

Stewardship of Washington's transportation system

WSDOT moving to the next level

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Overview

- Robust economy brings opportunities and challenges
- Overview of the state's transportation system
- Available Funding
- "Solving" congestion
- Practical Solutions
- Creating a diverse workforce and inclusive culture
- Conclusion

Robust economy brings challenges

- Washington's economy is booming
 - Greater population and employment
 - Worsening congestion as a result
- The Central Puget Sound is “ground zero” for this boom
 - Prosperous as a region
 - Conduit to/from the rest of the state
- 2017 Corridor Capacity Report – data from 2014 to 2016:
 - 3.2% increase in passenger vehicle registration
 - 4.3% increase in drivers
 - Congestion increases on 4 of 5 monitored corridors compared to pre-recession (2007) levels
 - I-5 up 76%
 - I-405 up 33%
 - I-90 up 117%
 - SR 167 up 4%
 - SR 520 below recession levels due to carpooling, tolling





Land use, housing and jobs

- Adding new jobs, but are we keeping up with affordable housing and transportation choices for those new workers?
- Lack of affordable housing pushes workers further from urban job centers –
 - Can't afford to live where they work
 - Travel longer distances
- Fewer transportation choices on the urban fringe – people “have to drive”
- Bedroom communities generate their own demand for services and for employees to fulfill that demand

Freight movement is important to state economy

- Washington one of most trade dependent states in U.S. per capita
 - Foreign imports/exports valued at \$126 billion (2017)
 - \$595 billion in gross business income from freight-dependent industries (2017)
 - 29% expected growth in freight demand in 20 years
- Freight needs are great –
 - System resilience
 - Truck parking
 - Grade-crossing improvements
 - First/last mile connections
 - Preservation of industrial sites
 - Aging infrastructure



We work with dozens of corridor partners, with competing interests, in a complex transportation network...new opportunities for WSDOT

- Convergence of complex issues –
 - Job centers – experiencing unprecedented growth throughout the region
 - Competing interests –
 - Developers – want to meet new demand, reliant on financing that is risk averse
 - Local jurisdictions – advocate for smart growth, struggle to fund local infrastructure and services
 - 65 cranes in Seattle today – New York has 20, LA has 36 – tremendous amount of activity (as of July 2018)
- Growth in the state is uneven – some communities feel left behind
- Need for even better coordination – We've had good success, also struggles
 - Small changes on state highway system can affect local streets, vice-versa
 - Closures on the state system can bring gridlock to city streets
- Reinforces need for a broader perspective, agency-wide view of our work
 - Examine impacts regionally, not just locally – look at entire system

Overview of the state's connected, multimodal system

The state's transportation network* is a connected system that must serve many modes and users



18,715
Highway lane miles



32
Transit systems



3,312
state-owned bridges



16
WSDOT-operated airports



22
Ferries
24.2 million
passengers per year

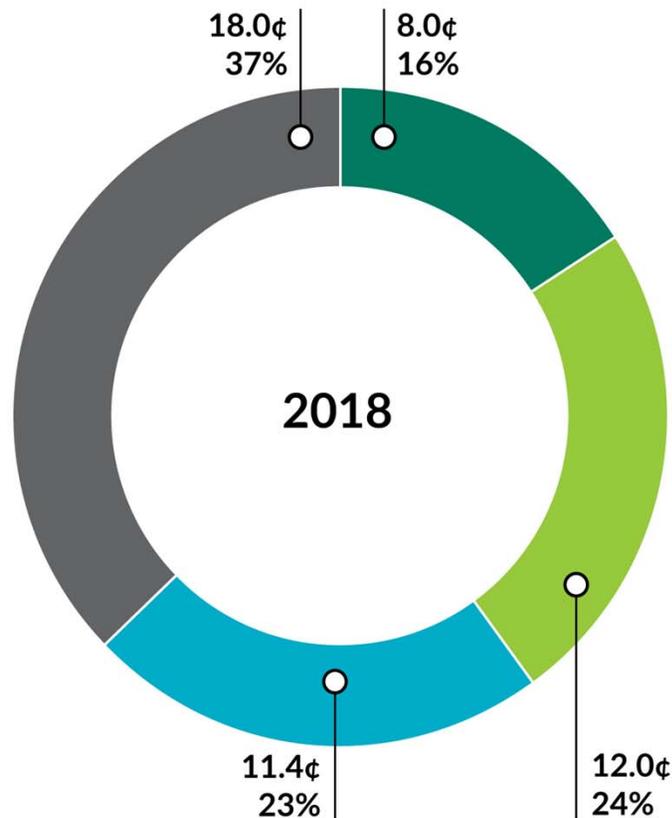


127
miles dedicated bike lanes
400
miles of sidewalk within/adjacent
to WSDOT right-of-way

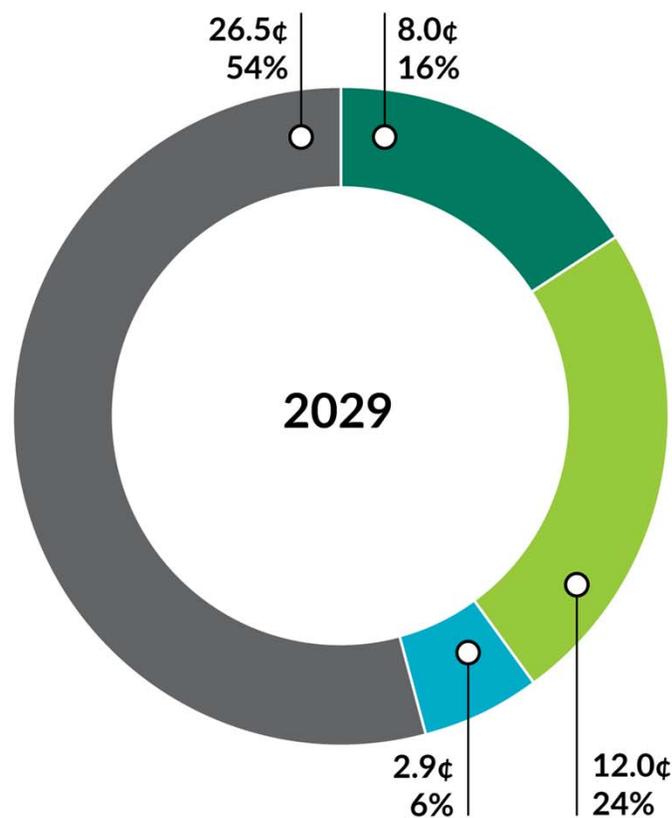
* More detailed information included in the appendix

Available Funding

Where Does the 49.4¢ State Gas Tax Go?



Where Will the 49.4¢ State Gas Tax Go?



