

# I-205 Improvements Project Phase 2

*Solutions for Safety, Reliability, and Economic Vitality*

**Submitting Agency:**



Oregon Department of Transportation  
355 Capitol St NE  
Salem, OR 97301



Was a INFRA application for this project submitted previously?

Yes: I-205 Improvements Project Phase 1  
*ODOT applied for INFRA funding for Phase 1 of the I-205 Improvements Project that has since been funded*

PROJECT COSTS	
Request:	\$120,000,000
Other Federal Funding:	\$20,000,000
Total Federal Funding:	\$140,000,000
Non-Federal Funding	\$293,000,000
<b>Future Eligible Project Cost:</b>	<b>\$433,000,000</b>
Previously Incurred Project Cost:	\$20,000,000
Total Project Cost:	\$453,000,000

Are matching funds restricted to a specific project component: No

### PROJECT ELIGIBILITY

The I-205 Improvements Project Phase 2: \$453,000,000

- A highway widening project on the National Highway Freight Network
- A highway and bridge project carried out on the National Highway System (NHS)
- Adds capacity to the Interstate System to improve mobility, enhance safety, and seismically retrofit the structure

### PROJECT LOCATION

State in which the project is located:	Oregon
Small or large project:	Large
Urbanized Area in which project is located:	Portland OR-WA (Code 71317)
Population of Urbanized Area:	1,908,887 <sup>1</sup>
Area of Persistent Poverty or Historically Disadvantaged Community within Project Limits:	Census Tract 224, Clackamas County <sup>2</sup>
Federal or USDOT designated areas within project location:	Opportunity Zone ID: 41005022400 <sup>3</sup>
Is the project currently programmed in the:	
TIP	Yes (MTIP 70859)
STIP	Yes (Key #19786)
MPO Long Range Transportation Plan	Yes (RTP ID 11585 and 11969) <sup>4</sup>
State Long Range Transportation Plan	n/a <sup>5</sup>
State Freight Plan	Yes <sup>6</sup>

1 [Employment Statistics.U.S. Bureau of Labor Statistics.2020.](#)  
 2 [Transportation Disadvantaged Census Tracts \(arcgis.com\)](#)  
 3 [Opportunity Zones \(arcgis.com\)](#)  
 4 [Regional Transportation Plan.Metro.2014.](#)  
 5 [Oregon Transportation Plan.ODOT.2016.](#)  
 6 [Oregon Freight Plan Amended.ODOT.2017](#)

**Visit the  
project  
website  
for all  
application  
materials.**

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# Supporting Documentation and Web Links

Below is a list of all the references cited throughout this I-205 Improvements Project Phase 2 INFRA grant application.

- [ATM Project Atlas](#).ODOT.2016.
- [BCA Guidance](#).USDOT.2022.
- [Biennial Report to the Legislature](#).Oregon Global Warming Commission.2020
- [Bridge Condition Report & Tunnel Data](#). ODOT. 2021
- [Cascadia Subduction Zone Earthquakes: A Magnitude 9.0 Earthquake Scenario. Cascadia Regional Earthquake Working Group](#). 2013.
- [ConnectOregon](#).ODOT.
- [Corridor Operations Bottleneck Study](#).ODOT.2013.
- [Crash Reports](#).ODOT.2020.
- [Employment Statistics.U.S. Bureau of Labor Statistics.2020.](#)
- [Enhanced Interchange Safety Analysis Tool](#).FHWA.2007.
- [Highway Cost Allocation Study](#)
- [House Bill 2017](#), Keep Oregon Moving.
- [House Bill 3055](#)
- [Jobs and Transportation Act](#)
- [Opportunity Zones \(arcgis.com\)](#)
- [Oregon Transportation Plan](#).ODOT.2016.
- [Oregon Freight Plan](#) Amended.ODOT.2017
- [Project Delivery Guide](#).ODOT.2017.
- [Regional Transportation Plan](#).Metro.2014.
- [Strategic Action Plan](#).
- [Transportation Disadvantaged Census Tracts \(arcgis.com\)](#)
- [Transportation Performance Report](#). ODOT. 2020.
- [Urban Mobility Strategy](#). ODOT. February 2022.
- [Value Pricing Feasibility Analysis and Proposed Implementation](#). ODOT. 2018.



