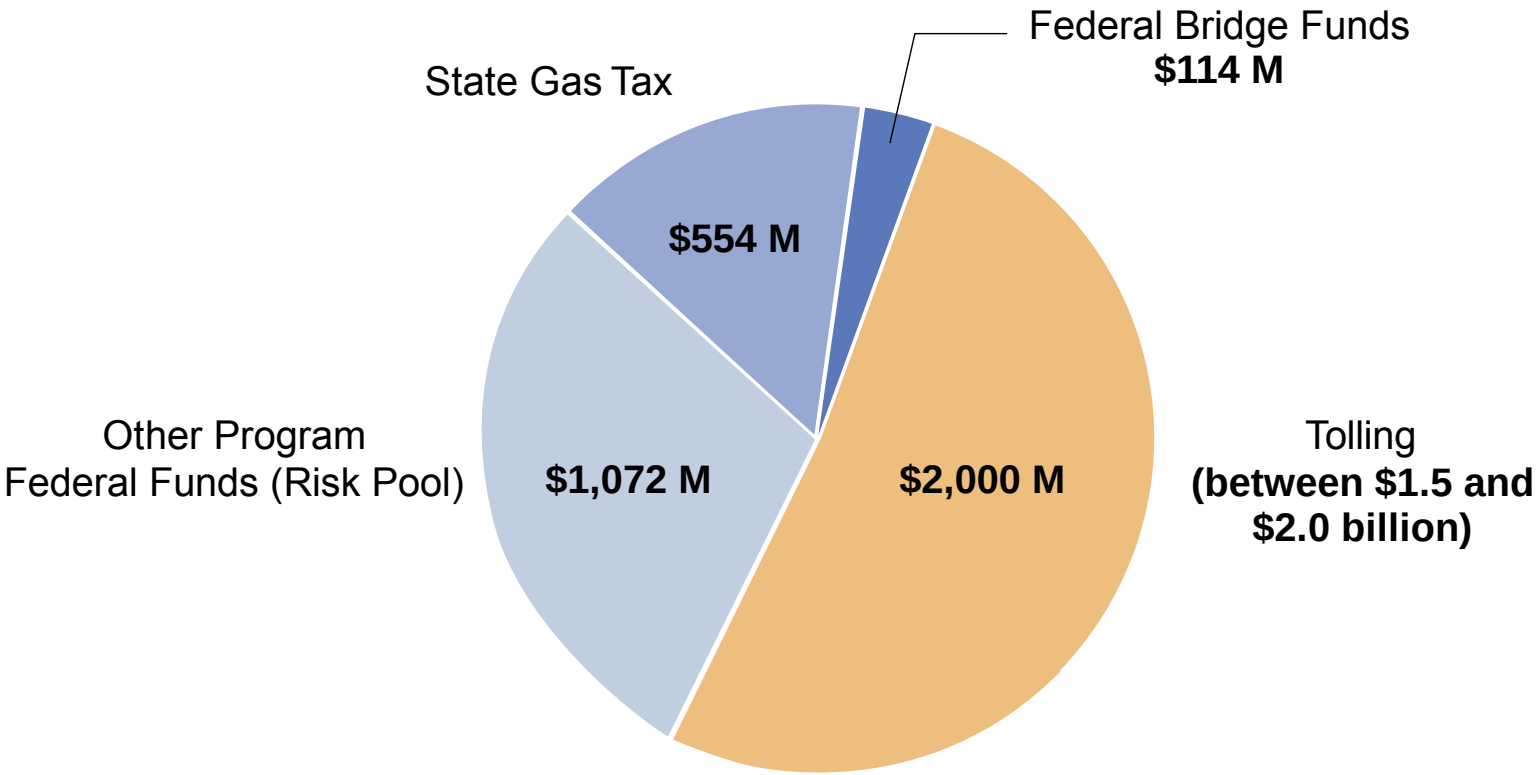
Engage citizens on the following topics:

- Funding a portion of the 520 replacement project with tolls on the existing bridge
- Funding the 520 replacement project and improvements on the 90 Bridge with a toll paid by drivers on both bridges
- Providing incentives and choices for transit and carpooling
- Implementing variable tolling as a way to reduce congestion

How will we pay for a new bridge?

