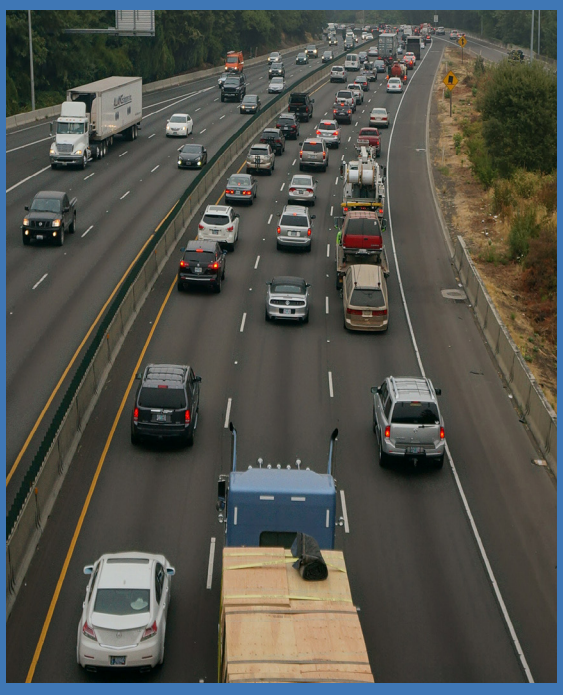
Oregon Application to FHWA: Value Pricing Feasibility Analysis and Proposed Implementation

Traffic Congestion Relief Program



Final Draft
December 2018

Oregon Department of Transportation

The Oregon Application to FHWA: Value Pricing Feasibility Analysis and Proposed Implementation can be found at the Oregon Transportation Commission website:

https://www.oregon.gov/ODOT/Get-Involved/Pages/OTC_Main.aspx

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December 10, 2018

Phil Ditzler
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Dear Mr. Ditzler,

On behalf of the Oregon Transportation Commission (OTC) and Oregon Department of Transportation, we are pleased to submit our application for Federal Highway Administration (FHWA) approval to move forward toward implementation of freeway tolling on segments of Interstate 5 and Interstate 205 in the Portland metro area. The I-5/I-205 corridor provides a vital north/south interstate route serving the economies of the state of Oregon and the entire western US from Canada to Mexico.

This endeavor was initiated as part of the transportation package passed during the 2017 legislative session. House Bill (HB) 2017 funds $5.3 billion for congestion-reducing projects, highway and bridge improvements, transit and active transportation investments, and more throughout the state. This bill is the largest transportation funding package in Oregon history and its passage underscores the scale and importance of transportation issues facing the state.

Even with these increased commitments, we know we must do more to make the most of our existing highways and to prepare for a transportation system that will meet the needs of a growing population and economy. A 2016 Transportation Vision Panel convened by the Governor's Office reported that congestion on Portland metro highways is impacting economic competitiveness for the entire state. The statewide panel established a need to eliminate bottlenecks and improve overall throughput on the highest-priority corridors of statewide significance. The panel also acknowledged the urgent need to secure resources to shore up seismic resiliency in coordination with other West Coast states and the federal government.

Informed in part by these conclusions, HB 2017 Section 120 directed the OTC to establish a Traffic Congestion Relief Program and to pursue value pricing as a means of managing congestion on the freeways and providing funding for critical transportation investments. HB 2017 also established a Congestion Relief Fund as the repository for all net tolling revenues to ensure that highway toll revenues will be used to provide congestion relief. Initial investments include two planned projects on I-5 and I-205: the seismic reconstruction and widening of a segment of I-205 between Oregon Highway 99E and Stafford Road, including the George Abernethy Bridge, and completion of the Rose Quarter project on I-5, which includes new freeway auxiliary lanes and relocation of a southbound on-ramp, as well as improvements to the surface transportation network.

This application presents the process and results of a Value Pricing Feasibility Analysis that was completed in June of this year. Through that feasibility analysis process, a Policy Advisory Committee (PAC) of regional stakeholders from Oregon and Washington considered several potential pricing projects on I-5 and I-205, informed by strong technical analysis and public engagement. We thank you for participating in this process as an ex officio member of the PAC. The proposed projects presented in this application reflect the PAC recommendation to move forward tolling projects on both I-5 and I-205.

To ensure that these new projects will successfully improve mobility for the region, the PAC also advanced three priorities for future mitigation strategies: improved public transportation and other transportation options for equity and mobility; special provisions for environmental justice populations, including low income communities; and strategies to minimize and mitigate negative impacts of diversion.

The OTC accepts and concurs with the recommendation of the PAC and seeks to advance pricing projects on both I-5 and I-205 in order to provide a north/south freeway system that can be managed with tolling. These projects should be advanced in conjunction with development of strategies to address the identified mitigation priorities.

We are seeking a response from FHWA that clarifies and confirms our approach and direction as we advance our work. In particular, Section 1 of this report seeks response regarding: 1) eligibility and other requirements under federal tolling programs; 2) required project refinement and analysis to obtain a classification determination under the National Environmental Policy Act (NEPA); and, 3) the anticipated timeline and opportunities to streamline review under NEPA.

The OTC is the designated tolling authority for the State of Oregon. With that authority comes the responsibility to take actions that preserve our investments and improve mobility for a broad cross section of our community. For that reason, we want to emphasize that our work will continue to be guided by principles of equity and fairness, transparency, partnership, improved mobility, and stewardship.

The pressures we face will only grow with time. For this reason, it is our hope to identify any avenue for efficiency and expedience during project development. We know that Oregon's success depends on a continued partnership with FHWA.

We look forward to hearing from and working with FHWA as we continue this effort.

Sincerely,

Tammy Baney, Chair
Oregon Transportation Commission

Matthew Garrett, Director
Oregon Department of Transportation

Contents

List of figures

Oregon Proposed Freeway Tolling Projects / Request to FHWA

In its 2017 session, the Oregon Legislature passed a historic transportation funding package, House Bill (HB) 2017. HB 2017 committed $5.3 billion in investments on congestion relief projects, preservation and maintenance for roads and bridges, biking and walking options, better public transportation, freight movement, and electric vehicle incentives. In addition, Section 120 of HB 2017 established a Traffic Congestion Relief Program, directing the Oregon Transportation Commission (OTC) to pursue federal approval to implement value pricing on freeways in the Portland region, starting with Interstate 5 and Interstate 205.

This report presents the OTC's application to implement freeway tolling projects, as directed in HB 2017, and seeks a response from the Federal Highway Administration (FHWA) providing confirmation and clarification of the following critical next steps:

- Eligibility and requirements under federal tolling programs
- Completeness of the proposed scope for additional analysis and project development
- FHWA ability to streamline required review under the National Environmental Policy Act (NEPA)

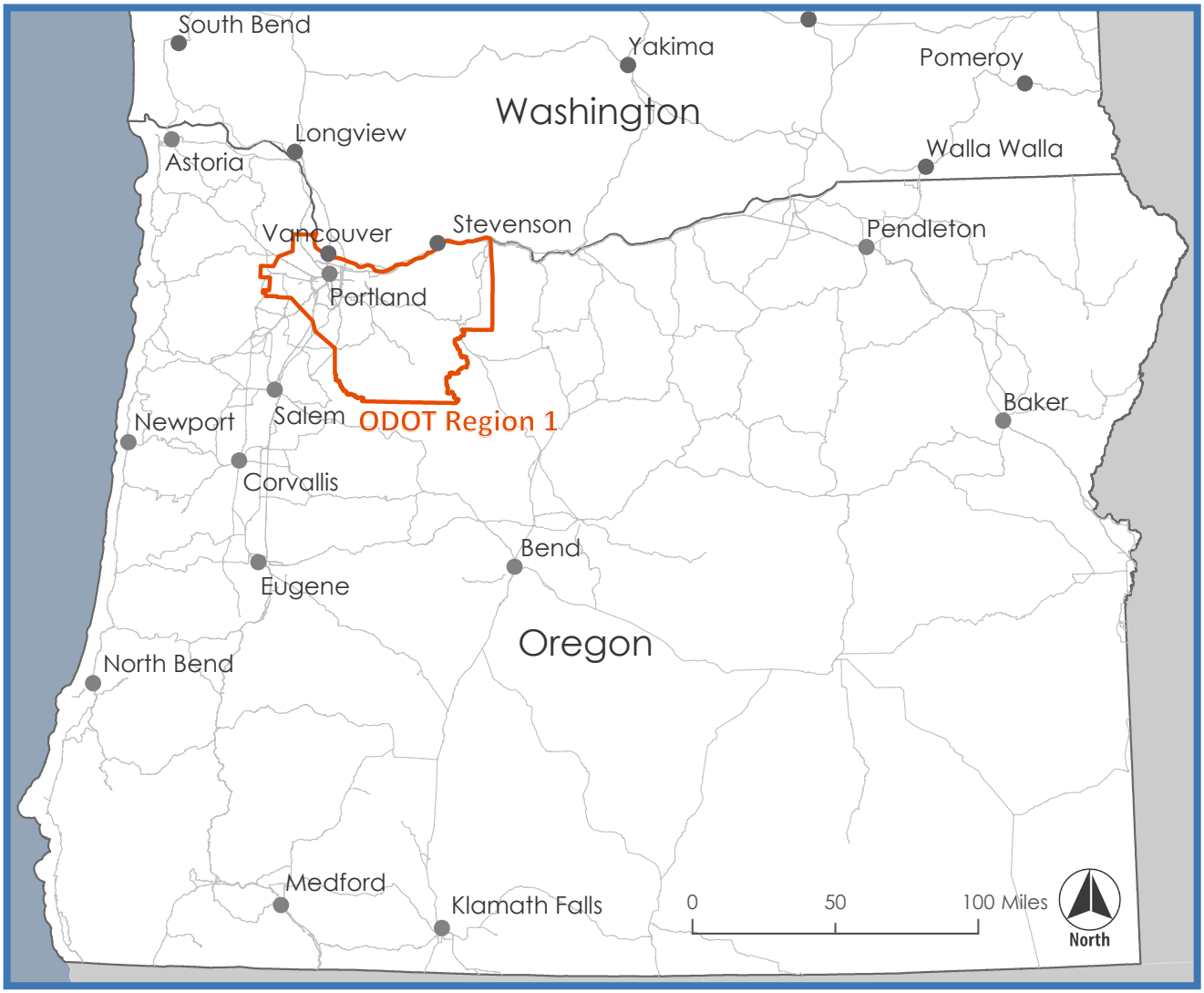
The projects identified in this report were selected through a feasibility analysis conducted by the OTC and Oregon Department of Transportation (ODOT) and reflect the majority recommendation of a Policy Advisory Committee (PAC) convened for the feasibility analysis. Both projects together (tolling on I-5 and I-205) constitute Oregon's proposed implementation of freeway tolling under the Traffic Congestion Relief Program.