# I. Project Description

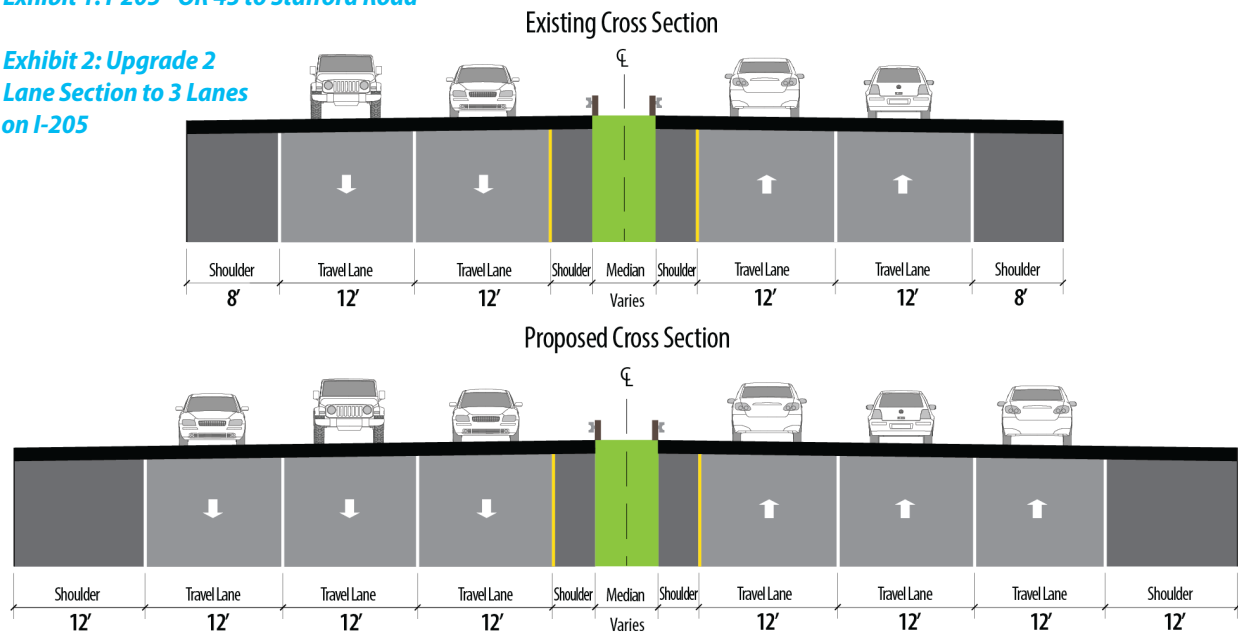
**Oregon Department of Transportation is requesting \$120 million towards a \$453 million project to address safety and capacity on Interstate 205 (I-205), a critical lifeline in the spine of America’s West Coast freight system.**

I-205 carries between 90,000 and 115,000 vehicles per day through the project area, connecting Interstate 5 (I-5) to the south and Vancouver, Washington to the north (See Exhibit 1).



**Exhibit 1: I-205 - OR 43 to Stafford Road**

**Exhibit 2: Upgrade 2 Lane Section to 3 Lanes on I-205**



The 25-mile I-205 corridor in Oregon is three lanes in both directions, with the exception of seven miles in Clackamas County. Daily vehicle hours of delay are high, which can be attributed to multiple lengthy bottlenecks that extend over almost 20 miles of the corridor in the northbound direction and over half of the corridor in the southbound direction.<sup>7</sup> The bottleneck that stretches from Stafford Road in West Linn to OR-213 is the last remaining two-lane section of I-205. In this segment, drivers experience nearly seven hours of traffic backups every day, significantly impacting state and regional economic activity. The addition of a third lane in each direction will reduce the need for merging and provide more space for weaving movements, allowing traffic to flow more freely and reduce the number of crashes (See Exhibit 2).

**1,747**   
**CRASHES IN THE PROJECT AREA**  
**2015-2019**

<sup>7</sup> [Transportation Performance Report](#), ODOT. 2020.