Funding sources identified by legislature in ESHB 3096

Project estimate: $3.7 - 3.9 billion*



* Low end of range reflects $180 million in sales tax deferral

Work underway and next steps

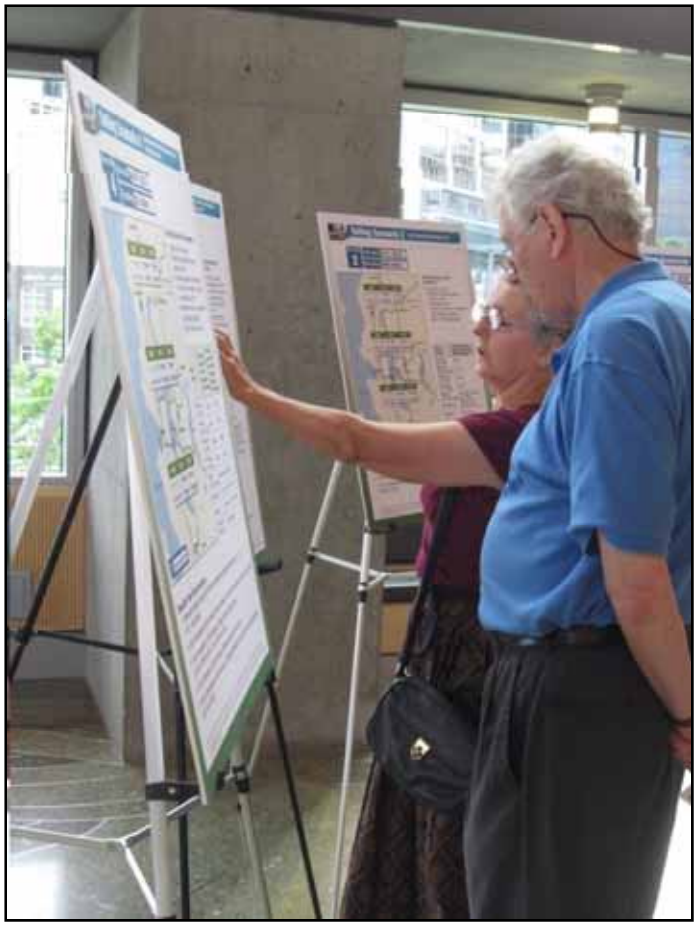
520 Tolling Implementation Committee			Next Steps
2008		**2009**	
November • 2nd round public engagement	December • Summary of 2nd round public engagement provided to committee	January • Draft report released for jurisdictional and legislative review and comment • Final 520 Tolling Implementation Committee report submitted to Legislature	State Legislature decides tolling policy for cross-lake corridor • Legislative decision for toll authorization • Washington Transportation Commission toll rate setting • Legislative approval of toll rates • Bridge pontoon construction and eastside transit and HOV improvements begin 2009/2010

November evaluation responds to feedback

- **Based on Local Jurisdiction and Public Feedback:** Five new scenarios in addition to our original four (for total of nine scenarios analyzed)

- **Based on Expert Financial Feedback:** Updated interest rate assumptions, based on current economic climate

- **Based on Independent Peer Review Feedback:** Regional model improvements



What evaluation criteria are being considered?

- The “reasonableness” of the tolls
- How much bridge funding is generated
- The diversion effects of tolls – people can choose to:
  - Stay on 520 but switch to carpool or transit
  - Stay on 520 but switch to different times
  - Travel on different routes
  - Choose a different destination – don’t have to cross the lake
- The performance of the bridge (potential congestion relief)
- The impacts tolls may have on low income bridge users

Overview of nine scenarios

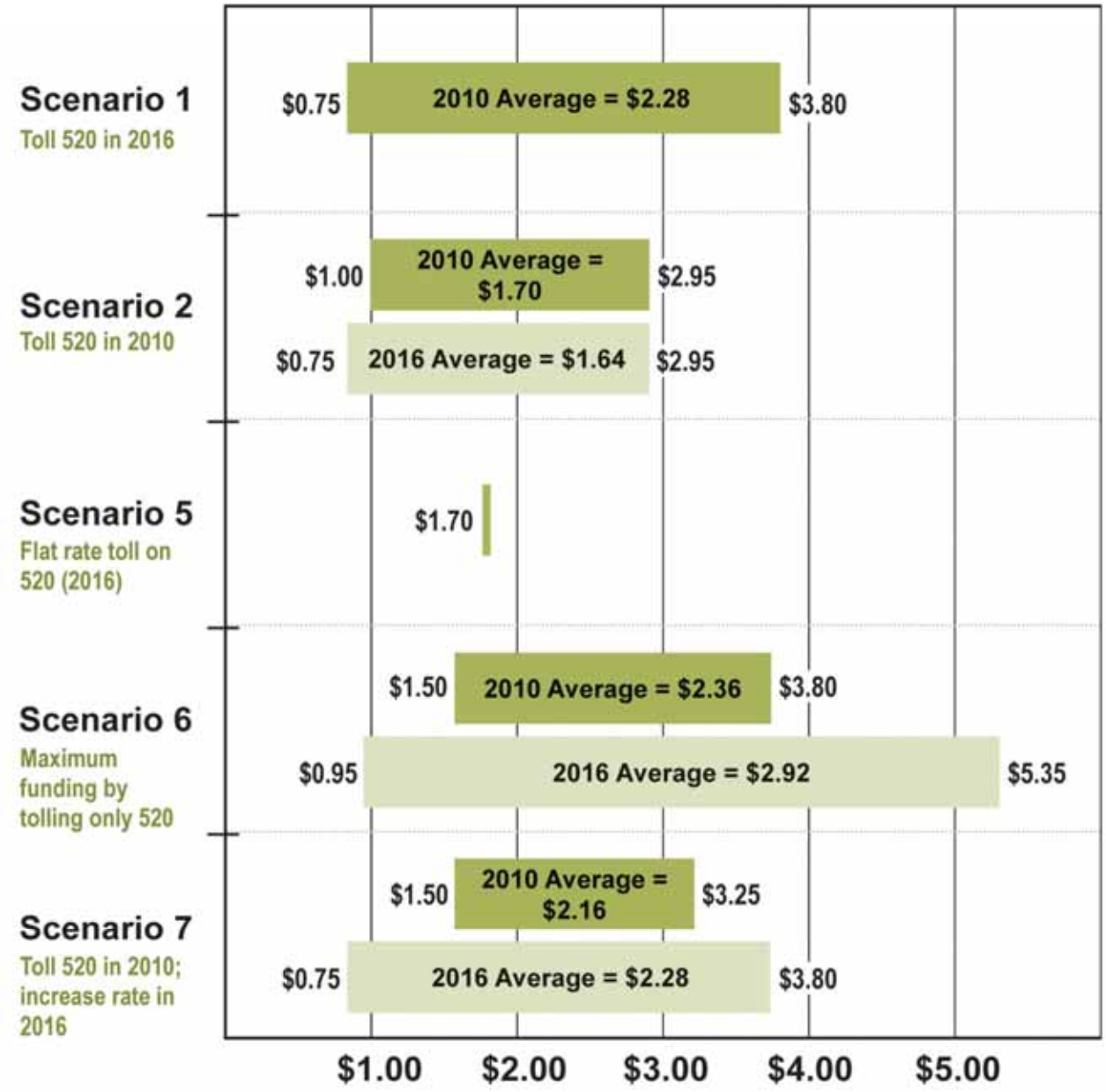
1	Toll 520 in 2016, when project is complete	520-Only
2	Toll 520 in 2010, when construction begins	
5	Flat rate toll on 520 (in 2016) NEW	
6	Maximize funding by tolling only 520 NEW	
7	Toll 520 in 2010; increase rate in 2016 NEW	
3	Toll both bridges in 2016	Two-Bridge (520 & 90)
4	Toll 520 in 2010 and 90 in 2016	
8	Toll 520 at a higher rate than 90 in 2016 NEW	
9	Toll both bridges in 2010 NEW	