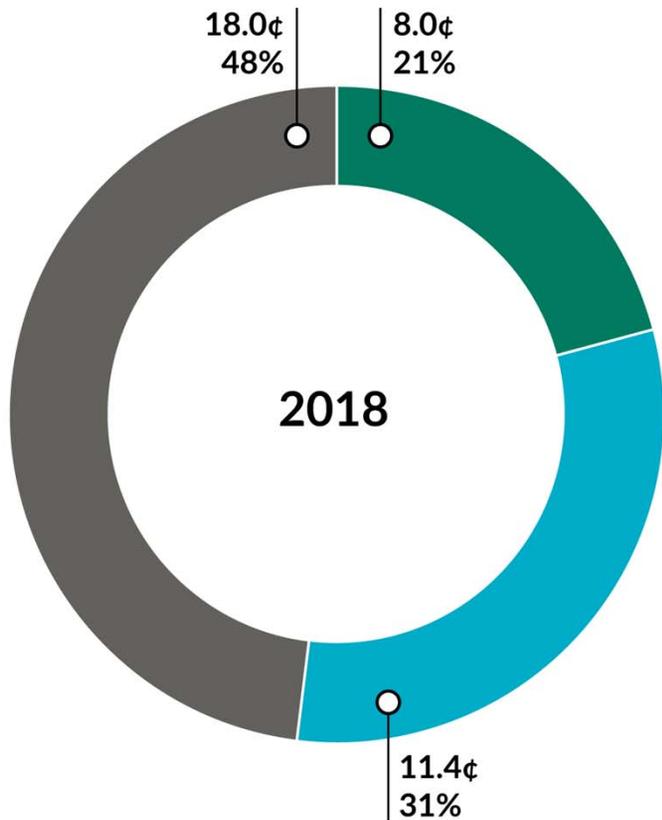
- WSDOT*
- Cities & Counties (Local Government)
- Legislatively Directed Investments**
- Debt Service**

* Includes operations, maintenance, preservation and safety improvements.

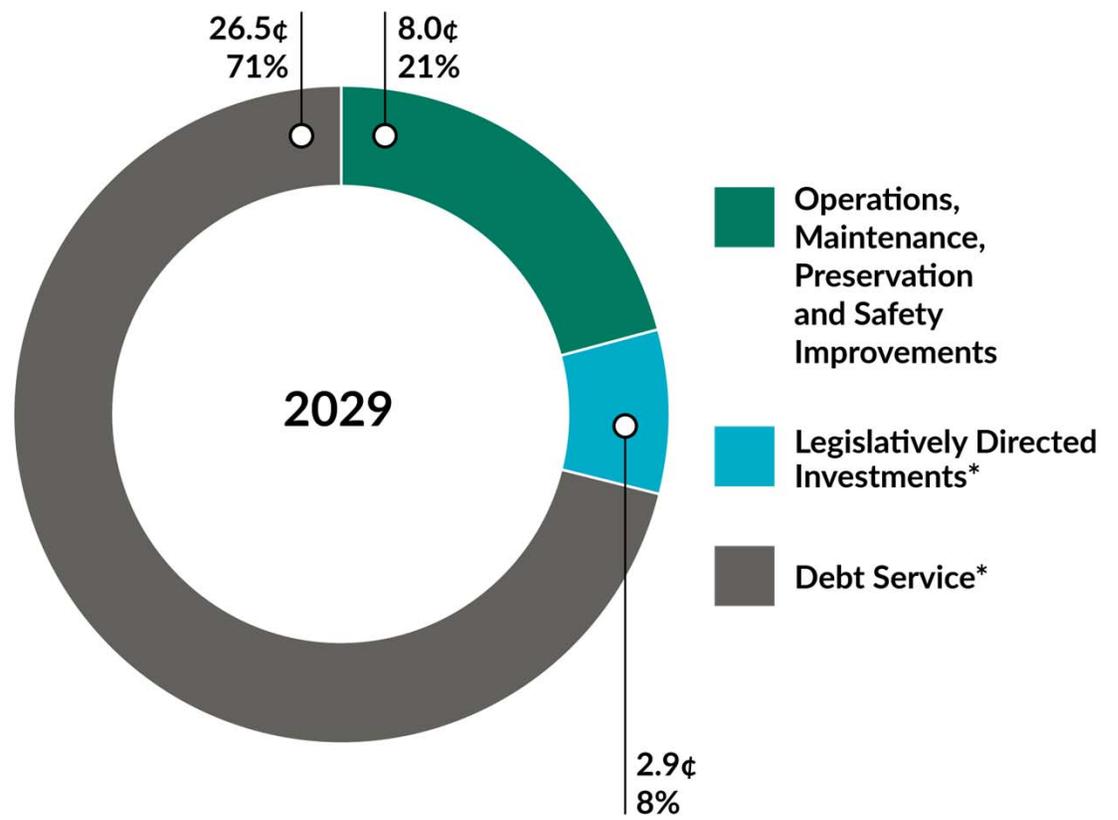
** Includes funding for projects specified in the 2003 Nickel, 2005 Transportation Partnership, and 2015 Connecting Washington acts, as well as funding to pay off bonds funded by pre-2003 fuel tax.

Available Funding

Where Does WSDOT's 37.44¢ Portion of the Gas Tax Go?



Where Will WSDOT's 37.44¢ Portion of the Gas Tax Go?