The I-205 Improvements Project Phase 2 (Phase 2) will provide key bottleneck relief and seismic upgrades on the interstate in Clackamas County by adding a third through lane to match the rest of I-205 and reconstructing bridges to make them earthquake-ready. With the third lane, interchange improvements, and variable rate tolls, the Phase 2 Project will reduce the daily congestion on I-205 from 14 to 2 hours per day and make I-205 the passable north-south route through the Portland region after a major earthquake (See Exhibit 3).

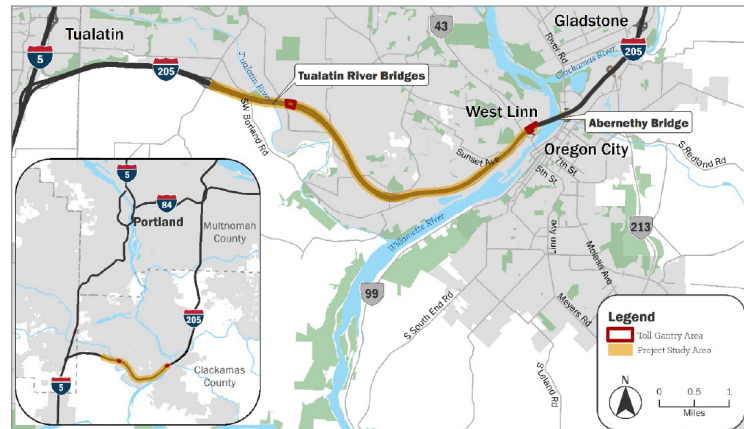


Exhibit 3: Phase 2 Project Location

The I-205 Improvements Project is being constructed in phases. In 2019, RealTime Active Transportation Management signs were installed in the corridor. Next, I-205 Improvements Project Phase 1 (Phase 1) will seismically upgrade and widen the Abernethy Bridge, making it the first earthquake-ready interstate structure across the Willamette River, and improve interchanges at OR 43 and OR 99E. Construction begins in June 2022. Phase 2 will seismically upgrade or replace eight bridges on the corridor and add a third travel lane in each direction. Finally, the northern section of Phase 1 will begin construction in 2025 to complete the section between OR 99E and OR 213 (See Exhibit 4 and Table 1).

To further reduce congestion and raise revenue for the I-205 Improvements Project, variable rate tolling will be implemented at the Tualatin River and Abernethy Bridges on I-205 in 2024. With the completion of the I-205 Improvements Project, I-205 will become the passable north-south route through the Portland region after a potential Cascadia Subduction Zone earthquake.

Exhibit 4: Key Project Elements



Table 1: Project Schedule

	2022			2023			2024			2025			2026		
	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall
Phase 1															
Phase 2															

**I-205 IMPROVEMENT PROJECT PHASE 2 ELEMENTS INCLUDE:**

- 1** Widening of 6.3 miles of the interstate mainline from two to three through lanes in each direction. Reconstruction of existing Continuously Reinforced Concrete Pavement (CRCP).
- 2** Seismic retrofit and widening of four existing bridges on the mainline.
- 3** Full replacement of six existing bridges on the mainline.
- 4** Full replacement of two existing bridge overcrossings on the mainline.
- 5** Construction of two sound walls.
- 6** Construction of traveler information signs.

**A Corridor Approach**

- Seven miles of I-205 will be widened from two lanes to three lanes as part of Phase 2. This is just one part of a larger corridor-wide approach to improve reliability and to enhance safety. PE is 100% funded.
- Phase 1 will begin construction in June 2022. Construction is 100% funded.
- A 100% funded comprehensive Active Transportation Management project was constructed in 2019.