Examples of variable toll ranges evaluated

Time of Day	Range of Tolls Evaluated (2007$)
Morning Commute (5 AM – 9 AM)	**$2.15 - $4.25**
Mid-Day (9 AM – 3 PM)	**$1.05 - $2.75**
Afternoon Commute (3 PM – 7 PM)	**$2.80 - $5.35**
Evening (7 PM -10 PM)	**$1.00 - $2.60**
Overnight (10 PM – 5 AM)	**$0.00 – $0.90**
Weekend	**$0.80 - $1.60**

Note: *Tolls assumed to increase at rate of inflation*

Toll ranges for 520-only scenarios (2007$)



Notes:

- *All toll rates are one-way*
- *All tolls are 2007$*
- *2010 scenarios do not charge an overnight toll.*

Toll ranges for two-bridge (520 & 90) scenarios

Notes:

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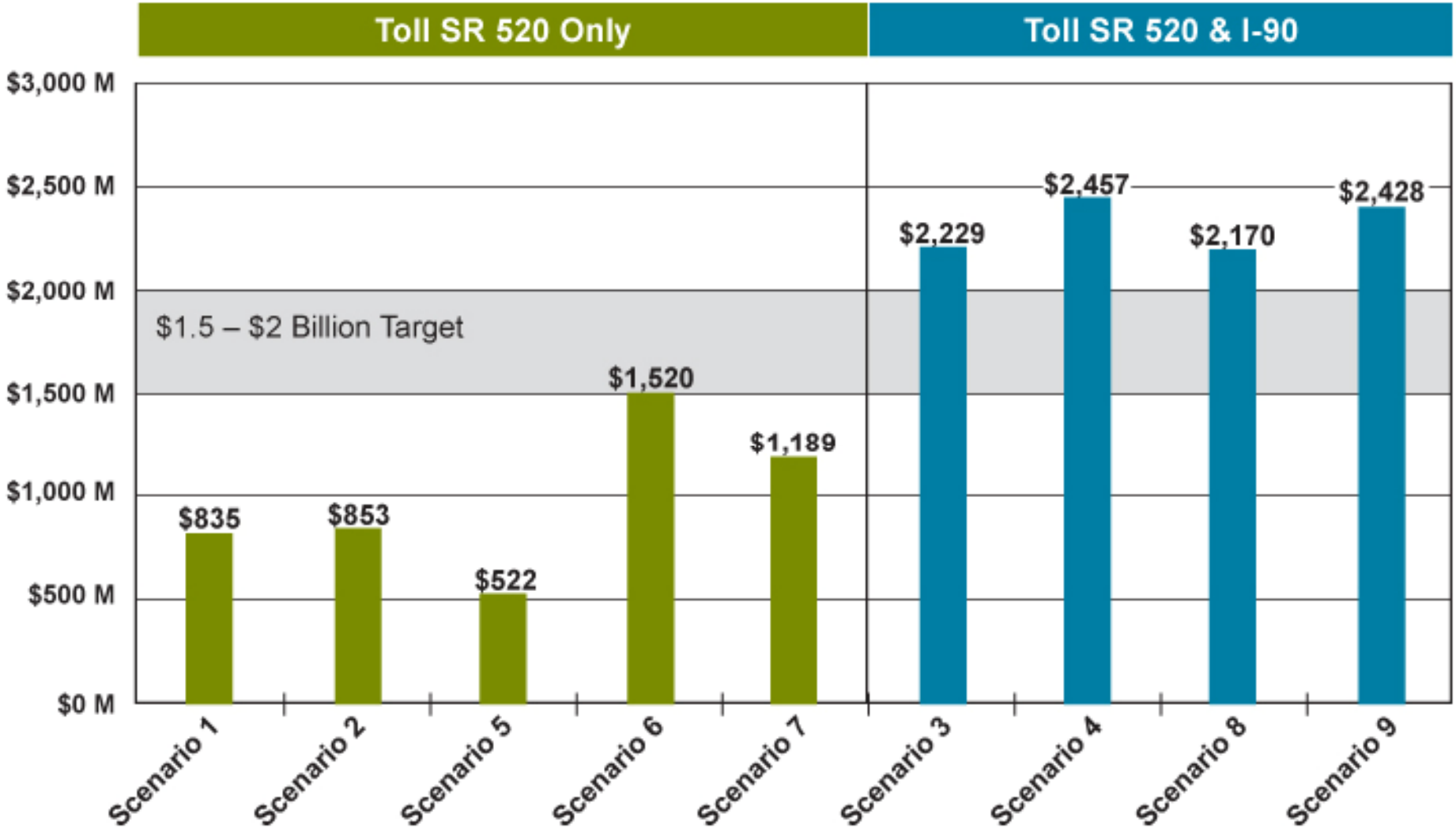
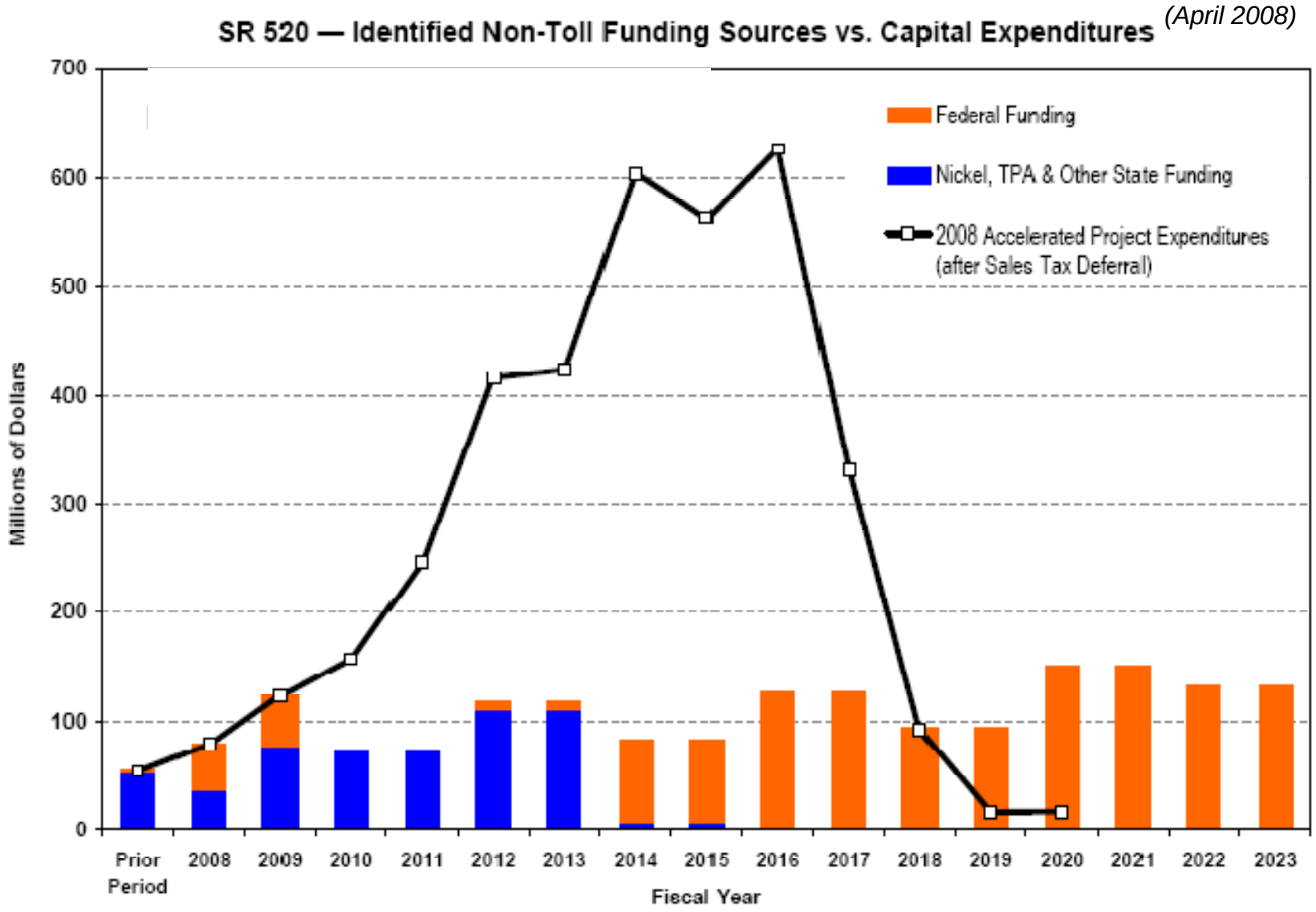
Bridge funding raised from toll scenarios