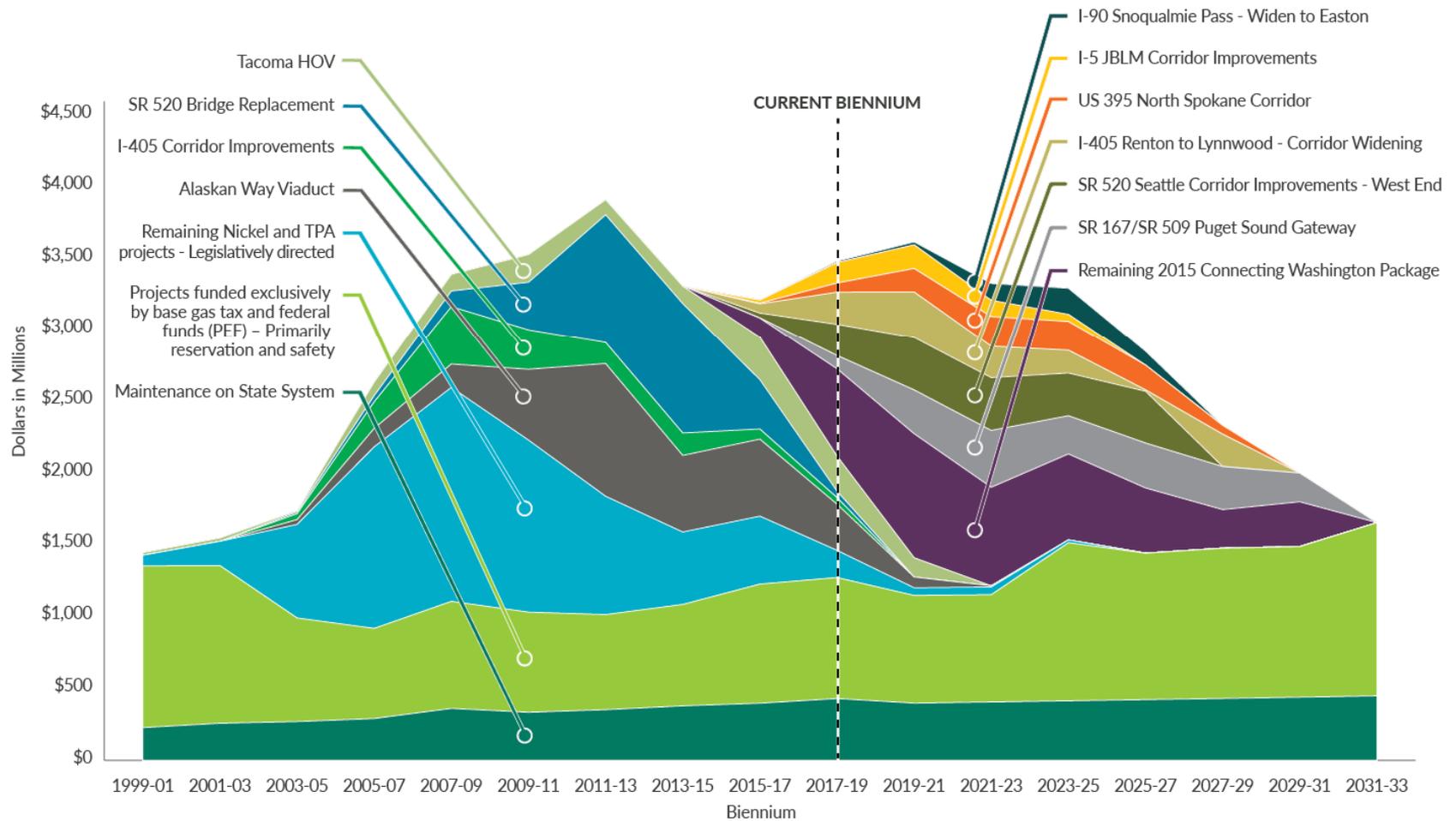


* Includes funding for projects specified in the 2003 Nickel, 2005 Transportation Partnership, and 2015 Connecting Washington acts, as well as funding to pay off bonds funded by pre-2003 fuel tax.

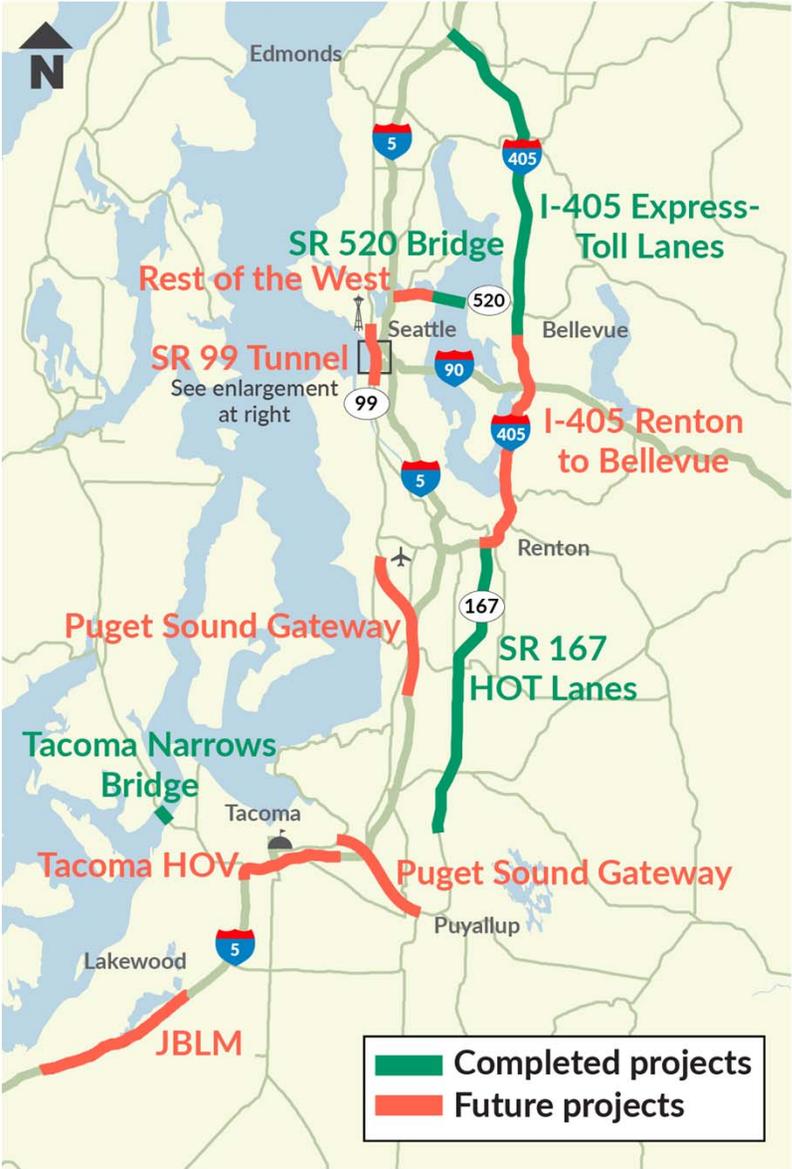
WSDOT Highway Maintenance and Construction Programs with Revenue Packages

2018 Governor's Supplemental Budget Request

18GOV001 (Excludes sub-programs 16 and 17)



PUGET SOUND MAJOR CONSTRUCTION

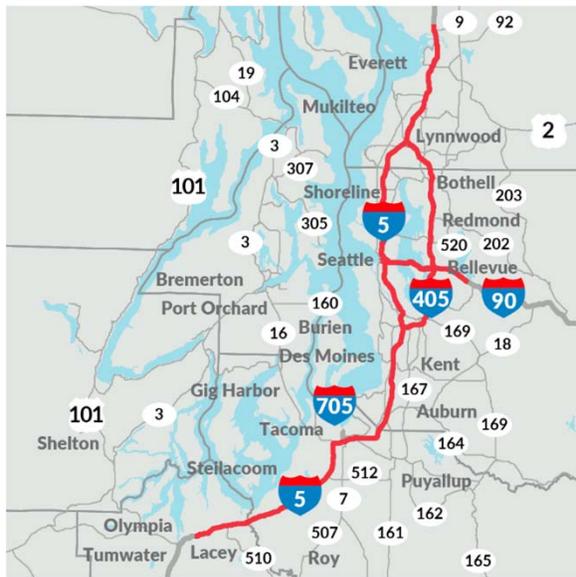


“Solving” Congestion

If we could add enough lanes to build our way out of congestion — what would that look like?