## II. Project Location

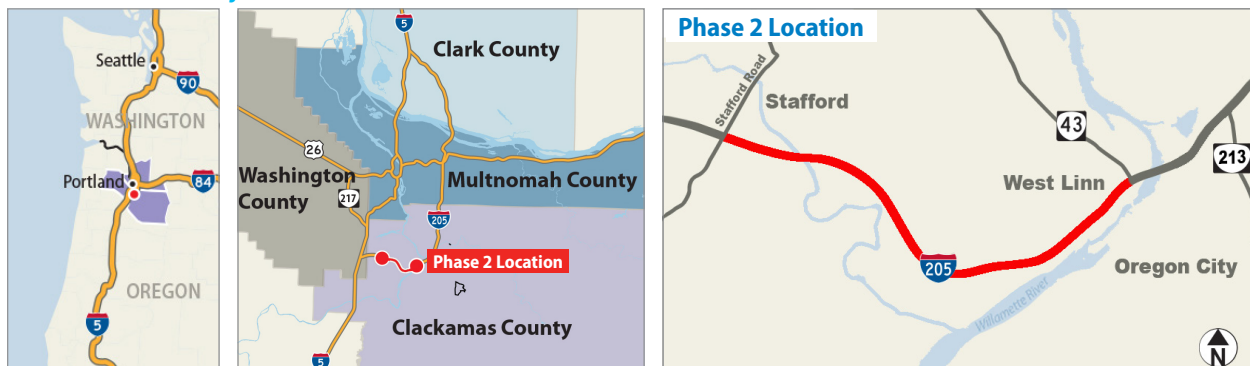
Phase 2 is located approximately five miles south of Portland, Oregon, and crosses through the cities of Oregon City, West Linn, and Clackamas County (See Exhibit 5).

- **Highway:** I-205
- **Milepost:** 2.73 to 8.80
- **Census-designated Urbanized Area:** Portland, OR-WA
- **County:** Clackamas County
- **Oregon Congressional District:** 5th District
- **Latitude/Longitude:** 45°20'54.6"N/ 122°39'20.0"W
- **Geospatial Data:** Hwy 064, East Portland Freeway



*There are more than 8,500 acres of designated employment, industrial, and urban center lands within the project influence area that rely on I-205 every day.*

**Exhibit 5: Phase 2 Project Location**





## III. Project Parties

### ODOT will receive the grant and deliver the project.

ODOT has the proven capacity to program state and local funds, as well as US Department of Transportation (USDOT) INFRA grant funding, for Phase 2. ODOT manages \$1.8 billion in funding annually, including 40 percent in federal funds and 55 percent in state funds, according to the Highway Cost Allocation Study.<sup>8</sup> ODOT has the experience, capacity, and credibility to implement local, state, and federal funds for bridge, modernization, preservation, and maintenance projects.

ODOT has extensive accountability mechanisms to ensure on-time project delivery and effective money expenditures when granted funding. For example, ODOT provided ongoing reports to the Oregon State Legislature and the public to ensure transparency about the project status and budgets for the Oregon Transportation Act (OTIA) III State Bridge Program, Jobs and Transportation Act, State Radio Project, and ConnectOregon.

House Bill 2017<sup>9</sup> (HB 2017), Oregon's largest Transportation funding package, included strong measures to ensure accountability, transparency, and efficiency in the use of funds. Six cents of the gas tax increase go into effect only if the Oregon Transportation Commission (OTC), ODOT's governing body, meets accountability and reporting requirements.

House Bill 3055<sup>10</sup> (2021) included a three-part finance plan to support ODOT's Urban Mobility Strategy,<sup>11</sup> a cohesive approach to make everyday travel safe, easier, and more efficient in the Portland metropolitan area. Components of this plan include increasing ODOT's short-term borrowing authority from \$100 million to \$600 million; allowing \$30 million, originally earmarked under HB 2017, to be available for the I-205 Improvements Project; the I-5 Boone Bridge and Seismic Improvement Project; and the implementation of a toll program; and to make necessary changes to existing tolling statutes.<sup>12</sup>

The 2009 Jobs and Transportation Act<sup>13</sup> (JTA) funded thirty-seven state highway projects and fourteen local government projects with a total funding obligation amount of \$960 million.

Oregon's competitive ConnectOregon<sup>14</sup> program has awarded \$477 million to 285 rail, port, transit, aviation, and bicycle and pedestrian projects since the program began in 2005.

ODOT has a long track record of competing for and delivering federal grants. ODOT received a \$60.4 million INFRA grant in Fiscal Year 2019 for the U.S. 97 North Corridor Project, which has selected a contractor and begins the design-build construction phase in June 2022. ODOT uses program management tools—including project tracking, financial management systems, and change management processes—to effectively deliver projects on time and on budget. In 2011, an independent study that examined 39 states ranked ODOT the top state in the nation for bringing projects in under budget.