Objectives

The overall purpose of this tolling implementation on I-5 and I-205 is to improve mobility for the region, with an emphasis on those trips that depend on the freeways for regional and longer travel. To achieve this purpose, the project has the following objectives:

- **Create a revenue source to help fund bottleneck relief projects in the corridor.** Priority projects considered for funding include:
  - The planned widening and reconstruction of I-205 between Oregon Highway (OR) 99E and Stafford Road. This project will add an additional lane in each direction and includes reconstruction of nine bridges, including the George Abernethy Bridge for seismic resiliency. This project currently has funding only for design.
  - The planned operational and safety improvements on I-5 near the Rose Quarter, including adding ramp-to-ramp auxiliary lanes and highway shoulders, between I-84 and I-405. This project received funding in HB 2017 to cover most, but not all, of the project design and construction costs.
- **Use variable toll rates to manage traffic congestion in the I-5/I-205 corridor.**

Figure 1. Project vicinity map



Project development priorities

In keeping with the objectives of the congestion relief program, it is imperative to develop strategies to improve mobility for the broadest possible cross-section of the community and to avoid, minimize, or mitigate negative impacts either through design or off-setting programs and investments. Throughout the feasibility analysis, discussions with the PAC, with regional stakeholders, and in public outreach revealed consistent themes about the need for improved transit and other transportation choices, concerns about impacts to low income communities, and the potential for freeway pricing to cause traffic to divert to local streets. The OTC and ODOT have determined that the freeway tolling projects must be advanced in conjunction with development of these priorities.

Improved public transportation and other transportation options are essential strategies for equity and mobility. The importance of providing additional public transportation options was clearly expressed by PAC members and is consistent with the priorities expressed in public input. Public transportation and other viable options are needed to improve mobility for communities that will be affected by pricing. Several members of the PAC and other public stakeholders emphasized that improved public transportation is a foundational element of any pricing program moving forward.

Most pricing projects throughout the country have included increased public transportation, carpool/vanpool, and active transportation alternatives. The next phase of project development will include more analysis of potential transit improvements targeted for the areas affected by proposed tolls. The analysis will consider opportunities to reallocate existing transit service and resources, evaluation of planned transit projects for potential synergies of service and timing, consideration of eligible expenditures of toll revenues to improve transit mobility and/or access, and evaluation of needs requiring new resources.

Special provisions may be needed for Environmental Justice populations, including low income communities. The impact to Environmental Justice communities, with an emphasis on low-income populations, has been one of the most common concerns heard from the public and PAC members. By the nature of any user fee system, lower-income populations may be disproportionately affected by tolls unless special provisions are made to ensure an opportunity to share in benefits of improved mobility. Several members of the PAC and the public emphasized that provision of transit and other travel options is among the most important mitigations to ensure that cost-effective improved mobility is an overall outcome.

Additional strategies have been used in other tolled freeway systems and will be considered during project development. Some examples include:

- Establish cash-based account options (while still using electronic and/or license plate toll systems) with an emphasis on ease of access and understanding.
- Implement toll discounts, credits, subsidies, or rebates, including preferential toll rates for various income classes, similar to TriMet's low-income program.
- Initiate programs to integrate benefits between modes, such as transit passes that accumulate toll credits.

As project development moves forward, the assurance that these concerns are adequately addressed requires inclusive engagement with a strong focus on non-traditional public participants. This engagement will inform project development, including mitigation strategies, and will help develop measures for success that reflect the values and priorities of the community.

Strategies to minimize and mitigate negative impacts of diversion.
Diversion occurs when motor vehicle traffic shifts from one roadway to another, to another mode of travel such as public transportation, or to other times of day. Diversion currently exists as drivers use non-freeway roadways for non-local trips in order to avoid congestion on freeways. Diversion to surface street routes was frequently mentioned by the PAC and members of the public as an area of concern, especially with potential increased traffic into residential neighborhoods or downtown main streets of smaller communities.

The next phase of analysis will look more closely at diversion and safety on affected and/or parallel routes and modes. Diversion can take many forms, some of which are desired outcomes of congestion pricing:

- Diversion from the local system to the freeways is drawing vehicles back to the freeway that currently are diverting onto the local and arterial road network in search of travel-time savings.
- Diversion of mode or travel time reflects trips shifting to different modes or times of day.
- Diversion balancing between I-5 and I-205; currently, ODOT manages this balance via variable message signs and other tools. Tolling may be another strategy to balance diversion.
- Diversion to the surface street system is through traffic diverting onto the local and arterial road network.

During the next phase of analysis, we will evaluate diversion potential and mitigating strategies through design options to minimize the potential for unwanted diversion. For example, both I-5 and I-205 projects show the need to identify the terminus points in order to avoid creating a condition that encourages easy diversion to bypass tolls.

Proposed tolling projects

Oregon's proposed congestion pricing projects are shown in Figure 2. This initial implementation of the Traffic Congestion Relief Program identifies pricing on both I-5 and I-205 to effectively manage north/south travel through the metropolitan area. This approach is consistent with the majority recommendation of the PAC and is intended to provide a balancing effect for the north/south corridor by providing increased lane capacity on the I-205 segment and implementing variable rate tolls on both freeways.

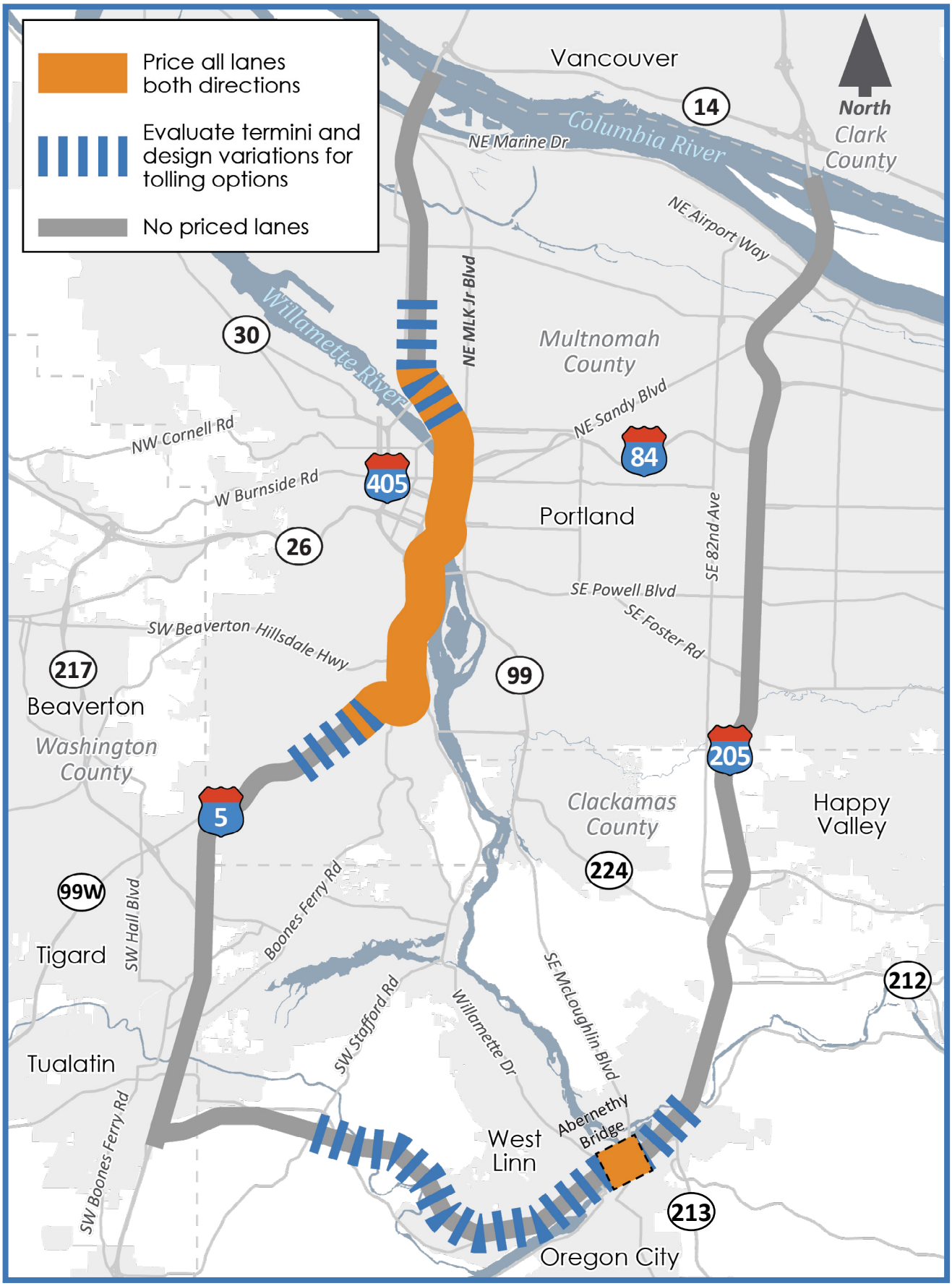
Interstate 205
This project would toll all lanes of I-205 on or near the Abernethy Bridge. This project is being evaluated for congestion management using variable toll rates and also as a funding strategy to pay for the planned widening and seismic reconstruction on I-205 between OR 213 and Stafford Road. This section is the only two-lane segment on I-205. Tolling would be implemented to add a third lane in each direction and reconstruct nine bridges (including the Abernethy), bringing them to a state of seismic readiness.

Exact termini of the pricing application will be developed as part of this future analysis. During the feasibility analysis, potential design variations were identified in consultation with Clackamas County staff for the purpose of reducing potential diversion onto surrounding surface streets and the Arch Bridge into Oregon City. These, and other variations, will be explored during this next phase of project development.

Another priority issue to be addressed during project development will be the relatively limited travel options due to a limited surface street network and few transit options. For example, the City of West Linn has one transit route (TriMet Line 154 bus) that provides service to the Oregon City Transit Center with

PROPOSED TOLLING PROJECTS AND REQUEST

Figure 2. Proposed congestion pricing projects



hourly service between approximately 6 a.m. and 7 p.m. on weekdays only. The Oregon City Transit Center is also served by the Line 34 bus, which provides service at approximately 37-minute intervals between 5:55 a.m. and 7:15 p.m. Currently, no direct regional transit service is provided to either city, nor is there transit service on the freeway.

One issue to consider in this next phase of analysis is whether improved reliability on the freeways will make bus service on the freeways a viable alternative.

Interstate 5

This project would convert all lanes of I-5 to a priced roadway generally between N. Going Street/Alberta Street and SW Multnomah Boulevard. Much of the I-5 corridor currently has three lanes, but north of the Marquam Bridge the project area has only two continuous through lanes. The evaluation conducted during the feasibility analysis indicated this concept would reduce congestion and provide travel-time savings for users within one of the most severely congested corridors in the Portland metro area.