Total additional interstate miles needed to drive posted speed limit at all times:

- 451 lane miles at an estimated cost of \$115 billion
- Depending on timing and percent bonded, would require a \$2.20 to \$2.50 gas tax increase



Greater Puget Sound area

(Olympia to Marysville/Seattle to Issaquah)

- 385 new lane miles
- Maximum of four additional lanes in each direction in select locations within the Central Puget Sound



Vancouver area

- 38 new lane miles



Spokane area

- 28 new lane miles



“Solving” Congestion Assumptions

High-level analysis for the interstate system:

- Assumes no induced demand
- No growth in demand
- Does not address increased capacity needed for unrestricted travel on non-interstate connections (other state routes or local roads)
- May not address costs or timing of full environmental impacts
- No additional transit or alternative modal options
- Current year costs

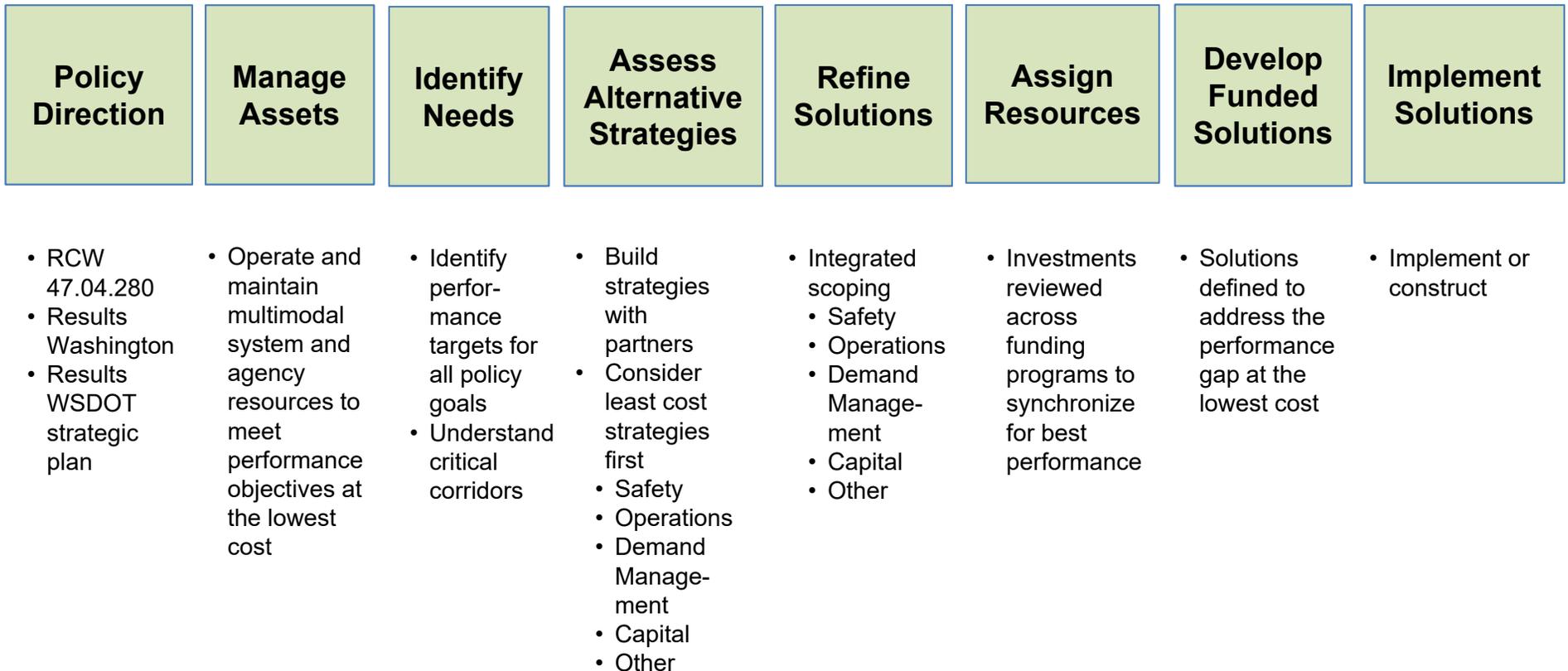
A path forward in a congested world: Practical Solutions

What is Practical Solutions?

- Addressing congestion within available resources
- It's the right investment, in the right location, at the right time
- It's not about fixing a problem on the state highway system, but instead, advancing to the next generation of transportation investment
 - Becoming stewards of the transportation system rather than “just” delivering projects
- We have a huge asset that we need to keep in state of good repair – make sure it operates safely – operates efficiently – manage demand – and at times, add capacity



Proposed framework for future investment decisions



Framework for future investment decisions (continued)

- Statewide Transportation Asset Management Plan is used to:
 - Identify performance measures and targets
 - Identify assets and their condition
 - Identify gaps between the existing condition and state performance targets
 - Perform lifecycle-cost and risk management analysis
 - Create a financial plan
 - Describe investment strategies to preserve the asset, using a Practical Solutions approach
- Corridor Sketch planning, MPO/RTPO plans are used to assess system needs and changes over time

Manage
Assets

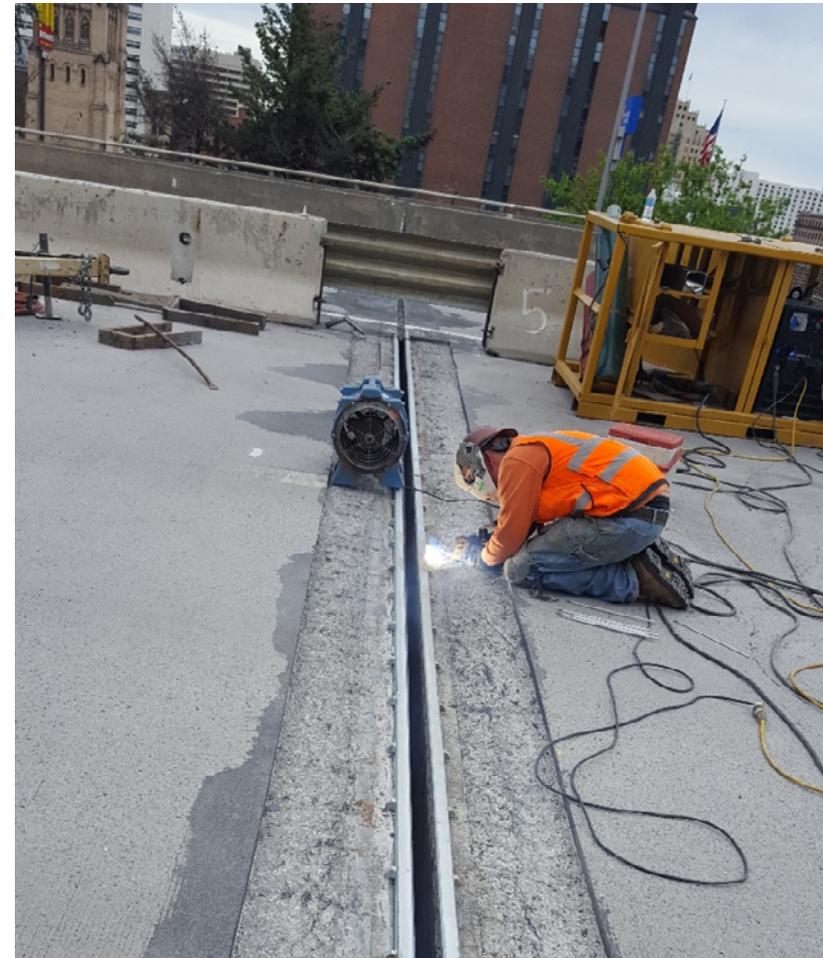
Identify
Needs



Practical Solutions framework

Assess
Alternative
Strategies

- **State of Good Repair** – just like owning a home, you have to maintain and preserve it to keep the value of the original investment
 - Includes the physical condition of the infrastructure and how well it meets operational needs
- Annual cost for vehicle repairs and operations costs due to poor road conditions: estimated at \$656¹ for every Washington driver
 - With 5.768 million licensed drivers in Washington, it adds up to an estimated \$3.78 billion spent
 - That's equivalent to a \$1.14 gas tax
- We can fix this!