<sup>8</sup> [Highway Cost Allocation Study](#)

<sup>9</sup> [House Bill 2017](#), Keep Oregon Moving.

<sup>10</sup> [House Bill 3055](#)

<sup>11</sup> [Urban Mobility Strategy](#). ODOT. February 2022.

<sup>12</sup> [House Bill 3055](#)

<sup>13</sup> [Jobs and Transportation Act](#)

<sup>14</sup> [ConnectOregon](#). ODOT.

### ODOT's Financial Condition

ODOT's financial condition is sound, as illustrated below:

- Moody's assigned an A1 rating to ODOT's most recent bond sale.
- As of June 30, 2016, the Department's governmental funds reported a combined ending fund balance of \$649 million.
- Net state vehicle-related tax collections have grown from \$900 million to \$1.2 billion from 2007 to 2016.

**In the Portland metropolitan area, ODOT operates a Traffic Management and Operations Center around the clock, incident response vehicles, 150 ramp meters, over 200 cameras, traffic monitoring equipment, a traffic signal system, and adaptive traffic signals.**



## IV. Grant Funds, Sources, & Uses of All Project Funding

### A. Previously Incurred Costs

ODOT has previously incurred costs that represent investments in project readiness to the I-205 Improvements Project. ODOT has \$65.2 million in current funding to complete the planning, preliminary engineering and right-of-way acquisition, of which there have been \$35.6 million in incurred expenditures to date, with an additional \$5.3 million expended for construction of the RealTime signs (Active Transportation Management), which is now complete (See **Exhibit 6**).

ODOT authorized \$495 million for the construction of Phase 1 in April 2022. In addition, ODOT allocated \$65.2 million to date for non-construction phases over the past years; \$20.2 million is needed to fund design of Phase 2; the remaining funds will be available for Phase 1 (north) of the project.

### B. Eligible Costs

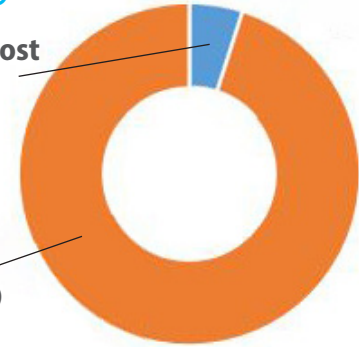
Total eligible Phase 2 project costs of \$453 million include preliminary engineering including costs incurred to date, the right of way phase, and construction phase (See **Table 2**).

**Exhibit 6: Previously Incurred Costs**

**Total Project Cost**  
**\$453,000,000**

Incurred, \$17 Million  
(3.8%) (Preliminary  
Engineering and  
Right of Way Costs)

Future Eligible Costs,  
\$433,000,000 (96.2%)  
(Final Design and  
Construction Costs)



**Table 2: Total Costs**

Improvement	Estimated Cost	Status
Preliminary Engineering	\$19M	Incurred
ROW	\$1M	Incurred
<b>Construction</b>		
Roadway	\$92M	Eligible
Structures	\$100M	Eligible
Miscellaneous	\$147M	Eligible
Construction Engineering	\$30M	Eligible
Contingencies	\$64M	Eligible
<b>Total Cost</b>	<b>\$453,000,000</b>	

### C. The Source and Amount of Funds used for Future Eligible Costs

If successful, INFRA Fiscal Year 22 funds will cover 26.5 percent (\$120 million) of Phase 2 total eligible costs. The remaining 73.5 percent will come from State funds. The State funds will be in the amount of \$313 million or 69.1 percent, coming from revenue generated from tolling. \$20 million or 4.4 percent will be allocated from the Federal Highway funding allocated to ODOT. Without the INFRA grant funding, there could be a \$120 million gap in funding that may result in delays (See **Exhibit 7**).

### D. Documentation of Non-Federal Funds

Tolling is scheduled to begin operation on the Tualatin River and Abernethy Bridges late in calendar year 2024 and will provide the revenue source to fund Phase 2. In the fall of 2024, ODOT is scheduled to sell the first series of toll revenue bonds to provide the upfront cash for the state contribution of Phase 2, backed by the toll revenues, which will be used to pay the debt service on the bonds.