Exact termini of the pricing project will be defined as part of the analysis and project development. This will include an evaluation of design alternatives and potential diversion. The northern segment of this project is within a highly developed grid network with several north/south routes that might attract drivers wanting to avoid tolls. Future traffic analysis will evaluate the potential diversion onto the surrounding street system, especially onto neighborhood streets designed for low speed, low volume conditions. This area is well served by transit, with light rail and several bus lines, including C-TRAN bus service between Vancouver, Washington and Portland. That said, there are capacity constraints on existing transit during peak periods and this system capacity will be evaluated to accommodate any shift in travel modes.

The southern portion of the project does not have a fully developed grid-street network, but it runs parallel to Barbur Boulevard (OR 99W), which will also be evaluated for diversion impacts from tolling. Several TriMet bus lines serve this corridor on Barbur Boulevard, and the Barbur Transit Center is located in the vicinity of the proposed southern terminus at Multnomah Boulevard. However, the capacity of transit center parking and the frequency of bus service have long been seen as limitations to transit quality in this area.

The planned Southwest Corridor light rail line from Portland to Tualatin could provide a substantial improvement for overall transit service in this corridor. The line is proposed for construction in 2027 with funding anticipated from federal and local sources. The availability of transit and other transportation options will be priority issues to evaluate and address in development of the freeway tolling project.

Request for FHWA response

Completion of the feasibility analysis, with FHWA participation, was a substantial milestone in the effort to implement the Legislature's directive in Section 120 of HB 2017. Oregon's successful implementation of freeway tolling depends on effective coordination and collaboration with FHWA.

Oregon seeks a response to this application and continued engagement from FHWA to ensure that analysis and development of the I-5 and I-205 tolling projects are conducted in a manner consistent with federal program requirements and that the outlined analysis and project development will support successful and expedient review under NEPA. In particular, Oregon requests a response from FHWA that confirms or clarifies federal requirements and guidelines regarding:

- The appropriate federal tolling program
- The required analysis and project

development in preparation for federal review under NEPA
» The anticipated timeline for federal review under NEPA

FHWA response requested: federal tolling programs

Two federal tolling programs are being considered for advancing the initial tolling on I-5 and I-205: Section 129 Mainline Tolling and the Value Pricing Pilot Program (VPPP).

Oregon requests that FHWA respond to ODOT and the OTC by confirming eligibility or providing clarifying policy direction on the tolling program requirements described in this section.

Value pricing tolling program

In January 2018, ODOT received FHWA notification that Oregon had successfully renewed its spot in the VPPP. It is understood that final toll authorization under this program would come from the Secretary of Transportation. Because Oregon secured its place in the VPPP program, the proposed tolling projects are understood to be strong candidates for approval. Key questions to be answered include:

» What are the criteria that the Secretary and the FHWA/Department of Transportation would consider in making a final determination for approval?
» Is there a specific section of code or policy that clarifies the approval criteria?
» What operating parameters are required under VPPP, including performance monitoring, reporting, and restrictions on uses of revenue?

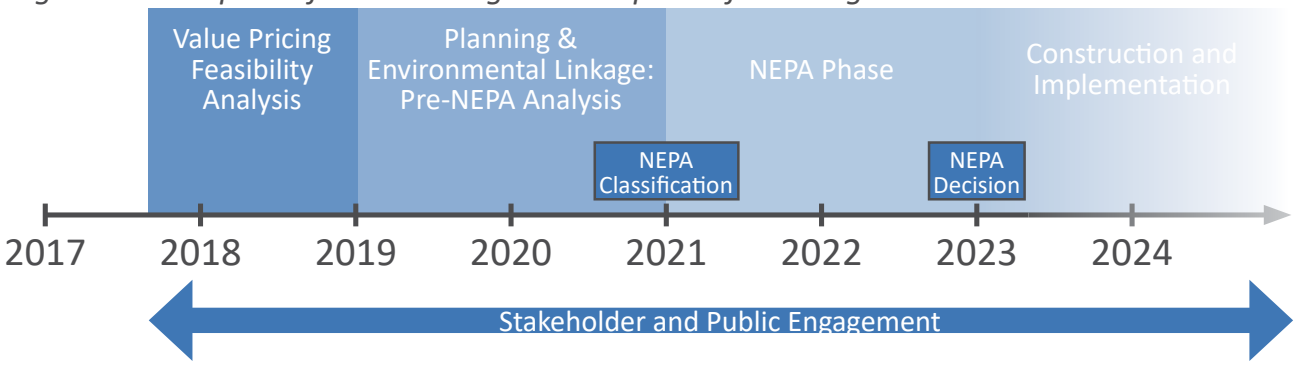
Section 129 mainline tolling

Alternatively, the Section 129 Mainline Tolling program could provide a more expedient path for Oregon if the project(s) can be deemed eligible. Under this program, public agencies may impose new tolls on federal-aid highways in several cases, including reconstruction or replacement of a bridge.

Both the I-5 and I-205 projects are planned to be located in areas that encompass or overlap two planned capital projects currently in the design phase:

» Interstate 5: The I-5 Rose Quarter Improvement Project provides safety and operational improvements along I-5 through central Portland. The project adds new ramp-to-ramp lanes on I-5 connecting the I-84 and I-405 interchanges, as well as highway shoulders, a relocation of an on-ramp, and improvements to local streets above the freeway. It also requires the replacement and seismic improvement of several structures that pass over the freeway, which will be rebuilt as highway covers. The project is in the environmental study phase, with NEPA documentation expected to be complete in spring 2019.

Figure 3. Anticipated federal tolling decision points for tolling on I-5 and I-205



- Interstate 205: ODOT is in the design phase of a project that addresses congestion, earthquake, and safety issues on a seven-mile stretch of I-205 between Stafford Road and OR 213 in Clackamas County. The project adds a third lane in each direction of the corridor, realigns a key interchange, and reconstructs or replaces nine bridges, including the Abernethy Bridge. The bridge reconstruction/replacements will widen the bridges from two to three lanes in each direction and will improve seismic resiliency to withstand a major earthquake.

Oregon is seeking clarity from FHWA on the potential eligibility of both the I-5 and I-205 tolling projects under Section 129. In particular, the I-205 project could be tolled directly on one or more of the reconstructed bridges. However, the local agencies have requested an examination of tolling treatments beyond the extent of the bridge to reduce potential diversion. The project technical team considered this a credible design variation. In this circumstance, where the toll is being applied beyond the reconstruction project in order to avoid diversion, could Section 129 be interpreted to a positive eligibility finding?

In addition to eligibility, Oregon requests that FHWA provide clarification of other program parameters, such as performance monitoring, reporting/auditing, and restrictions on the uses of revenues. It will be especially important that we are able to compare the relative merits of each tolling program at the earliest possible date so that we can begin our next phase of work with full knowledge of the program requirements.

FHWA response requested: planning & environmental linkages

Under either the VPPP or the Section 129 tolling programs, the final project will require successful review through the NEPA process, including stakeholder and community engagement. Oregon seeks to complete this process in a way that is sufficient to meet all NEPA requirements and enable a streamlined review.

Oregon developed the general scope of work for the next phase of analysis in consultation with FHWA staff for the purpose of ensuring an efficient path forward, including potential credit for past efforts completed during the feasibility analysis and an ability to accurately anticipate future steps that will be required.

Oregon requests that FHWA respond to ODOT and the OTC by confirming the adequacy of the general scope described below, or by providing clarifying policy direction to ensure an adequate analysis is conducted.

Planning & environmental linkage - next steps

The next stage of analysis and development will include Planning and Environmental Linkage (PEL) activities, which are intended to provide sufficient analysis and findings for an agreement on a NEPA classification (Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement) for environmental review. ODOT staff has consulted with FHWA staff to develop a general scope for further analysis in advance of NEPA review. The identified scope includes critical activities that Oregon will be required to complete as part of the PEL analysis. These general tasks/include:

- Project purpose and need
- Traffic analysis, including transit analysis
- Equity analysis
- Revenue and cost analysis
- Alternatives selection and logical termini
- Stakeholder and public engagement
- Tribal coordination
- Agency coordination
- Methodologies for NEPA review
- Definition of study area and environmental

baseline report
- » Consultant procurement
- » Tolling policy

An agreement on NEPA classification (Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement) for environmental study will depend on the findings from this PEL analysis. Following completion of the tasks listed above, Oregon will have:

1. Completed traffic, transit, and equity analyses that demonstrate detailed tolling impacts and improvements to I-5, I-205, and adjacent facilities; needed transit improvements and modal shifts; and impacts to low-income and other environmental justice groups
2. Identified a preferred alternative through a public refinement process based on an accepted purpose and need
3. Completed an environmental baseline report that defines the study area and affected environment
4. Completed, through a review process, methodologies that will be used to evaluate tolling impacts during the NEPA process
5. Carried out a thorough and inclusive public engagement process as well as comprehensive agency and tribal coordination programs

FHWA response requested: National Environmental Policy Act compliance

This scope was developed with the intention of providing sufficient analysis to FHWA to conduct the NEPA compliance review in a streamlined timeline. It is understood that federal agencies, under Executive Order 13807: Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects, will make timely decisions with the goal of completing all federal environmental reviews and authorization decisions for major infrastructure projects within two years. In addition, the OTC appreciates the "One Federal Decision" initiative under the Executive Order, which outlines a process whereby one federal agency (FHWA) will navigate the project through federal environmental review and authorization, including the identification of points of contact for the tolling project.

Oregon requests that FHWA respond to ODOT and the OTC by confirming or providing clarifying policy direction regarding the anticipated timeline for NEPA review described in this section.

The remainder of this report provides a summary of background information that informed the development of this application.

- » Section 2 provides a summary of growing pressures on the Oregon transportation system and I-5 and I-205 in the Portland region;
- » Section 3 summarizes current Oregon policies related to freeway tolling, constitutional restrictions on the uses of revenue, and relevant regional policies;
- » Section 4 describes the process and outcomes of the Value Pricing Feasibility Analysis completed in 2018; and,
- » Section 5 provides a list of reports and other materials developed or referenced for this project.

Reason Statement

Portland metro area freeways are under significant pressure. A growing economy added 36,000 jobs from 2014 to 2015, with 31,000 people moving to the region during that period. Half a million more people are expected in the region by 2040. This growth, coupled with greater challenges in raising revenue to pay for critical transportation improvements and maintenance on aging infrastructure, has led to more congestion on the region's freeways. More residents are traveling for work and daily activities, and more businesses need to move goods and services on the highway system.

With our transportation system already operating at or near capacity, total vehicle hours of delay and hours of congestion on the freeways has grown dramatically and continues to grow at a rate that outpaces the growth in population and employment. These pressures will only get worse with continued forecasted growth for the state and the region unless new tools are implemented.