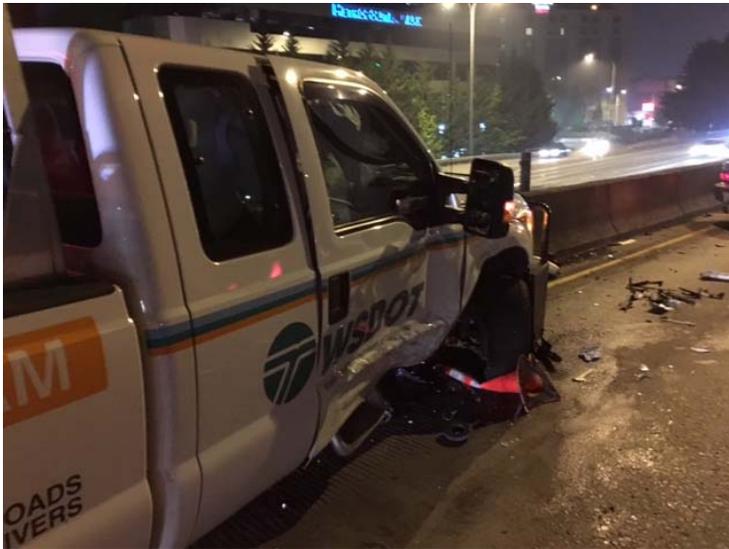


1) American Society of Civil Engineers 2017 Infrastructure Report Card

Asset Management – All WSDOT

(Millions of dollars)	Replacement Value	10-year Average Spending (2007 - 2017)	10-year Future Annual Avg. Spending (2017 - 2027)	10-year Annual Additional Needs (2017 - 2027)	Budget, Plus Needs Annual Avg. (2017 - 2027)
Highways	\$109,390	\$330	\$335	\$330	\$665
Multimodal	\$560	\$15	\$20	\$75	\$95
Intra-Agency (i.e. IT, facilities, TEF)	\$2,145	\$55	\$70	\$55	\$120
Ferries	\$4,770	\$110	\$125	\$90	\$220
TOTAL	\$116,865	\$510	\$550	\$550	\$1,100

Assess
Alternative
Strategies



Practical Solutions Framework

- **Target Zero – the state’s Strategic Highway Safety Plan**
 - Establishes priorities across multiple categories and disciplines:
 - Crash type – lane departure, intersection related
 - Road users – young drivers, motorcycles, pedestrians, older drivers (70+), heavy truck involved, bicyclists
 - High-risk behavior – impairment, speeding, distraction, unrestrained occupants, unlicensed driver, drowsy driver
 - Decision and performance improvement – traffic data systems, EMS and Trauma response, Evaluation/Analysis/Diagnosis
 - Other monitored emphasis areas – wildlife, work zone, vehicle-train, school-bus involved



Practical Solutions Framework – Safety (continued)

Assess
Alternative
Strategies

- **Target Zero Goal** – reduce traffic fatalities and injuries to zero by 2030
 - 530 traffic fatalities on Washington’s roads in 2017
 - 22% higher than the state’s all-time low of 436 fatalities in 2013
 - 2,232 serious injuries on Washington’s roads in 2017
- **Societal cost of crashes** ¹: NHTSA estimates each traffic death has an economic impact of \$9.1 million and each serious injury an economic impact of \$1.5 million
 - For Washington, that equates an impact of \$4.8 billion for fatalities in 2016; \$3.4 billion for serious injuries
 - The combined total economic impact of fatalities and serious injuries is the equivalent of a \$2.46 gas tax
- **Infrastructure response**
 - Intersection related: installing/converting to roundabouts; optimizing traffic signal timing; dynamic intersection warnings; installing refuge islands; shortening crossing areas for pedestrians
- **We can fix this!**

1) The estimates are based on 2013 National Highway Traffic Safety Administration values for preventing fatal and serious injuries. Economic cost components include: medical care, emergency services, market productivity, household productivity, legal costs, insurance administrative costs, workplace costs, property damage and congestion.