Cash flow needs, compared to secured bridge funding

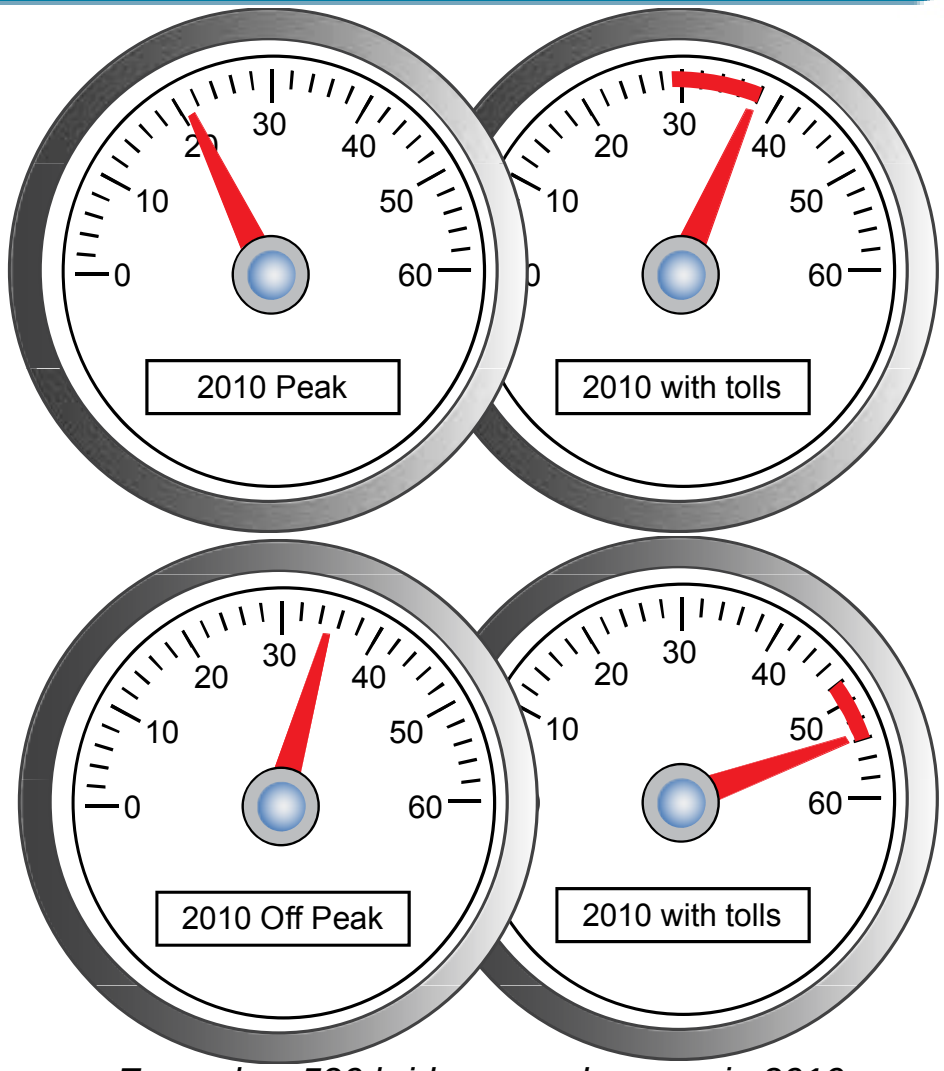


Big picture observations of the November evaluation

- **When tolls are in place, speeds improve**
- **Tolling starting in 2010 improves traffic flow on the 520 bridge**
- **Route diversion – people may change their routes, but net effect is distributed across the system**
- **People may change their travel choices to take transit, shift time of day or change destination**
- **Tolling 520 in 2010 raises more funds and should reduce cost of borrowing over tolling 520 in 2016**
- **Scenarios raise between $654 M to $2,457 M in bridge funding from tolls. The most a single-bridge scenario raised was $1.5 billion. Scenarios that toll both 520 and 90 exceeded that amount.**

When tolls are in place, speeds improve

- On 520, up to 40% increase in speeds
- The only time speeds decrease on I-90 by more than 5 mph is under the highest toll scenario for 520.
- With two-bridge scenarios (520 & 90), speeds increase on both bridges (in peak and off-peak times)
- On 522 and 405, speeds never decrease by more than 3 mph

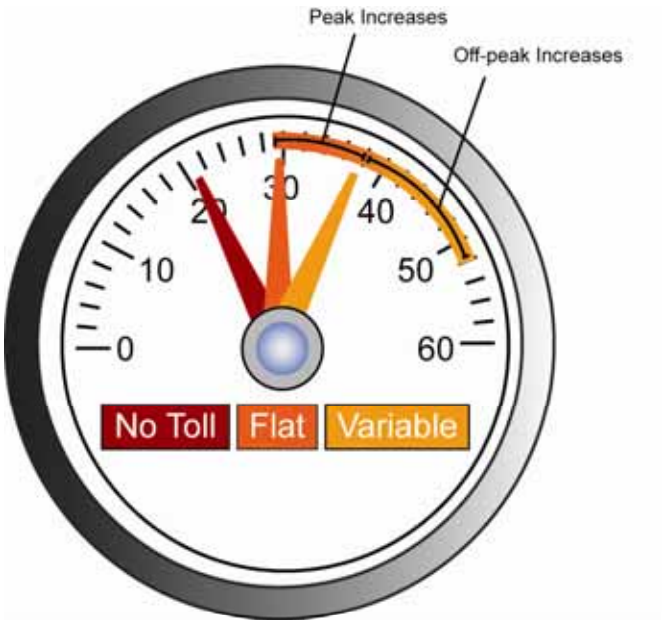


Examples: 520 bridge speed ranges in 2010; speeds with tolls, compared to roadway speed without tolls

Tolling improves traffic flow on the 520 bridge

On average, variable tolling leads to higher speeds from I-5 to 405:

- Speeds increase on average from 10 to 30 mph.
- By charging higher tolls during the busiest times, travel speeds increase about 13 to 16 mph over 2010 without tolls
- Off peak speeds increase between 13 and 19 mph
- With flat rate tolls, 520 speeds improve 7 mph in the peak and 16 mph in the off-peak.



520 bridge speed ranges, comparing no toll, flat toll and variable tolls in peak times in 2010. Off-peak speed increases could be up to 30 mph.