Critical interstate freeways

I-5 is the major artery running north and south through the center of the region. It carries the highest number of vehicles and has direct connections to all other regional freeways. FHWA classifies I-5 in the study area as an urban interstate on the National Highway System and as part of the national freight network. The *Oregon Highway Plan*, which establishes the function each highway serves in the state-owned transportation network, identifies I-5's function as a high-clearance route that serves large freight vehicles, and a reduction review route that requires a formal process before ODOT may construct projects that reduce overhead clearance or roadway width.

Together, these classifications define I-5 as a facility of national significance that provides connections to major cities, neighboring regions, and interstate destinations from Mexico to Canada. Its primary function is to provide safe, reliable, higher-speed operations for longer distance travel and freight movement, as well as emergency services. Truck volume on I-5 accounts for 10 to 17 percent of total traffic, or a daily volume of 13,600 to 17,800 trucks. That is the highest truck volume on any roadway in the Portland region.

I-5 is the longest corridor in the metro region and provides one of two highway routes between Oregon and Southwest Washington in the Portland region. The freeway is an international link from Canada to Mexico carrying major freight

and through traffic to all of the major cities on the West Coast. Many long-distance trips on I-5 are picking up or dropping off freight from the industrial areas in the region. This long-distance connection is especially critical for the Portland region and statewide businesses that rely on this long-distance travel to fulfill daily business needs. I-5 has two or three through lanes in each direction depending on location in the area.

I-205 is the second-longest freeway corridor in the region. I-205 is part of the national freight network and a high-clearance route that serves large freight vehicles, and a reduction review route that requires a formal process before ODOT may construct projects that reduce overhead clearance or roadway width. I-205 truck volume accounts for 6 to 9 percent of total traffic on the freeway, with a daily volume range of 7,900 to 13,100 trucks. This is the second-highest truck volume in the Portland region, providing an alternative north/south interstate route to I-5 on the east side of the Portland region connecting Oregon to Southwest Washington.

I-205 continues north and connects back to I-5 near Salmon Creek, Washington. I-205 connects the East Portland metro area to the Tualatin/Sherwood industrial area, the Clackamas industrial area, and Portland International Airport, making it a corridor of economic importance in the Portland region and state of Oregon. I-205 from the Willamette River to I-5 has six through lanes (three in each direction), except for the section from Stafford Road to OR 99E, which is four through lanes (two in each direction).

I-5 and I-205 function as one north/south corridor through the region that provides alternative routes for through travelers in particular. When traffic congestion increases on either I-5 or I-205 due to a crash, construction, or other issue, motorists often shift to the other. In fact, ODOT monitors traffic volume on each route and provides travelers with travel-time information on both routes so motorists can better choose the most efficient freeway.

Weekday PM peak-period average travel speeds on I-5 through Portland are below 25 miles per hour (mph) in many segments and even as low as 13 mph in the vicinity of the proposed I-5 pricing implementation site in downtown Portland. Similarly, travel speeds on I-205 near the George Abernethy Bridge bottleneck average 32 mph during typical weekday peak periods. As traffic congestion has increased, travel speeds have decreased and trips have become more unreliable and inefficient in the Portland metro area due to rising population and a growing economy. Diversion off the freeways to the local system is a product of slowing and unreliability on the freeways.

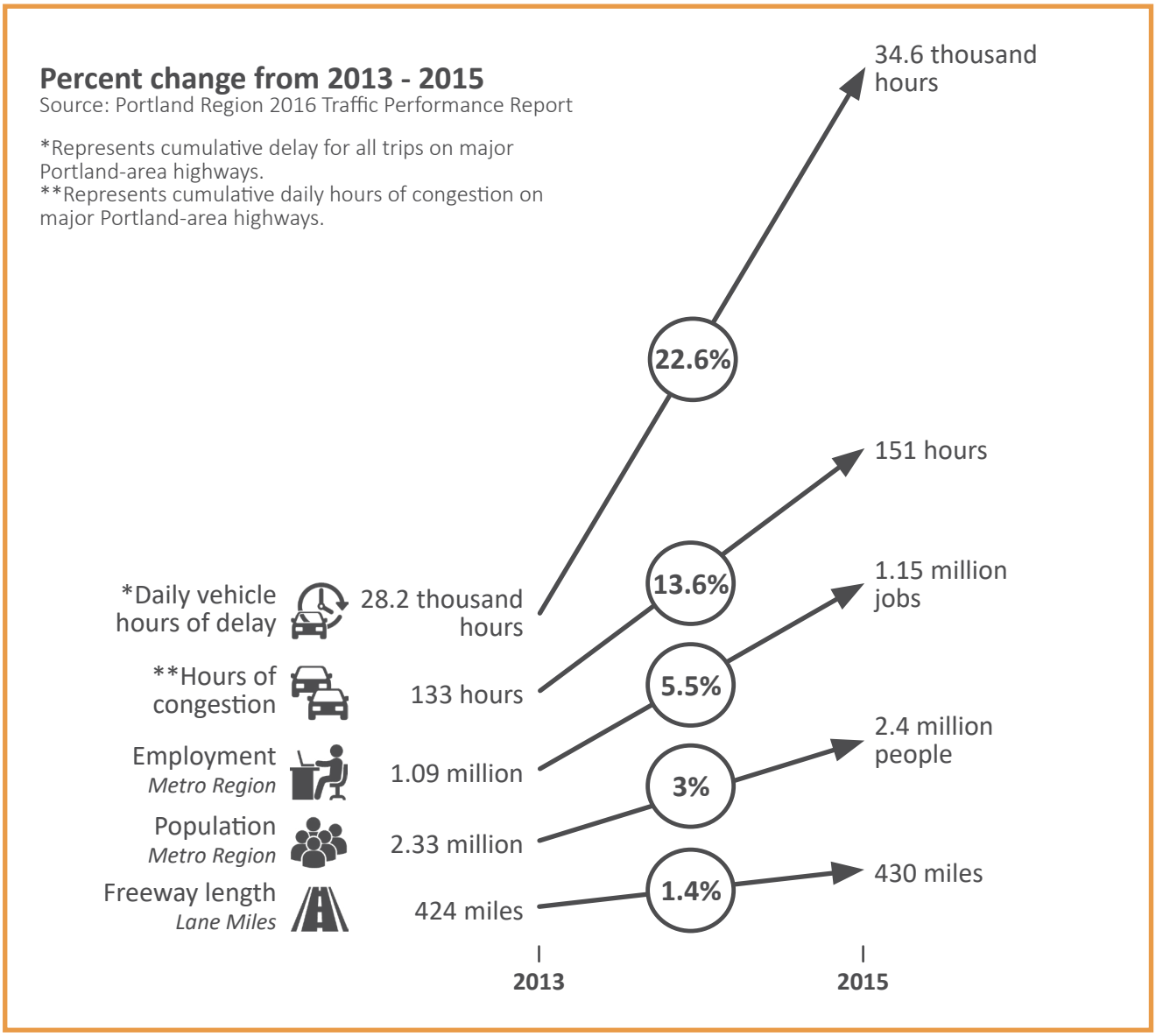
Traffic congestion can now occur at almost any hour of the day, with the hours of congestion on Portland's freeways growing nearly 14 percent from 2013 to 2015. Daily vehicle hours of delay rose 23 percent during the same period. I-5 and I-205 top the list of regional freeways with

the least reliable travel (ODOT 2016 Traffic Performance Report).

This increase in traffic congestion directly affects freight movement. Delays and unreliability are moving into the mid-day hours, which freight movers have traditionally relied on as a good time to move goods and services through the region. But as the mid-day period becomes more unreliable and inefficient, freight movers miss delivery deadlines, drivers reach hours of service limits more frequently, and the cost of shipping rises.

Under free-flow uncongested conditions, the travel time on I-5 through the region (totaling 27 miles) would be 25 minutes. Due to congestion, average travel time experienced by motorists on I-5 in this corridor was 48 minutes in 2015 and delays are growing worse. The buffer time (extra time that travelers should add to their travel time to ensure on-time arrival due to congestion) is 38 minutes. So, due to congestion and reliability challenges, motorists should plan to allocate 86 minutes to complete a trip that should take 25 minutes.

Figure 4. Metro area regional growth



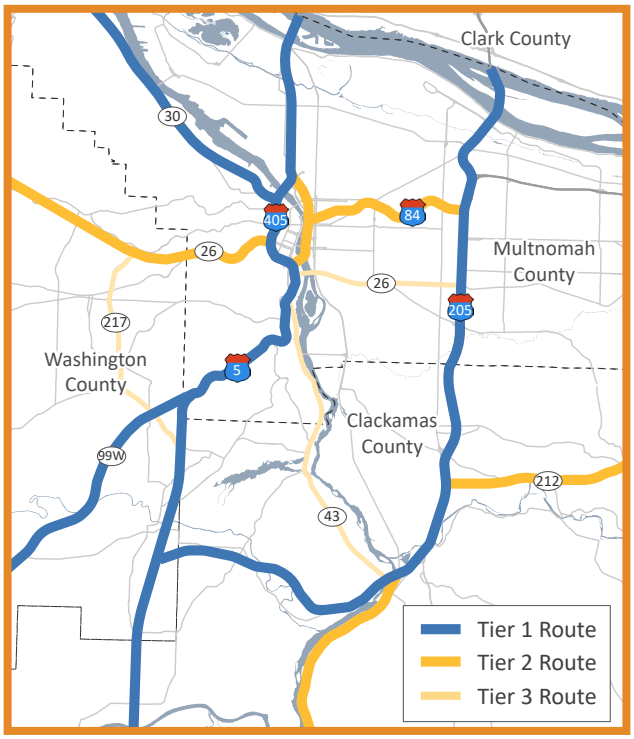
Similarly, on I-205, which is 25 miles long through the region, free-flow travel time is 25 minutes. The average travel time on I-205, however, is 42 minutes, with a buffer of 43 minutes. Drivers with a critical scheduled arrival (such as a need to catch a flight at the Portland airport or punch a time clock) would have to allow for an 86-minute trip to ensure on-time arrival.

Seismic risk

Portland metro area governments, businesses, and residents face the real prospect of experiencing a megathrust earthquake. In fact, there is a 40 percent chance that an earthquake of 9.0+ magnitude will occur in the region's Cascadia Subduction Zone during the next 50 years, according to scientists cited by the Oregon Office of Emergency Management.

I-5 and I-205 are important routes for response to earthquakes and other major events. The *Oregon Highway Plan* identifies I-205 as a highest-priority (Tier 1) seismic lifeline route. I-5, excluding the section between the northern and southern I-405 interchanges, is also a Tier 1 lifeline route through most of the Portland metro area (it is a Tier 2 lifeline route between the I-405 interchanges). "It is the policy of the State of Oregon to provide a secure lifeline network of streets, highways and bridges to facilitate emergency services response and to support rapid economic recovery after a disaster," according to Policy 1E of the *Oregon Highway Plan*.