### E. Federal Funds Non-Federal Match Source

Toll revenue or bond proceeds backed by the toll revenue will be the match source of funding (See **Table 3** and **Exhibit 7**).

**Table 3: Non-Federal Funds**

Funds	Amount \$	Match Source	Project Share	Status of Commitment
Federal Funds	20,000,000	State Gas Tax	4.4%	Committed
Other State Funds	310,000,000	Tolling Revenue	69.1%	Committed

## F. Source of Funds Allocation

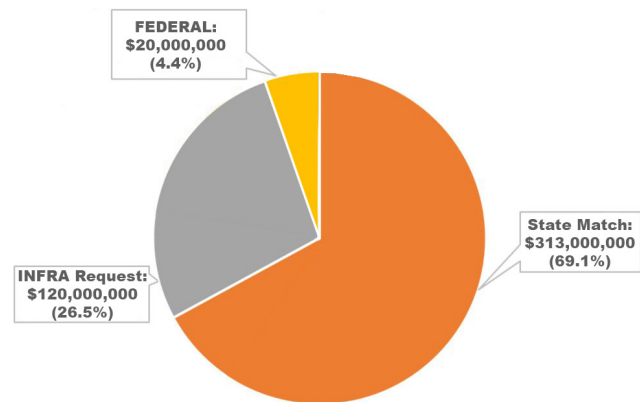
Bridge construction and the highway lane addition will be funded by 4.4 percent federal, 26.5 percent INFRA funds, and 69.1 percent state funds (See Table 4).

**Table 4: Fund Source Allocation**

Major Construction Activities	Federal 4.4%	INFRA 26.5%	State 69.1%	Total
Bridge Construction	\$4,472,306	\$26,935,480	\$70,235,533	\$101,643,319
Highway Lane Addition	\$7,432,388	\$44,753,247	\$116,722,277	\$168,917,912
<b>TOTAL</b>	<b>\$11,904,694</b>	<b>\$71,698,726</b>	<b>\$186,957,810</b>	<b>\$270,561,230</b>

## G. Contingency

ODOT determined appropriate levels of contingency and construction engineering funds for this level of design. Construction costs include a 20 percent contingency to account for unforeseen circumstances and cost variability. Construction engineering and inspection costs were set at 12 percent of construction. This percentage is consistent with industry standards for out-sourced services in Oregon.



**Exhibit 7: Total Future Eligible Costs \$453 million**

## H. Limitations

As a highway project, the Phase 2 proposal does not count towards the \$485 million maximum INFRA funds authorized to be used toward freight, rail, water (including ports), or other freight intermodal projects.

## Transportation Challenges

### Mobility Challenge

On I-205, daily vehicle hours of delay are high and reliability remains an issue. The most congested conditions occur during the PM peak, with the average speed in the northbound direction among the lowest in the region.<sup>15</sup> For both directions in the AM and mid-day peaks, reliable travel time hovers around 40 minutes (compared to a free-flow travel time of 25 minutes).<sup>16</sup> For the PM peak, reliable travel time in the northbound direction is 81 minutes.<sup>17</sup> In the southbound direction, reliable travel time in the PM peak is nearly 57 minutes.<sup>18</sup> Travelers in this corridor have to plan ahead to ensure on time arrival at their destinations due to congestion.

The movement of people and goods is critical to support a growing economy. I-205 is a designated north-south interstate freight route in a roadway network that links Canada, Mexico, and major ports along the Pacific Ocean. This area of I-205 facilitates the movement of over \$34 million in commodities and serves more than 8,000 freight vehicles daily.<sup>19</sup> Congestion on I-205 affects the ability to deliver goods on time, which results in increased costs and uncertainty for businesses. The constrained two-lane section is a

<sup>15</sup> [Transportation Performance Report](#). ODOT. 2020.

<sup>16</sup> [Transportation Performance Report](#). ODOT. 2020.

<sup>17</sup> [Transportation Performance Report](#). ODOT. 2020.

<sup>18</sup> [Transportation Performance Report](#). ODOT. 2020.