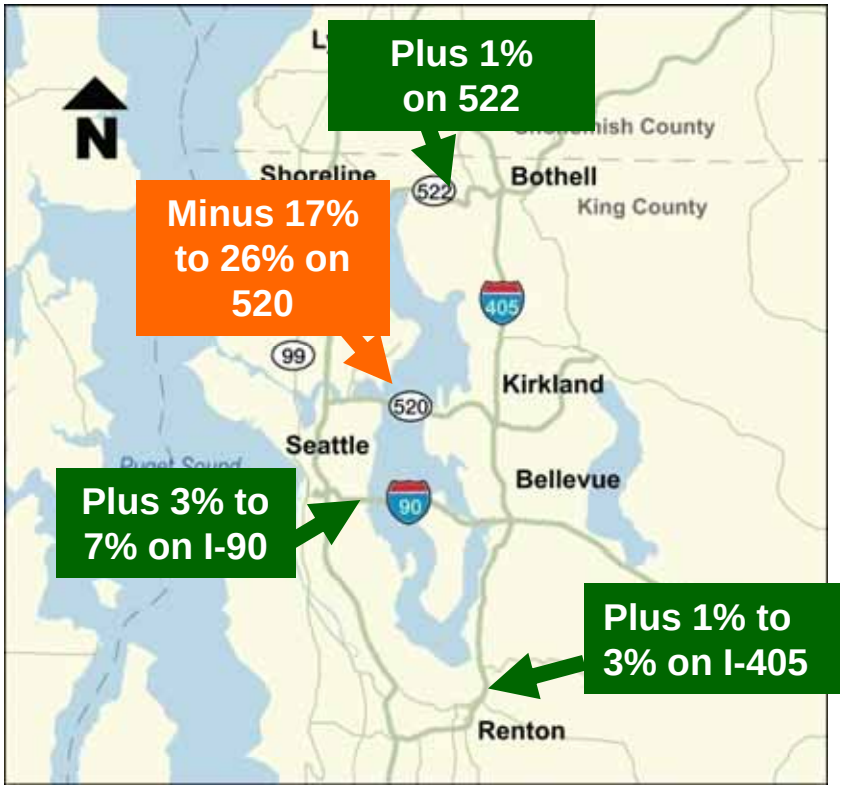
Route diversion – people may change their travel routes, but net effect is distributed across the system

520-only –

- Peak period traffic on I-90 increases less than 5%, except in highest toll one-bridge scenario (8%)
- Peak period traffic on SR 522 (at 61st/Kenmore) increases no more than 5%
- Peak period traffic on I-405 (at SR 167) increases no more than 3%
- Local roadways leading to tolled bridges have less traffic when tolls are in place
- System-wide congestion makes alternative routes less attractive

Examples of traffic diversion when tolling 520

(2010, Scenario 7: Toll 520 in 2010, increase rate in 2016)



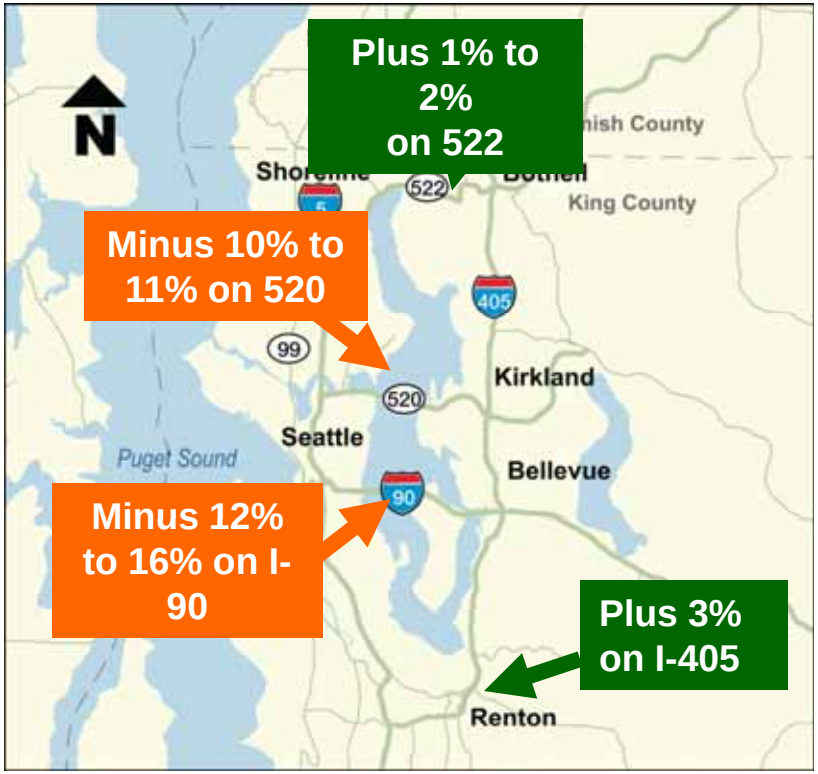
Route diversion – people may change their travel routes, but net effect is distributed across the system

Two-bridge (520 & 90) –

- Peak period traffic on 522 (at 61st/Kenmore) increases no more than 5%
- Peak period diversion to I-405 (at Renton) is greater in two-bridge scenarios, with volume increases reaching 8%.
- Local roadways leading to tolled bridges have less traffic when tolls are in place
- System-wide congestion makes alternative routes less attractive

Example of traffic diversion when tolling both 520 and 90

(2016, Scenario 9: Toll both bridges in 2016)

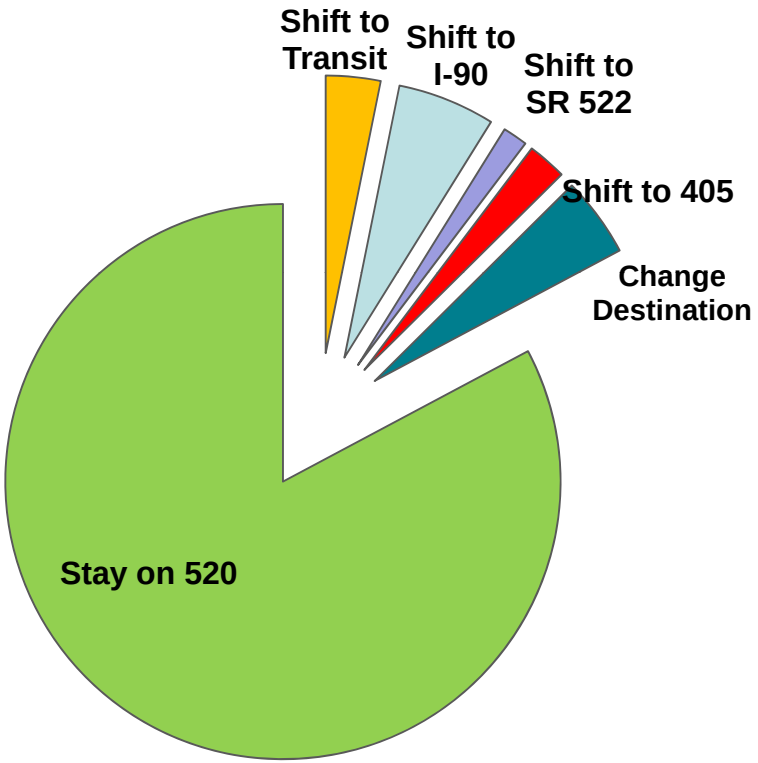


Some people make different choices – take transit, shift time of day or change destination