Figure 5. Seismic lifeline routes



Tier 1 routes are considered the most significant and necessary to provide a functioning statewide transportation system available for emergency response. Tier 2 routes provide additional connectivity and redundancy to the Tier 1 lifeline system.

Planned projects

As noted earlier, ODOT is in the environmental planning and design phase for two significant projects along I-5 and I-205: The I-5 Rose Quarter Improvement Project and the I-205 Widening and Seismic Improvements Stafford Road to OR 213 Project.

The I-5 Rose Quarter Improvement Project provides safety and operational improvements along I-5 through central Portland. The project adds new ramp-to-ramp lanes on I-5 connecting the I-84 and I-405 interchanges, as well as highway shoulders, relocation of an on-ramp, and improvements to local streets above the freeway. It also requires the replacement and seismic improvement of several structures that pass over the freeway, which will be rebuilt as highway covers. The project is in the environmental study phase, with NEPA expected to be complete in spring 2019. The total estimated cost for future design and construction of the highway and local street improvements is $450 to $550 million (in 2017 dollars). The majority of funding is provided through HB 2017, and ODOT will need to pursue additional funding opportunities for the remaining costs.

REASON STATEMENT

ODOT is in the design phase of a project that addresses congestion, earthquake, and safety issues on a 7-mile stretch of I-205 between Stafford Road and OR 213 in Clackamas County. The project adds a third lane in each direction of the corridor, realigns a key interchange, and reconstructs the Abernethy Bridge and replaces or reconstructs eight other I-205 bridges in the project area to withstand a major earthquake. ODOT has enough funding to cover design work, utilities, right-of-way, and construction of active traffic management components. The majority of the construction funding needed for this $500 million project (in 2017 dollars) has not been identified.

Funding challenges

ODOT revenue largely comes from several state sources, including state fuels tax, taxes on heavy trucks, driver and motor vehicle fees, and bond proceeds. About a quarter of overall revenue comes from the federal government.

The Oregon Legislature has taken action over the past decade through legislation such as HB 2017 and the Jobs and Transportation Act to increase revenue to meet numerous financial challenges. These challenges include increasing bond payments to finance transportation improvements; escalating expenditures to maintain aging infrastructure; the growing need for seismic upgrades to the state's bridge inventory; and rising construction costs due to increases in material costs, along with general inflation. Meanwhile the federal government's funding contribution to significant regional transportation improvements has declined in inflation-adjusted terms. Compounding this problem is a substantial increase in travel demand as the state, and the Portland metro area in particular, experiences strong population growth. Amid this financial situation, Oregon must explore every possible method for getting the most out of its existing infrastructure, funding bottleneck relief projects to ease congestion, and planning for increased earthquake resiliency.

Relevant Existing Policies

HB 2017 and its value pricing directive are not Oregon's first legislative experience with tolling, which is under the authority of the OTC. ODOT's approach to modern tolling and value pricing policy began in 1995 with the passage of Senate Bill 626. That legislation resulted in much of Oregon Revised Statutes (ORS) Chapter 383 as it exists today, governing tollway project authority, agreements, funding, and fee collection. Although lawmakers and ODOT did not move forward on any tolling projects at the time, the Traffic Congestion Relief Program provisions of HB 2017 augment this existing statute in ORS Chapter 383.

Oregon Highway Plan Goal 6

Starting in 2006, the OTC adopted policies to support tolling in Oregon as a means to improve the capacity and operational efficiency of the state highway system. Following a series of analyses that investigated many facets of tolling and value pricing, ODOT updated the Oregon Highway Plan in 2009 with Goal 6: Tolling and Congestion Pricing. These amendments set the policy for ODOT and the OTC to follow on future value pricing projects. The analyses and resulting policies identified that tolling, under certain conditions, can accomplish more than just revenue generation. Additional objectives could include congestion relief, greenhouse gas/emission reduction, and economic development. Oregon Highway Plan Goal 6 also established policies that stipulate tolling project requirements, public engagement and education, and tolling technology and system interoperability.

Statewide tolling policy work continued into 2012, with the adoption of many additions to Oregon Administrative Rule (OAR) Chapter 731, Division 40. These rules implement the provisions of ORS Chapter 383 that direct ODOT and OTC to further clarify statute and set the parameters OTC will use when considering toll project proposals. These rules also create a process for reviewing and approving toll rates, reinforce Oregon's commitment to interoperability, establish civil penalties for failure to pay a toll, and set up processes specific to interstate bridge toll projects.

Uses of toll revenue

HB 2017 dedicates net revenue from value pricing to a newly created Congestion Relief Fund. As a tax or excise levied on the operation or use of a motor vehicle, revenue from value pricing would be subject to the same limitations as the State Highway Fund. The State Highway Fund is bound by the restrictions of Article IX, Section 3a of the Oregon Constitution, which specifies that funds "shall be used exclusively for the construction, reconstruction, improvement, repair,

maintenance, operation and use of public highways, roads, streets and roadside rest areas in this state."

The Oregon Supreme Court has interpreted this to mean that these funds "must be limited exclusively to expenditures on highways, roads, streets and roadside rest areas themselves and for other projects or purposes within or adjacent to a highway, road, street or roadside rest area right-of-way that primarily and directly facilitate motorized vehicle travel."

The newly created Congestion Relief Fund is a dedicated account to finance congestion relief efforts on the identified tollways, including value pricing administrative and operating costs, new or expanded facilities, and ongoing maintenance of the tollways.

Regional plans and policies

In 2018, the Metro Council and Joint Policy Advisory Committee adopted the 2018 Regional Transportation Plan (RTP),* which reaffirms past actions by regional policymakers in support of congestion pricing.

This updated 2018 RTP builds on existing peak-period pricing policy and policy direction for future corridor refinement plans and studies (2000 RTP), and includes pricing as a potential strategy for future traffic management (originally adopted in the 2010 RTP). The 2014 RTP made congestion pricing an objective within the plan's Goal 4, "Emphasize Effective and Efficient Management of the Transportation System," and advanced value pricing as one possible strategy to help the region optimize capacity of existing facilities, improve travel conditions for system users, and address complementary goals such as improving air quality and meeting greenhouse gas emission reduction targets.

The 2018 RTP continues to underscore the importance of pricing with goals (Chapter 2) and policies (Chapter 3) that illustrate the potential utility of congestion pricing as part of a comprehensive, integrated approach to congestion management in the Portland region.

Chapter 3, "Transportation System Policies to Achieve Our Vision," includes several specific policies that enumerate two principal objectives of congestion pricing: managing system efficiency and providing transportation revenue. Further, Policy 6 of the Regional Motor Vehicle Policies states that "(i)n combination with increased transit service, consider use of congestion pricing to manage congestion and raise revenue when one or more lanes are being added to throughways."

"Moving Forward Together," Chapter 8 of the 2018 RTP, identifies several corridors and facilities that should consider pricing strategies as part of future corridor refinement planning that includes rehabilitation or capacity expansion projects. These include segments of I-5 and I-205 currently being examined for congestion pricing.

The 2018 RTP also identifies a Regional Congestion Pricing Technical Analysis, a system-wide look at pricing's ability to address congestion issues throughout the Portland metro area, to be conducted in coordination with ODOT. The study's goal is to help state and regional policymakers and stakeholders better understand the different ways congestion pricing could be implemented regionally, as well as potential impacts of that implementation. The study will provide policy guidance as to how different types of pricing might impact different policy outcomes, including equitable outcomes for underserved communities, safety, freight mobility, air pollution, greenhouse gas emissions, traffic diversion, traffic volumes, mode share, transit access and whether or not they improve performance of the regional transportation system.

**The Metro Council is scheduled to consider the updated 2018 Regional Transportation Plan for adoption on December 6, 2018.*

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Overview and Outcomes of the Feasibility Analysis

In order to implement Section 120 of HB 2017, the OTC directed ODOT to initiate the Portland Metro Area Value Pricing Feasibility Analysis. The purpose of the feasibility analysis was to engage regional stakeholders, agency partners, and the public to explore the options available and determine how and where congestion pricing could help improve congestion on I-5 or I-205 during peak travel times. A consultant team with national expertise in congestion pricing, economics, and public engagement helped ODOT administer the feasibility analysis.

Policy Advisory Committee

The OTC convened a Policy Advisory Committee (PAC) to provide input on the implementation of Section 120 of HB 2017. The purpose of the PAC was to allow a diversity of perspectives to help shape the design of key elements of the project in the study area – from the Columbia River to Tualatin where I-5 and I-205 split. The advisory committee was called upon to provide insight, observations, feedback, and recommendations to the OTC.

Figure 6. Policy Advisory Committee representation

OTC Commissioner Alando Simpson (Co-Chair)	OTC Commissioner Sean O'Hollaren (Co-Chair)	ODOT	WSDOT
Clackamas County	Clark County	Multnomah County	Washington County
City of Portland	Port of Portland	Metro	City of Vancouver
TriMet	Ride Connection	Verde	Oregon Trucking Association
Portland Business Alliance	Fred Meyer	AAA Oregon	The Street Trust
Oregon Environmental Council	OPAL Environmental Justice of Oregon	Westside Economic Alliance	FHWA (ex officio)

The PAC was charged to "evaluate pricing options that will address congestion through one or more of the following means:

- Managing congestion: Value pricing used to manage demand and encourage more efficient use of the transportation system by shifting trips to less congested times or designated lanes through pricing and/or maximizing the use of other modes to improve freeway reliability.
- Financing bottleneck relief projects: Value pricing used as a means to finance the construction of roadway improvements that address identified bottleneck projects that will improve the efficient movement of goods and people."

To that end, the PAC Charter requested the PAC provide a recommendation that, at a minimum, addressed the following questions:

- What location(s) on I-5 and/or I-205 are best suited to implement value pricing?
- For the recommended location(s), what type of value pricing should be applied?
- What mitigation strategies should be pursued based on their potential to reduce the impact of value pricing on environmental justice communities or adjacent communities?

There were 24 PAC members, including FHWA Administrator Phil Ditzler as a non-voting member. The committee was co-chaired by OTC Commissioners Alando Simpson and Sean O'Hollaren. (See Figure 6 for the PAC composition.)

The PAC met six times between November 2017 and June 2018. Public comment was provided to the PAC through extensive public outreach (see next section), as well as during public comment periods at each of the PAC meetings.

Public involvement

In addition to the diverse representation of stakeholder interests on the PAC, a transparent and inclusive public involvement process was developed for the feasibility analysis. This effort informed PAC decision-making and shaped pricing project selection. It also represented OTC direction: stakeholders from across the region and on both sides of the Columbia River must be provided every opportunity to easily and effectively inform the process.