Practical Solutions Framework

Assess
Alternative
Strategies

- **Transportation System Operations**

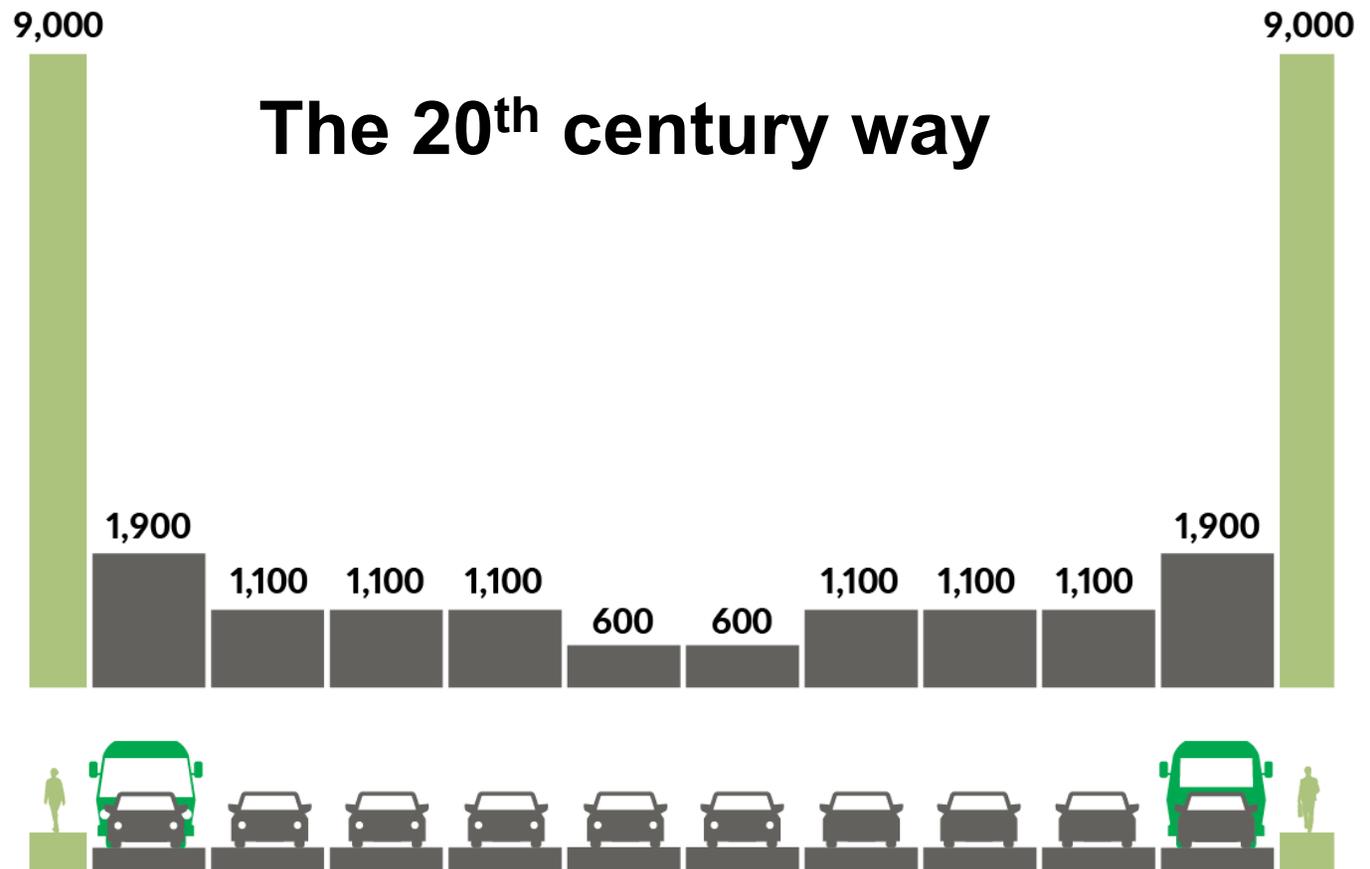
- Smart technology – WSDOT ITS Systems
 - 6 statewide Traffic Management Centers
 - 4,000 ITS devices; 1,000 traffic signals; 3,000 illumination systems
 - 7% average annual increase in ITS devices
- Managed lanes – Dynamic tolling, HOV/HOT, Ramp metering
- Low cost enhancements - enhanced warning signs; centerline and shoulder rumble strips; high-friction surfaces on curves and ramps; median barriers; pavement edge safety treatments

Do our old standards meet today's demands?


**How many people
can this street
serve per hour?**

Up to
29,600

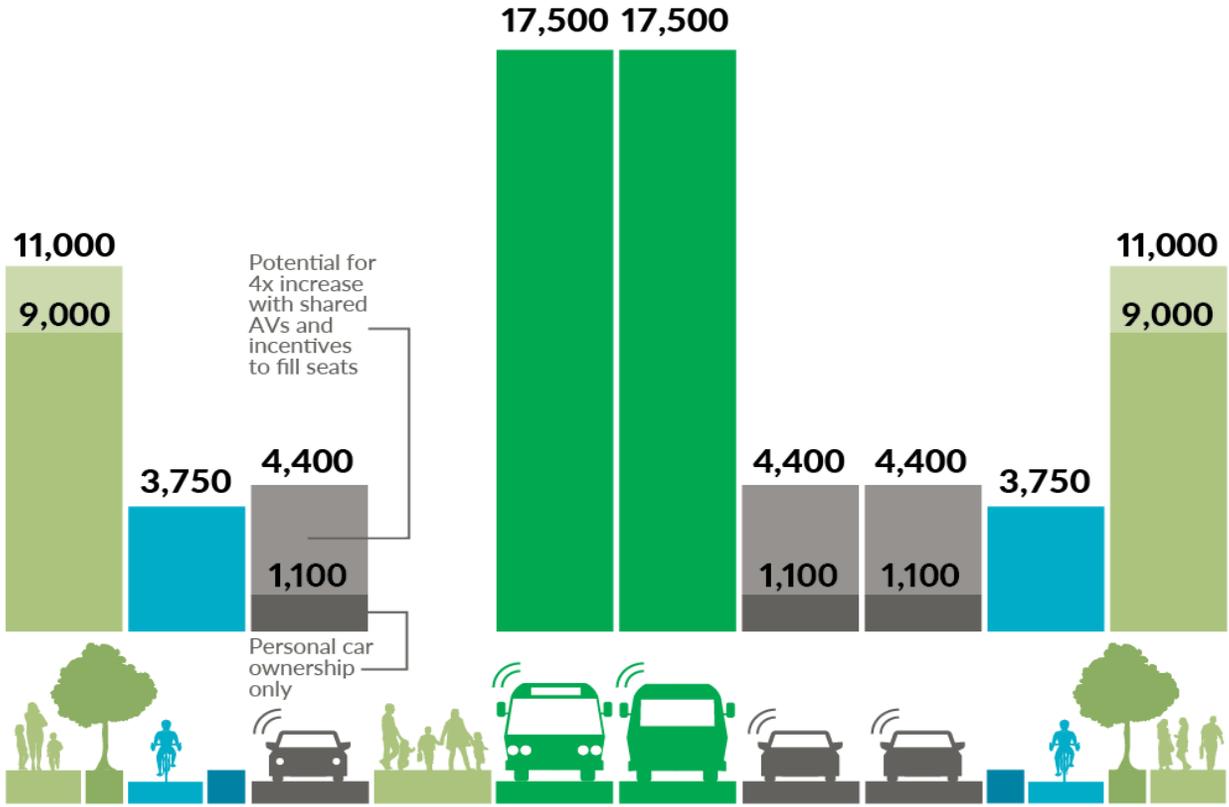
Source: NACTO Transit Street Design Guide



A new way to look at our transportation system

If we manage the asphalt and concrete, we can move more people


How many people can this street serve per hour?
 Up to **77,000**
Source: NACTO Transit Street Design Guide



I-5 and I-405 peak hour performance comparison

I-5 (Northbound at NE 130th St)

Daily Volume: 105,000

■ Stop and Go ■ Heavy ■ Moderate ■ Freeflow



I-405 (Northbound at NE 85th St)