- Tolling 520 leads to a 15-35% increase in transit ridership in peak periods on 520 in 2010, provided the service is in place.
- The percentage of people who choose to travel at a different time of day ranges between 3-11% in 2010, and between 2-9% in 2016.

Some people make different choices – take transit, shift time of day or change destination

- Overall, under one-bridge scenarios, 0-15% change their destination.
- Overall, Under two-bridge scenarios, 5-10% change their destination.
- When tolls are at their highest, changing destination is also its highest (15 to 20% at off-peak).



Total Diversion under Scenario 6: Maximize funding by tolling only 520. 82% of person volume stay on 520 based on 2010 baseline 520 volume.

Tolling Locations Evaluated

Single-Point toll on both existing and new 520 bridges

- Beginning in 2010 for Scenarios 2, 4, 6, 7, 9
- Beginning or continuing in 2016 for Scenarios 5, 7, 8, 9

Segment tolls on new 520 bridge

- Beginning in 2016 for Scenarios 1, 2, 3, 4, 6

Segment tolls on I-90

- Beginning in 2016 for Scenarios 3, 4

Single-Point toll on I-90

- Beginning in 2010 for Scenario 9
- Beginning in 2016 for Scenario 8

Tolling 520 in 2010 reduces the cost of borrowing

- Starting tolling with bridge construction improves cash flow and reduces the cost of borrowing
- The Urban Partnership Agreement and tolling 2010 could result in $400- $500 M in bridge funding

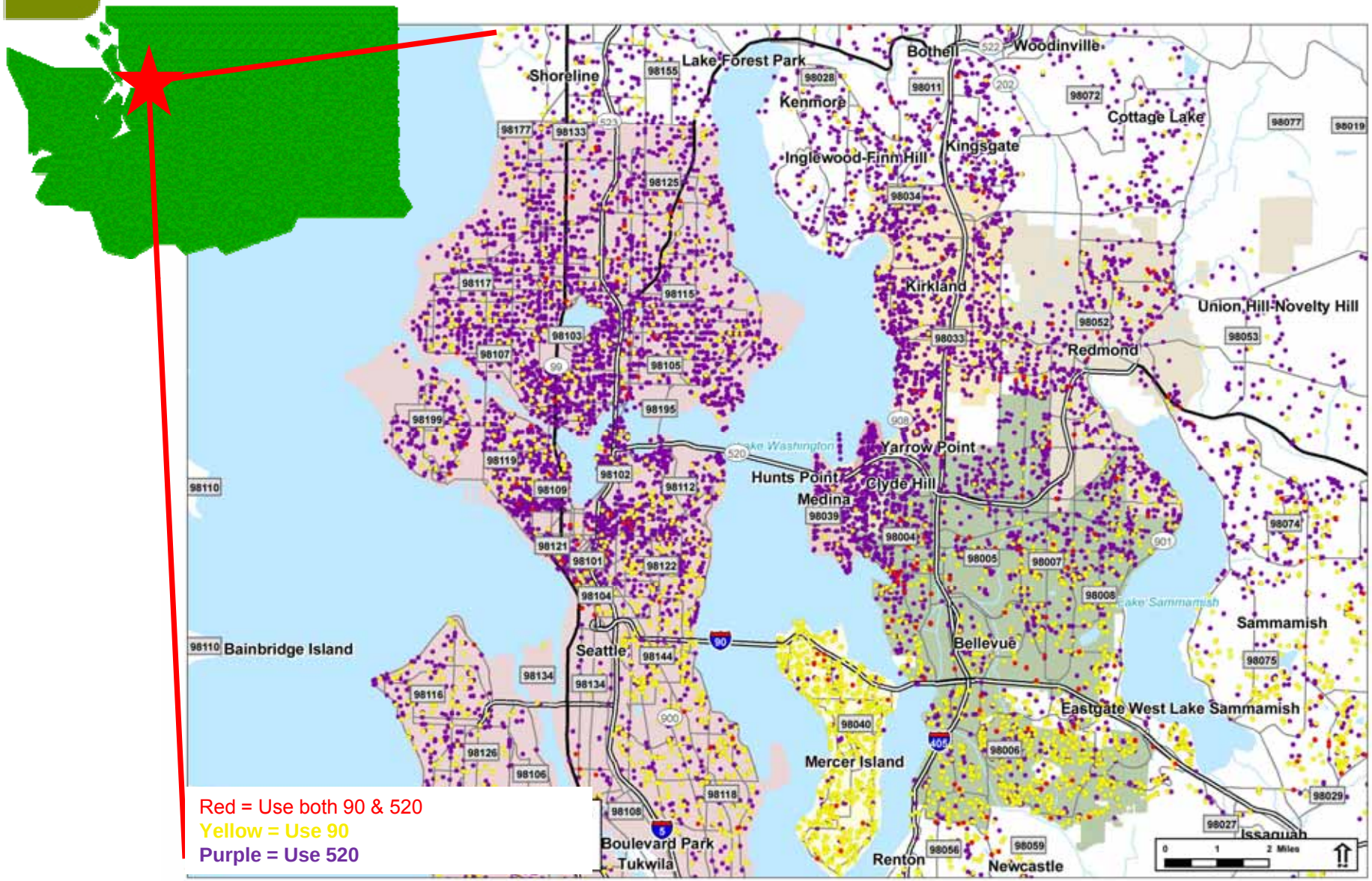
Up to $370 M (2010 – 2016 Tolls)

+ $134 M (UPA)

$400-$500 Million

More early funding = less borrowing costs

How can tolls work for people who use 520, nearby communities, and taxpayers?