OUTCOMES OF THE FEASIBILITY ANALYSIS

This section outlines ODOT's approach to educate and engage stakeholders and the public during the development of the Value Pricing Feasibility Analysis.

Public input opportunities

ODOT sought public input in three different rounds of public outreach from November 2017 to July 2018. General public input opportunities included in-person open houses, online open houses, PAC meetings, community briefings, and email and voicemail available at all times during the engagement. Primary public outreach activities were focused in four counties – Multnomah, Clackamas, Washington, and Clark – across two states. A summary of all engagement activities is provided in Figure 7.

The project team reached stakeholders in several ways: project website, email list, social media posts, paid digital advertising, and earned media coverage. The project team collected nearly 6,000 written and verbal comments from the public during the feasibility analysis. Comments were summarized in five engagement summary reports that were provided to the PAC and to the OTC. As with all project documents, the public engagement summary reports were made available to the public via the website.

Figure 7. Public involvement statistics

Public involvement by the numbers

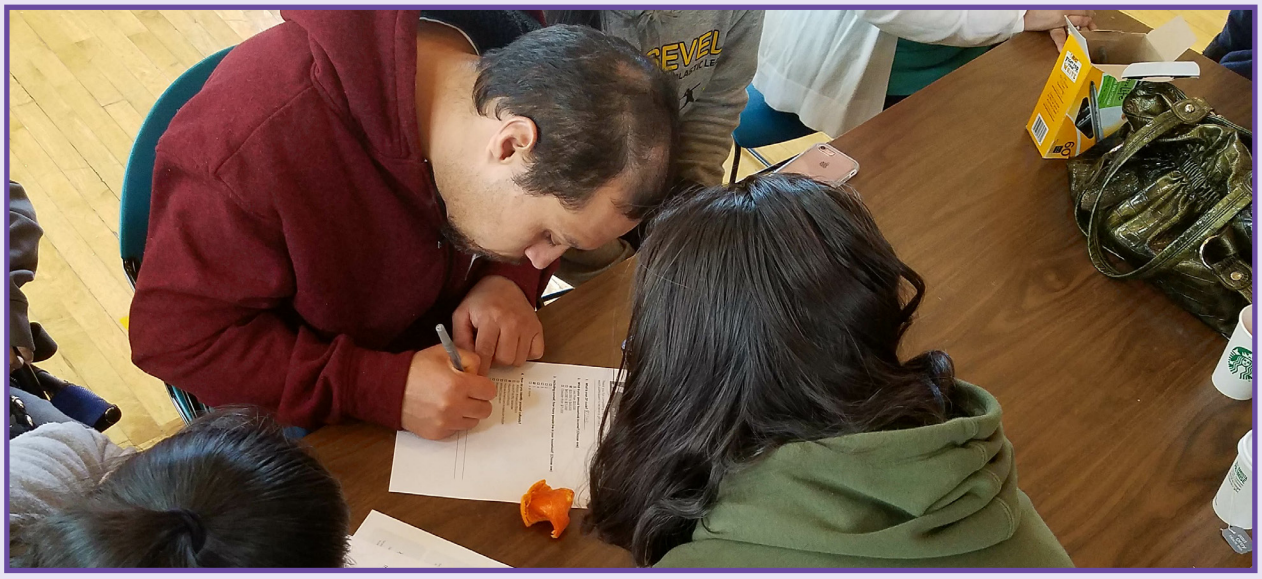
- 1,000+ attendees at 21 in-person events
- 2,500+ completed questionnaires
- 6,000+ written and verbal public comments
- 600,000+ people reached through social media
- 2 online open houses *and* 13,000+ views
- 2 project videos with 24,000+ views
- 50+ community group presentations

Title VI/Environmental Justice Outreach

Experience shows that traditional public engagement practices, such as open houses, may not be accessible for many members of the community for reasons such as limited English language proficiency or other reasons. In order to reach a broader cross section of the community, ODOT provided several opportunities focused on Environmental Justice communities to learn about the feasibility analysis and provide input:

- Early in the process, ODOT conducted demographic research and stakeholder interviews with organizations that work with Environmental Justice communities. The research identified languages spoken and cultural communities in the study area. The interviews also provided early guidance to inform the outreach efforts throughout the project.
- ODOT hosted bilingual, equity-focused discussion groups to obtain input from representatives of the African-American, Chinese, Hispanic, Native American, Slavic, and Vietnamese communities. ODOT retained the services of Community Engagement Liaisons to recruit participants who commute on or use I-5 and I-205 and interpret the discussions. In total, 114 people from all four counties in the region attended the six meetings.
- A survey was distributed to Title VI/Environmental Justice communities to augment the effort from the discussion groups. The community engagement liaisons assisted in translating and distributing paper and online copies of the questionnaire. ODOT collected 286 completed questionnaires during this round of engagement.

Altogether, more than 400 individuals participated in this equity-focused effort. Seventy-five percent of those participants self-identified as low-income residents. The discussion groups and surveys showed that concerns were consistent with the general population feedback, but heightened because in many cases these communities have experienced greater pressures from rising housing costs and displacement from job centers.



Technical analysis

Along with an extensive public outreach program, the feasibility analysis included two rounds of technical and qualitative evaluation for the PAC's consideration. The first round of evaluation assessed the opportunities and issues associated with broad, corridor-long primary types of highway congestion pricing applications. Following the Round 1 screening evaluation of these general concepts, five Round 2 concepts were developed based on technical evaluation, input from the PAC and the public, and project team experience with congestion pricing systems throughout the U.S. These five concepts allowed for a detailed assessment of potential impacts and benefits for defined pricing strategies and locations.

Performance measures were developed with the PAC and provided a basis for concept comparison during both rounds of the technical analysis. These measures were based on 10 key considerations listed on the next page, provided by the OTC, and outlined in the approved PAC Charter.

The analysis evaluated two general types of tolling: priced lanes and priced roadways. Variable toll rates were modeled, with the highest tolls applied during the periods of heaviest traffic demand.

In order to be consistent with regional planning efforts, the planning analysis used the 2027 baseline from Metro's 2018 Regional Transportation Plan (RTP), which includes projects expected to be built using reasonably expected funding. The use of a future year for the planning horizon reflects standard practice in transportation planning. As with many complex projects, it is expected that congestion pricing will take several years to identify, plan, design, and implement. Professional standards require that significant projects be evaluated in the context of a future planning year that incorporates population and job growth and planned transportation investments. By conforming to these standards, the feasibility analysis had the highest potential to establish compliance with the Oregon Statewide Planning Goal 12 (OAR 660-012 Transportation) and ultimately the NEPA process in future regulatory processes.

The RTP was the most appropriate source for a planning horizon year. The RTP is a publicly developed and vetted plan that incorporates population forecasts, planned projects, and projected funding from all local, county, regional, and state transportation providers. The RTP also reflects state and federal guidance on determining that projects are "reasonably likely" based on funding projections. The 2027 baseline condition from the RTP, therefore, is the reference condition that enabled evaluation of different pricing concepts according to their relative impacts and effectiveness.

Round 1 analysis

While the Round 1 concepts could be considered to have varying degrees of viability, the purpose of this phase was to create a shared learning opportunity for the project team, the PAC, and members of the public about the effectiveness and viability of value pricing to inform the primary objectives set by the OTC. For the Round 1 analysis, the concepts were applied to the full I-5 and I-205 corridors from the state line south to where the interstates intersect in Tualatin, Oregon. The I-5 and I-205 value pricing concepts evaluated in Round 1 did not represent proposals or recommendations – rather, they were for testing and screening value pricing applications in order to identify a narrower range of projects for more detailed analysis in Round 2.

The evaluation consisted of seven initial pricing concepts and the baseline (no tolls) concept applied to this corridor. Of the eight concepts considered, four were "bookend" concepts and

10 Key Considerations Outlined in the PAC Charter

Traffic operations improvements: To what extent the option will improve the traffic operations of the priced facility, including but not limited to increasing reliability and mitigating congestion.

Diversion of traffic: To what extent the option will cause diversion to other routes and modes that will impact the performance and operations of other transportation facilities, including both roads and transit service.

Adequacy of transit service: To what extent public transportation service is available to serve as an alternative, non-tolled mode of travel.*

Equity impacts: Whether the option will disproportionately impact environmental justice households or communities and to what extent mitigation strategies could reduce the impact.

Impacts on the community, economy, and environment: Whether and how the option will impact the surrounding community, economy, and/or environment and the economy of the state in general.

Public input: To what extent the public supports a particular pricing option as a way to address congestion.

Consistency with state and regional law and policy: Whether the option will comply with existing Oregon Transportation Commission policies, state laws, and regional planning regulations.

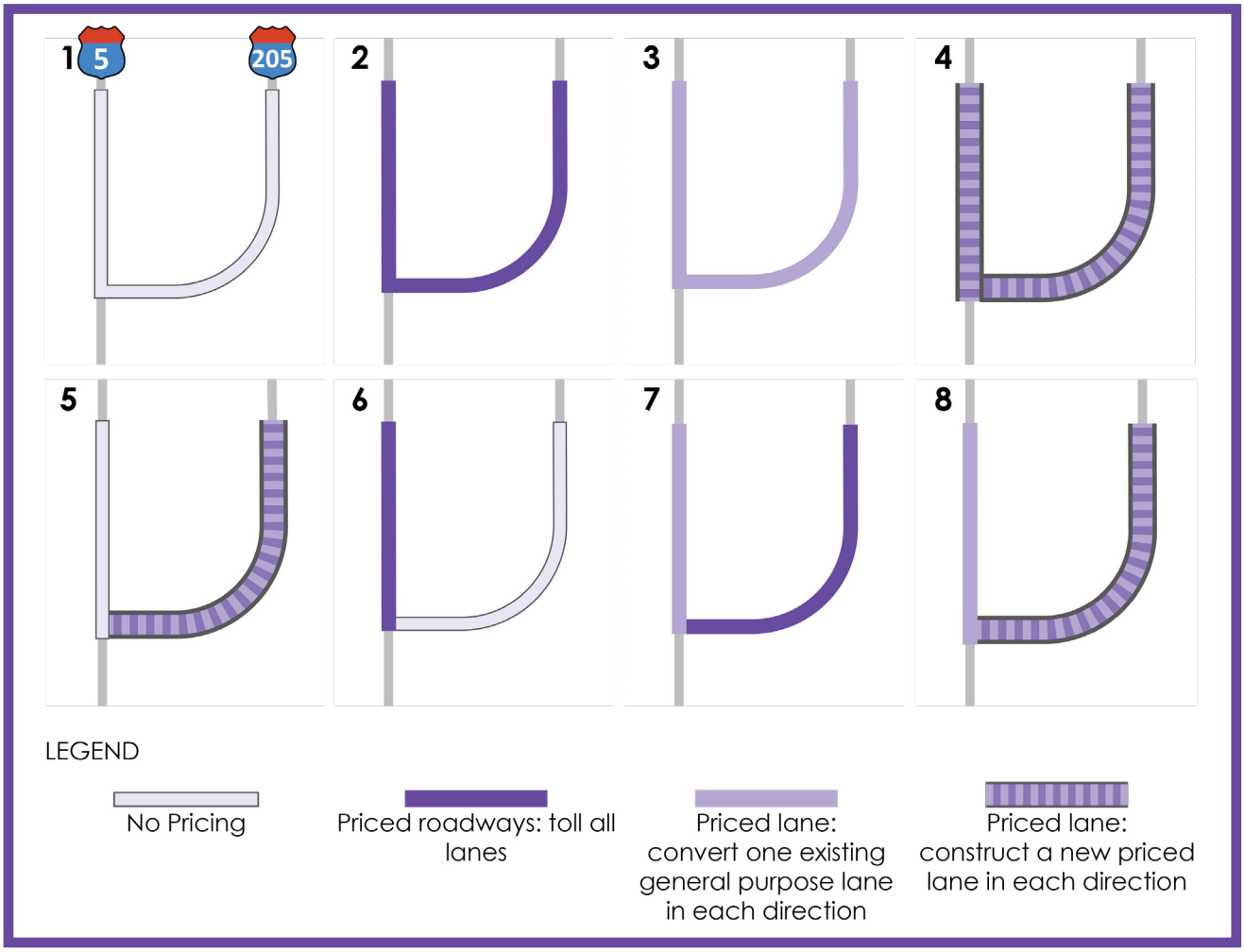
Feasibility under federal law: Whether the option is allowable under federal tolling laws or will require a waiver under the Value Pricing Pilot Program or some other authority.