Daily Volume: 107,000

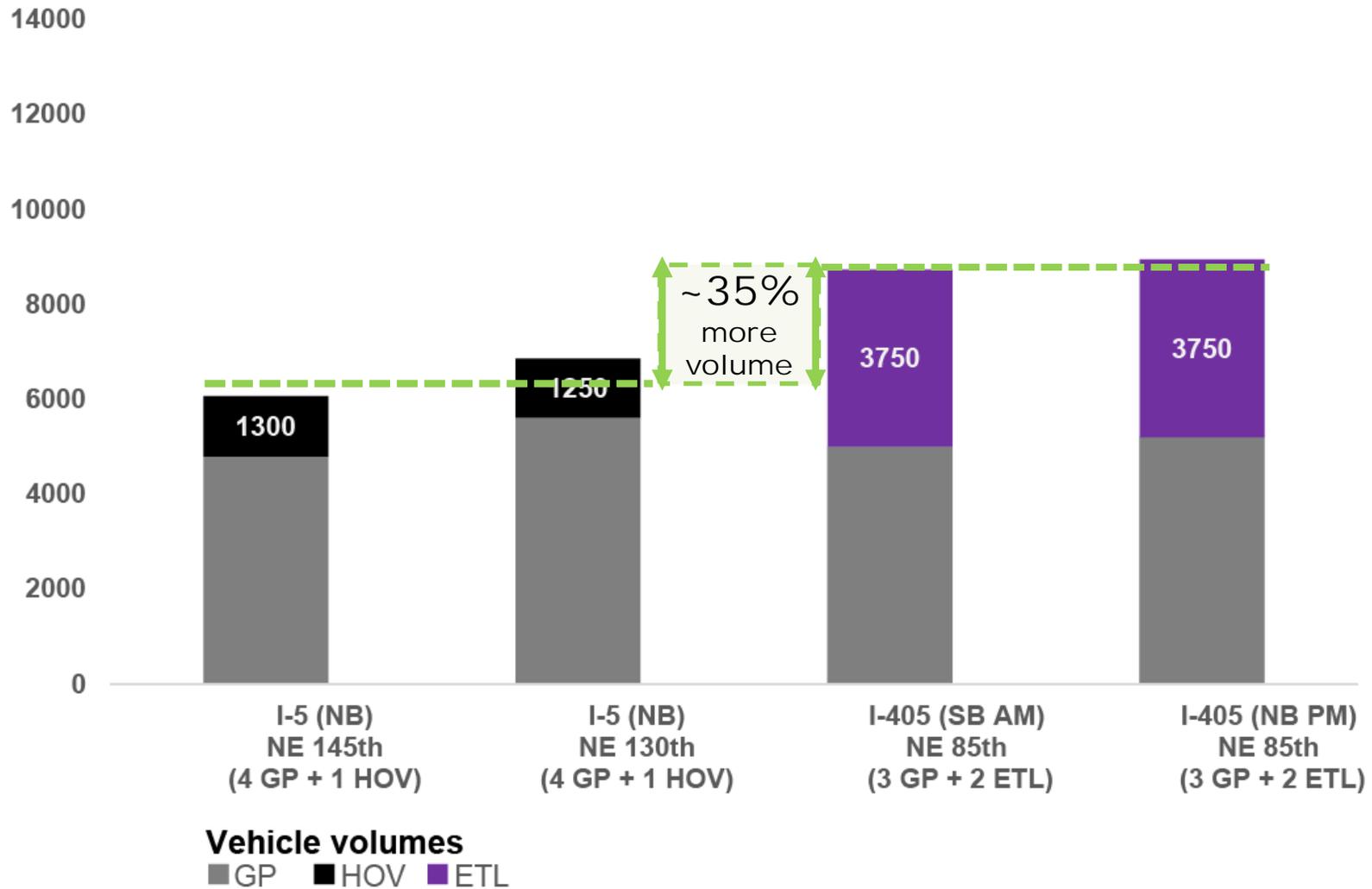
■ Stop and Go ■ Heavy ■ Moderate ■ Freeflow



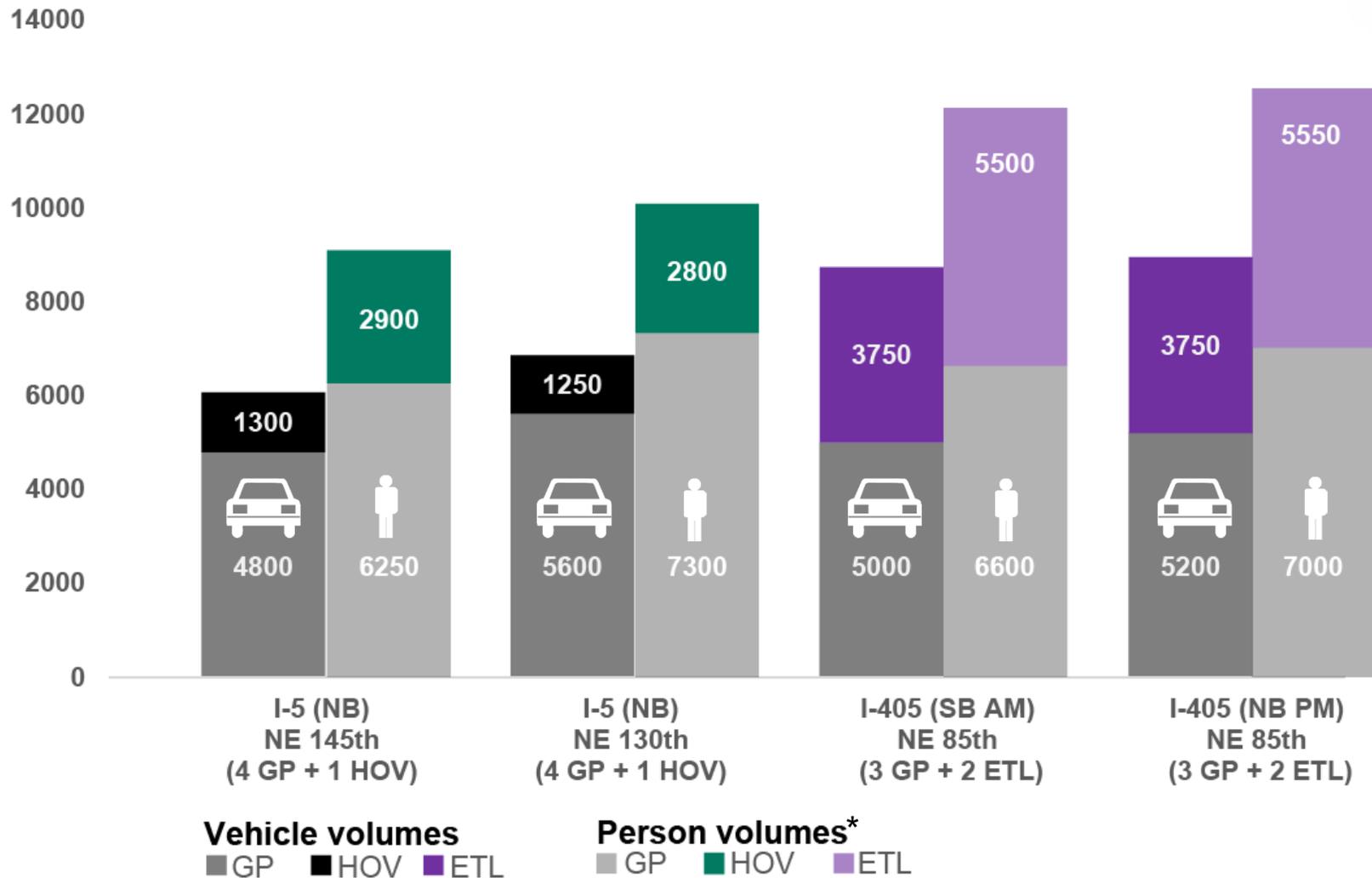
Tuesday, July 12, 2017 4:50 p.m.