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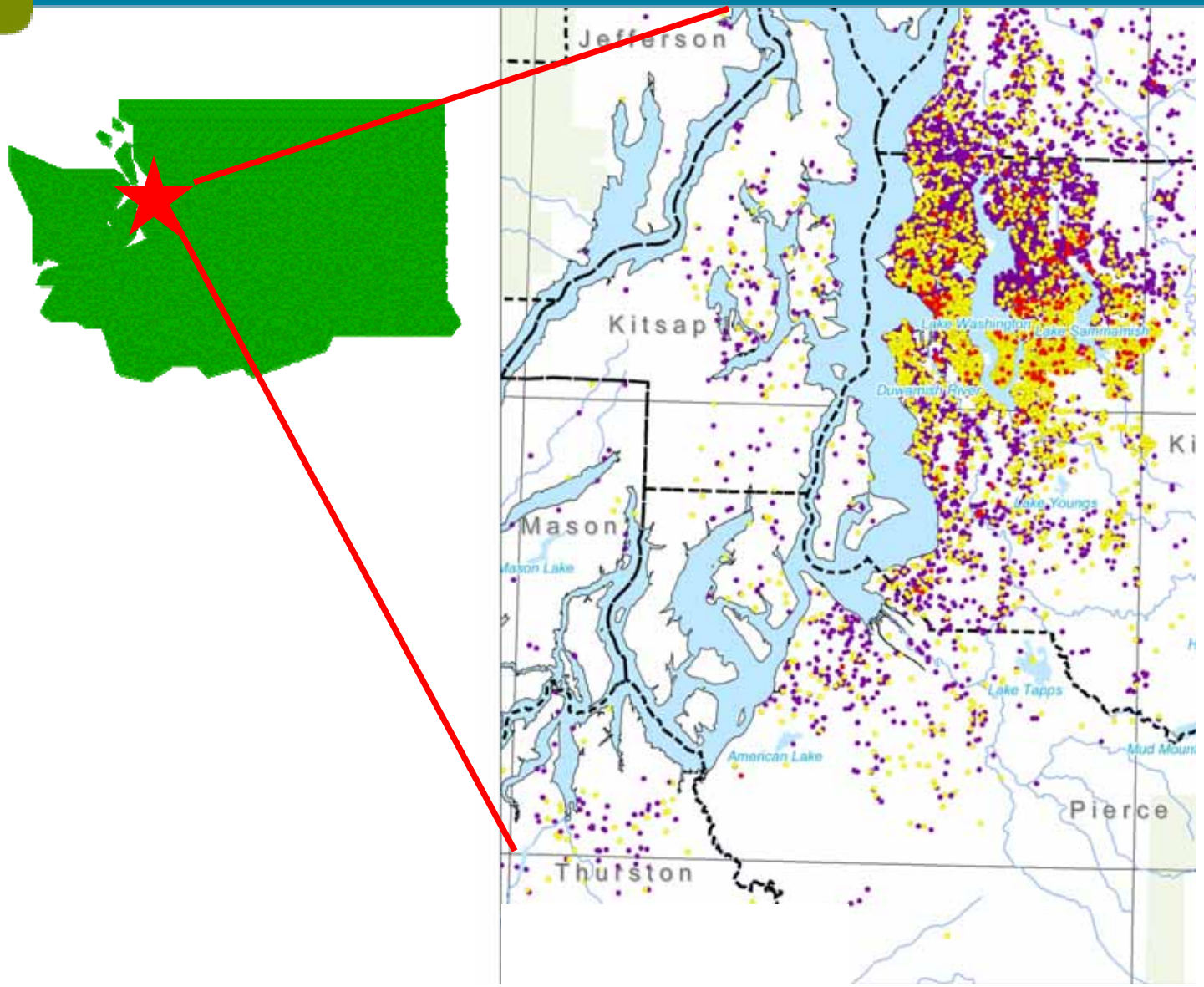

A two-part approach to diversion mitigation

Part 1: Keeping Traffic on the Tolled 520

- Toll levels
- Variable toll rate structure
- Segment tolls
- Improved transit and demand management programs
- 520 Project itself

A two-part approach to diversion mitigation

Part 2: Mitigating the effects of diversion off of 520

Principles:

- Focus on mitigation of 2010 diversion
- Mitigation related to level and type of diversion effects
- Focus on increment of tolling effects
- Focus on operational measures which are flexible in responding to actual and changing diversion effects
- Capital projects should be reserved for persistent diversion effects

Areas where data and input indicate there could be diversion effects

- 522 Traffic Flow
- Bellevue/Points Communities Arterial Effects
- Mercer Island Traffic Effects
- I-405 South Effects
- Seattle/University of Washington

What happens next?

Open Houses

November 12 – Bellevue: Bellevue City Hall

November 13 – Seattle: University of Washington, Urban Planning and Architecture Building

November 17 – Mercer Island: Stroum Jewish Community Center

All meetings are from 3 to 7:00 p.m.
Presentation at 5 p.m.

Comment opportunities

All comments due by Monday, November 30

In person: At Open Houses

Web Survey: via www.build520.org

Email: info@build520.org

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QUESTIONS?