Project delivery schedules: Whether a value pricing option has the potential to alter the expected delivery schedule for a project on the corridor.

Revenue and cost: To what extent the option will raise sufficient revenue to cover the cost of implementing value pricing as well as the ongoing operational expenses, including the costs of maintenance and repairs of the facility.

* Subsequent to review and formal acceptance of the PAC Charter and 10 Considerations, the "adequacy of transit service" consideration and associated performance measures were broadened to reflect bike and pedestrian modes of transportation. The consideration was revised to "transit service and active transportation".

Figure 8. Round 1 concepts



four were "combination" concepts based on the bookends. The four "bookend" concepts, as shown in Figure 8, are:

1. Baseline: No tolls on any lanes or roadways
2. Priced Roadway: Toll all lanes on I-5 and I-205
3. Priced Lane Conversion: Convert one existing general-purpose lane on I-5 and I-205 to a priced lane in each travel direction
4. Priced Lane Construction: Construct a new priced lane on I-5 and I-205 in each travel direction

Recognizing that different pricing concept types have different effects and that individual application to either I-5 or I-205 might have an impact on the operations of the others, four combination concepts were also examined. The four "combination" concepts are:

5. Baseline (no pricing) on I-5 with Priced Lane Construction on I-205
6. Priced Roadway on I-5 with Baseline (no pricing) on I-205
7. Priced Lane Conversion on I-5 with Priced Roadway on I-205
8. Combination: Priced Lane Conversion on I-5 with Priced Lane Construction on I-205

Lessons from Round 1 analysis

The Round 1 analysis yielded several key considerations and insights about the two types of freeway pricing applications considered:

Priced lane treatments

- Priced lane treatments that operate adjacent to unpriced (general purpose) lanes are not operationally feasible in areas with only two lanes (e.g., I-5 at Rose Quarter).
- A priced lane is typically located in the left-most lane. Under Oregon statute, vehicles over 10,000 pounds, such as freight trucks, would not be allowed to experience the benefits of the priced lane.
- While priced lane treatments typically are adjacent to one or more unpriced travel lanes, the per-trip price for single-lane treatments would tend to be higher when compared to priced roadways (all lanes tolled).
- Travelers using unpriced lanes adjacent to a single priced lane would not likely benefit from congestion pricing.
- Single priced lane treatments generate limited revenue, as a general order of magnitude.

Priced roadway (all lanes tolled)

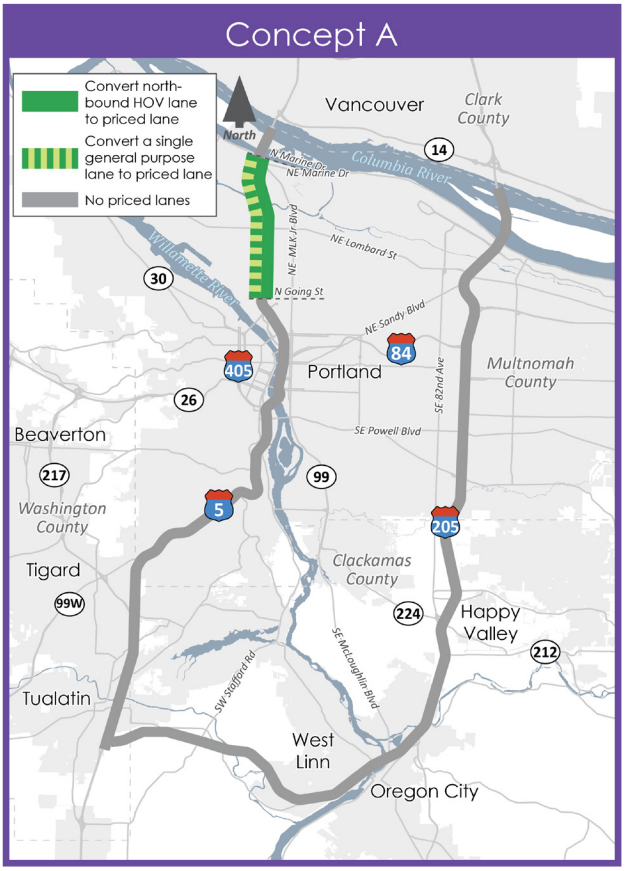
- Priced roadway treatments were found to have the highest level of congestion relief and would provide benefits to all motorists – including freight movers – traveling on the tolled facility.
- Priced roadways would yield the highest revenue potential, as a general order of magnitude.
- There is no unpriced option on the corridor with a priced roadway. However, the cost per trip to travel on the priced roadway would be lower than the price per trip to travel on a priced lane treatment.

Round 2 analysis

Five concepts were identified for Round 2 analysis based on Round 1's high-level learning phase. The primary goal of each of the five concepts was to manage congestion on I-5 and I-205, except for Concept E. This concept was evaluated as a congestion management strategy and a potential strategy to help fund a planned congestion-relief project that would add a lane in each direction on I-205 from OR 99E to Stafford Road and on the Abernethy Bridge. Round 2 concepts are described below and shown in Figure 9.

- Concept A – I-5 Priced Lane: Toll the existing high-occupancy vehicle (HOV) lane on I-5 north between Going Street and Marine Drive, and toll an existing general-purpose lane on I-5 south in the same section
- Concept B – I-5 Priced Lanes: Toll all lanes on I-5 between the North Going Street and SW Multnomah Boulevard interchanges
- Concept C – I-5 and I-205 Priced Roadway: Toll all lanes on I-5 and I-205 in the study area
- Concept D – I-205 Priced Lane: Toll one lane in each direction of I-205 between OR 99E and Stafford Road
- Concept E – I-205 Abernethy Bridge Priced Roadway: Toll all lanes in both directions of I-205 on the Abernethy Bridge

Figure 9. Round 2 concepts A and B



Concept A:

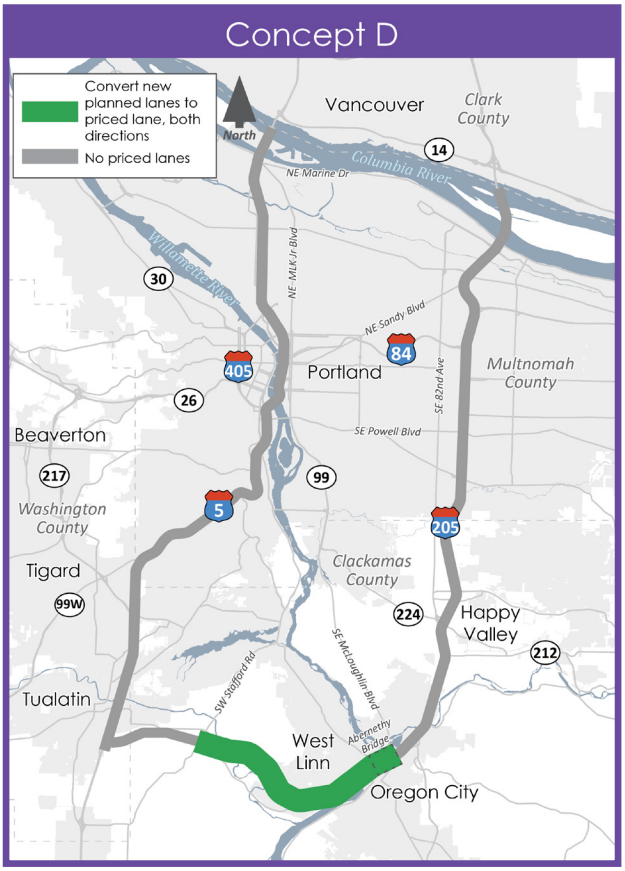
- Low level of congestion-relief benefits on priced segment/lanes
- Limited diversion to non-freeway streets
- Low relative toll revenue and system capital costs
- Moderate transit connectivity and relatively few frequent service lines, although this section does have transit service on the freeway provided by C-TRAN

Concept B:

- Strong potential to reduce congestion on priced segment
- Modest diversion to alternate routes
- Dense adjacent transit network provides options, including connections to the regional transit network
- More toll revenue than single-lane options

Figure 9. Round 2 concepts C and D

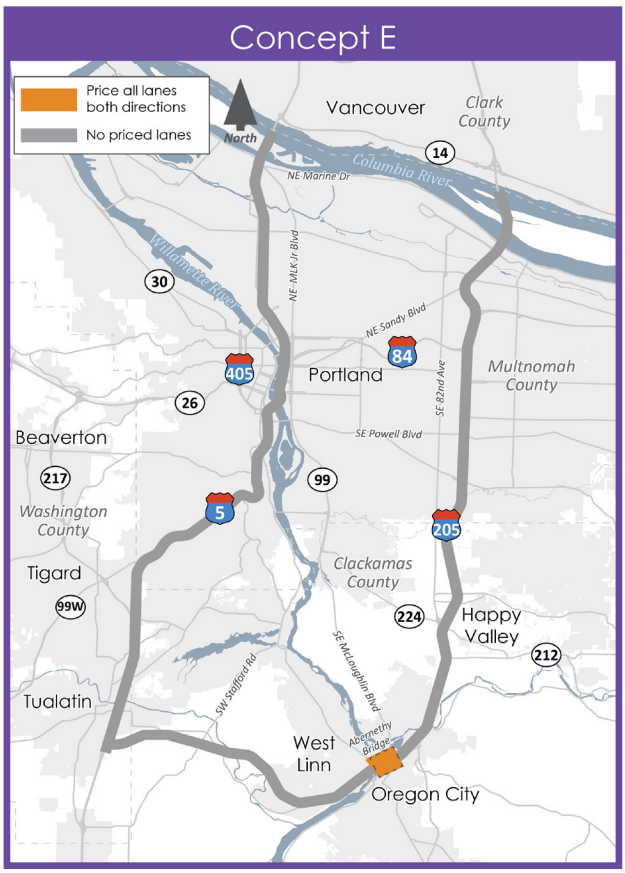
- Greatest potential for reducing congestion on tolled corridors
- Large scale of tolling could increase implementation challenges
- Diversion to non-freeway routes likely in some areas
- More toll revenue than other concepts
- Transit options vary by location in this large geographic area; service and connectivity more extensive in the northern sections of both corridors; frequency and connectivity breaks down in the southern sections