Tuesday, July 25, 2017 4:30 p.m.

I-405 section with dual express toll lanes moves more vehicles than five-lane I-5 sections with similar daily traffic volumes



Comparison of volumes moved in five-lane sections of I-405 and I-5 with similar daily traffic



*I-5 person estimates based on TRAC occupancy data (2012). I-405 person estimates based on occupancy sampling (2017). Transit ridership not included in person estimates.

Assess
Alternative
Strategies

Demand Management

- **It's all about giving people choices**
 - Off system improvements
 - CTR
 - Transit investments
 - Active Transportation investments
 - Land use – affordable housing where people work



Focused System Expansion

- Adding capacity – last resort in some corridors
- Right solution in others:
 - Puget Sound Gateway – SR 509 and SR 167
 - Relieve traffic congestion
 - Improve freight mobility – ports, distribution centers, warehouses, industrial areas
 - Improves airport access for passengers and freight
 - Supports regional job and economic growth
 - North Spokane Corridor
 - Improves mobility from I-90 to US 395 at Wandermere for vehicles and freight
 - Supports vanpooling with park and ride lots; transit
 - Provides a pedestrian/bicycle trail along its full 10.5 mile length



Proposed framework for future investment decisions (continued)

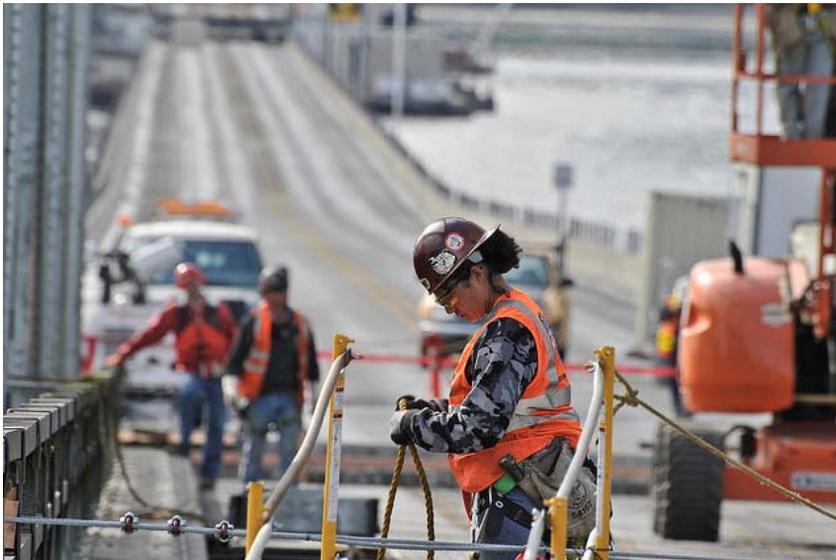


- **Assign Resources**
 - Examine how solutions rank across the state based on benefit/cost
 - Look across programs for best fit for resourcing
 - Develop prioritized list of investments
- **Develop funded solutions**
 - Assess design/development options for the proposed solution
 - Design/develop for the lowest cost that addresses the solution
- **Implement solutions**
 - Manage implementation/construction to address the performance gap

Cost to Washington's economy

- **Congestion***: \$3.2 billion in delay costs for the Central Puget Sound region alone
 - WSDOT's average biennial mobility program expenditure is \$1.8 billion
- **State of Good Repair****: \$3.78 billion annually for vehicle repairs and operations
 - WSDOT's average biennial expenditure is \$800 million
- **Safety*****: \$8.2 billion combined cost of fatalities and serious injuries
 - WSDOT's average biennial safety program expenditure is \$100 million

- *Congestion cost source: Texas Transportation Institute's 2015 Urban Mobility Scorecard; based on value of travel delay and excess fuel consumption for the area from Everett to Tacoma.
- ** State of Good Repair source: ASCE 2017 Infrastructure Report Card; estimated at \$656 for every Washington driver
- ***Safety source: 2013 National Highway Traffic Safety Administration



Creating a diverse workforce and inclusive culture

- **Workforce development**

- WSDOT's retirement eligible – expect to lose 44 percent of engineering staff due to retirement or attrition by 2022
- 75 – 80 percent of maintenance leadership eligible in same period, along with 42 percent of maintenance staff
- 45 percent of ferry employees eligible to retire
- WSDOT aspires to recruit and retain highly competent and motivated employees
- Recruitment efforts:
 - Building a modern work environment: teleworking, flexible schedules, compressed workweek schedules, piloting “infants at work” program
 - Developing talent: re-examining our leadership training, tuition reimbursement, enhancing Knowledge Transfer process
 - Developing Talent Pipelines: targeted outreach in diverse communities; re-entry efforts

Creating a diverse workforce and inclusive culture

- **Inclusion**

- Equal opportunities
- Disparity Study – 2017 DBE disparity study, 2018 FAA disparity study
- New 19% overall DBE goal since January 2018 (FFY 2018 – 2020)
- Mentor-Protégé program
- Enhanced apprenticeship and pre-apprenticeship support

- **Every voice is heard**

- Strive to be sensitive to the cultures of our diverse communities
- Reaching out to those traditionally underrepresented and underserved





Community engagement

- In 2017, WSDOT conducted or participated in nearly 1,000 public forums including
 - More than 400 WSDOT-hosted informational briefings and presentations
 - Nearly 300 local-agency sponsored public meetings
 - 65 project-specific open houses
 - 15 milestone events
- In addition, WSDOT held dozens of workshops, advisory group and stakeholder meetings, conducted public surveys, as well as engaged with the public at fairs, festivals and other events

Community engagement

We listen, we respond

- **Social Media Outreach**

- 883,000 mobile app downloads
- 465,000 Twitter followers for Seattle area traffic
- 275,000 Twitter followers for WSDOT announcements
- 82,000 Facebook likes
- 77 million Flickr views
- 3.1 million text messages per month

- **Proof of performance**

- Example: 2016 week-long SR 99 closure for tunneling under Alaskan Way Viaduct – with only two weeks notice:
 - Nearly 1 million social media impressions leading up to and through the closure
 - Helped drivers plan, influenced media coverage
 - Traffic was still heavy, but social media presence had noticeable effect on start and end times of peak commutes
 - Drivers altered the hours of their commute – both morning and evening commute began up to an hour earlier



Conclusion

- We're moving from an agency that "just" delivers projects, to one that is the steward of a complex transportation system
 - We look forward to continuing to work with our partners on this stewardship of the system
- We know you are aware of problems and concerns
 - Please reach out to us so that we can work together, be part of the discussion, find a solution
 - Discover what the real problem is, ways to address it
 - Evaluate how the possible solution(s) fits with the state's overall priorities
- Together we can fix this!

Questions?

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