Concept D:

- Modest congestion relief from single tolled lane
- Minimal traffic diversion to non-freeway routes
- Limited toll revenue from single tolled lane
- Limited transit options in the corridor

Figure 9. Round 2 concept E



Concept E:

- Toll revenue could likely provide funds for part of corridor expansion and seismic upgrades
- Strategies would be needed to mitigate diversion to non-freeway routes
- Some congestion relief anticipated from variable toll rates
- Limited transit options in this tolled area

These five concepts represented a range of potential congestion pricing application type, scale, and geography. The concepts included conversion of an existing HOV lane in Concept A (northbound); conversion of existing general lanes in Concept A (southbound), Concept B and Concept C; added freeway capacity with the third lane assumed under Concepts D and E; and a tolled bridge as a funding strategy in Concept E.

Consideration of mitigation priorities

In the PAC Charter, the OTC asked the advisory committee to recommend mitigation strategies to reduce or eliminate potential detrimental impacts on Title VI/Environmental Justice communities and adjacent communities. In discussions of freeway congestion pricing applications, PAC members and other stakeholders considered some of the negative impacts that could affect those who currently depend on the freeways, as well as potential diversion impacts on the surrounding area and roadway network. PAC discussions were informed by examples from other congestion pricing projects, as reported by members of the consultant team and documented in reports provided to the committee.

In the PAC process and other public engagement, the potential negative impacts of tolling on low-income communities was a frequent concern. It is understood that when pricing levies a direct cost on drivers as a means of managing congestion, the burden is disproportionately higher on lower income travelers as a percentage of overall household income. Engagement that focused on Environmental Justice communities revealed that while the concerns about cost impacts were shared broadly, lower income communities are already under pressure from

stagnant wages and rising costs of housing. These pressures have pushed many lower income households away from the city centers, resulting in longer commutes. For these reasons, any added pressures from pricing the freeways are exacerbated among these communities. It is also known that families of all income levels have a value of time, and lower wage earners may have considerable costs of being late for a shift change or other time-sensitive travel need. The PAC considered several strategies that could be used so that negative impacts could be reduced while positive impacts can be shared.

Pricing also may create impacts on adjacent communities. Positive impacts might occur if improved freeway conditions result in drivers returning to the freeway for longer trips. In addition, where congestion is severe, pricing can improve flow, which can reduce the harmful carbon emissions in the immediate vicinity of a freeway. Most people are concerned about the potential negative impacts, primarily in the form of diversion of traffic onto surface streets, as drivers seek to avoid paying tolls. Such diversion could increase congestion on local streets, including residential neighborhoods or smaller business main streets.

The PAC had the opportunity to read technical reports describing types of impacts and mitigation strategies that have been used in other tolling systems. Further, the team dedicated the majority of one PAC meeting (April 11, 2018) to a facilitated small-group work session among PAC members to focus on key concerns and to identify mitigation strategies. Facilitators led small groups in discussing and documenting key concerns about potential impacts, learning about strategies used in other systems, and discussing considerations about how they might or might not be appropriate for the Portland region. In addition to the PAC process, the project team incorporated the mitigation strategies theme into public outreach, including five open houses held at locations throughout the region; an

on-line open house; and presentations given to community groups throughout the region, including business, civic, and other interest groups. These efforts introduced the topic of mitigations and sought input on priority concerns and suggestions about potential mitigation strategies. Comment themes heard from this effort include the following:

- Impacts to Title VI and Environmental Justice communities, with an emphasis on low-income populations
- Impacts to communities that are highly dependent on the freeway system due to a lack of choices (other modes, other routes, or flexible travel times)
- Diversion into adjacent communities as well as onto arterials and other freeways
- Questions and suggestions about how tolling revenue would be used

These themes identify a community-based perspective on the issues and possible strategies that should be foundational elements considered as project development moves toward future implementation phases of freeway tolling.

PAC recommendation

The PAC recommendation to the OTC responded to the Commission's priority request as described in the PAC Charter to identify the locations on I-5 and/or I-205 that are best suited for value pricing; the type of value pricing that should be applied; and the mitigation strategies that should be pursued to reduce impacts on Environmental Justice and adjacent communities. The recommendation identified the pricing concepts that warrant further technical analysis, planning, and environmental review under the NEPA process, along with mitigation strategies and other priority policy issues identified by the PAC. This recommendation was based on an understanding of the purpose and nature of legislative direction, the federal regulatory environment, and the request from the OTC. The PAC recommendation was presented to the OTC at a special meeting in July 2018, with a

primary purpose of providing a forum for public comment, and again at the regular August 16, 2018 OTC meeting, at which the OTC accepted the recommendation.

Projects recommended for further study

The PAC recommended advancing value pricing projects for further study on both I-5 and I-205 to effectively manage north/south travel through the metro area. Both projects could provide congestion relief and, potentially, funding for planned projects and mitigation strategies. The recommended pricing projects are:

- Conversion of all existing I-5 lanes to a priced roadway between North Going Street/Alberta Street and SW Multnomah Boulevard. Exact termini of the pricing application will be developed as part of future analysis. The evaluation indicates this concept would reduce congestion and provide travel-time savings for users within one of the most severely congested corridors in the Portland metro area.
- Value pricing on or near the I-205 Abernethy Bridge as a potential funding strategy and for congestion management. Toll funds would be used for the planned Abernethy Bridge reconstruction and widening, and construction of a planned third lane on I-205 between OR 99E and Stafford Road. Exact termini of the pricing application will be developed as part of future analysis. Future analysis will include design variations that may extend pricing north and south of the bridge itself along the I-205 widening corridor to better evaluate revenue potential and overall traffic congestion impacts, including diversion.

One potential advantage of implementing value pricing projects on both I-5 and I-205 is the ability to manage traffic through variable tolling on the two freeways together. Since I-5 and I-205 offer dual options for north/south travel through the metro region, a system-based management approach makes sense. Traffic congestion could be managed on both corridors

by increasing or decreasing toll rates on the basis of existing conditions on both freeways.

PAC mitigation priorities

The PAC charter specified the need to identify and consider mitigation strategies for possible negative impacts on Title VI and Environmental Justice communities and other stakeholders within the affected corridors.

Throughout the feasibility analysis, concerns about congestion pricing in this region were identified by PAC members and the public. The project team provided examples of strategies that have been part of congestion pricing projects across the country, including enhanced transit, toll discounts or credits for low-income populations, and free or discounted HOV use of tolled lanes, among others. (More information about the mitigation strategies can be found at www.ODOTvaluepricing.org, including notes from PAC meeting discussions.)

Based on PAC member and public input, PAC members identified three core priorities to be developed during future value pricing planning and environmental phases, as shown in Figure 10.

Figure 10. Mitigation priorities

Improved public transportation and other transportation options are essential strategies for equity and mobility

Public transportation and other viable options are needed to improve mobility for communities that will be affected by pricing. Most pricing projects throughout the country have included investments in increased public transportation, carpool/vanpool, and active transportation alternatives. The exact types and locations of public transportation improvements included will be developed as part of future project development.

Special provisions are needed for Environmental Justice populations, including low income communities

The potential to place a disproportionate burden on Environmental Justice communities, with an emphasis on low-income populations, is a concern. It is important that congestion pricing provide benefits and be accessible to a broad cross-section of the community. Where negative impacts are likely, it is a priority to develop strategies to eliminate, reduce or mitigate those impacts.

Diversion strategies should be incorporated to minimize and mitigate negative impacts

Diversion occurs when motor vehicle traffic shifts from one roadway to another, to another mode of travel such as public transportation, or to other times of day. Although not explicitly an issue of Title VI and environmental justice, diversion to "surface street" routes was frequently mentioned during the feasibility analysis as an area of concern. It is acknowledged that some diversion occurs as drivers seek to avoid priced areas, but it is also expected that some vehicles may return to the freeway system if travel becomes more reliable. Future studies should look more closely at diversion and safety on impacted and/or parallel routes and modes. In particular, early project efforts should prioritize design or other strategies that avoid or minimize diversion to the local system while supporting diversion to transit or other modes.

References

Value Pricing Feasibility Analysis Documents:

- *Policy Advisory Committee Recommendation*, July 2018
- *Technical Memorandum #1 – Objectives and Proposed Performance Measures* (Dec 15, 2017)
- *Technical Memorandum #2 – Initial Value Pricing Concepts* (Jan 23, 2018)
- *Technical Memorandum #3 – Round 1 Concept Evaluation and Recommendations* (Feb 20, 2018)
- *Technical Memorandum #4 – Round 2 Concept Evaluation* (May 7, 2018)
- *Draft Value Pricing Summary of Relevant Policies* (Apr 4, 2018)
- *Congestion Pricing Mitigation and Related Policy Considerations* (May 7, 2018)
- *Winter 2017-2018 Community Engagement Summary Report* (Feb21, 2018)
- *Title VI/Environmental Justice Engagement Summary Report* (Apr 4, 2018)
- *Spring 2018 Community Engagement Summary Report* (May 11, 2018)
- *May/June 2018 Community Engagement Summary Report* (June 18, 2018)

Other references:

- Cambridge Systematics, Inc. *Report: Tolling Impacts and Mitigation Strategies for Environmental Justice Communities* (Sept 30, 2017) [https://www.oregon.gov/ODOT/KOM/EJ-Mitigation.pdf]
- FHWA: *Income-Based Equity Impacts of Congestion Pricing* (Dec 2008)
- *2016 Traffic Performance Report*
- *Seismic Resiliency Report*
- *Oregon Highway Plan* (http://www.oregon.gov/ODOT/Planning/Documents/OHP-Tolling-Pricing-Policy-Amendments.pdf).

All documents are available at the ODOT project website (www.ODOTvaluepricing.org) or by contacting the value pricing team for assistance.