<sup>19</sup> [Transportation Performance Report](#). ODOT. 2020.

**Table 5: Peak Period Travel Time Savings by I-205 Segment**

From	To	2027						2045						Compound Annual Growth Rate for change in travel times	
		Build		No Build		Difference		Build		No Build		Difference			
		AM Travel 7-9 am	PM Travel 4-6 pm	AM Travel 7-9 am	PM Travel 4-6 pm	AM Travel 7-9 am	PM Travel 4-6 pm	AM Travel 7-9 am	PM Travel 4-6 pm	AM Travel 7-9 am	PM Travel 4-6 pm	AM Travel 7-9 am	PM Travel 4-6 pm	AM	PM
NB Stafford Rd	OR-213	8.66	8.89	12.86	14.36	-4.20	-5.47	8.44	10.12	12.68	15.24	-4.24	-5.12	0.05%	-0.37%
SB OR-213	Stafford Rd	7.97	7.97	8.85	8.96	-0.88	-0.99	7.97	8.00	11.68	11.61	-3.71	-3.61	8.32%	7.45%

significant freight bottleneck and the region is outgrowing the capacity of I-205. Mobility is constrained by the following:

- Congestion extends for four hours during both the morning and afternoon commutes.
- Under a “no build” scenario, daily traffic in the project corridor is expected to grow by 28 percent on average by 2045, with a 17 percent increase in the morning peak and a 30 percent increase in the afternoon peak (See Table 6).
- Corridor freight traffic specifically will grow 36 percent by 2045.<sup>20</sup>
- Peak spreading will reduce the number of hours that freight can move on the system.

**Mobility Solution**

Improve capacity and operation along the corridor by including the following:

- Adding a third lane on I-205 in both directions between Stafford Road and Oregon 213 (OR-213). This will increase peak travel speeds and reduce travel times in the corridor by 35 to 114 percent depending on direction and time of day, improve trip reliability with delays caused by traffic reduced to 2 minutes from 8 minutes (75 percent improvement), and reduce future weekday hours of congestion through the corridor from 14 to 2 per day.
- Reducing the amount of crash-related congestion by improving safety and operations from the added lane through the corridor and improved merging. Analysis predicts 21 percent fewer crashes in the corridor in 2045 with the construction of Phase 2.
- Adding variable rate tolls in the vicinity of the I-205 Abernethy Bridge and Tualatin River Bridges in Clackamas County to fund the I-205 Improvements Project and manage congestion. Tolls will help fund construction of the Project while giving travelers a better and more reliable trip.

**Project History & Previously Incurred Costs**

The I-205 Improvements Project is a key part of a series of significant investments ODOT is making along the I-205 corridor to improve freight operations and spur job growth. The largest effort completed to date is the \$130 million Sunrise Corridor Project, opened to the public in July 2016. Sunrise is a two-mile, four-lane

<sup>20</sup> [Transportation Performance Report](#). ODOT. 2020.



The Kirk Company, located on OR-213 near I-205 in Clackamas County, provides wholesale Christmas products for distribution nationwide. During the holiday season, the Kirk Company will load and send out 30-50 trucks full of trees onto I-205 each day. The trucks are largely headed for containers in Portland and Washington. Ultimately the trees are sold in Texas, California, Colorado, and Canada (British Columbia to Manitoba), among other locations. The Kirk Company sells 350,000 trees a year.

*“The corridor connects advanced manufacturing, high tech, forestry, agricultural, and distribution/shipping businesses in Clackamas County, Portland, and the Willamette Valley with major import-export facilities such as the Port of Portland, the Portland International Airport, and the Port of Tacoma. - Clackamas County Board of Commissioners”*

— Clackamas County Board of Commissioners

segment of Oregon 224 (OR-224) connecting I-205 to SE 122nd Avenue in the east Clackamas County industrial lands just north of the Abernethy Bridge. The I-205 Improvements Project is expected to create jobs in the industrial district by improving freight mobility and travel times. ODOT constructed another project on I-205 to the north that was funded through construction by HB 2017:

The I-205 Johnson Creek-Glenn Jackson Bridge Project provides auxiliary lanes and Active Traffic Management infrastructure to compliment capacity improvements planned with the I-205 project. Roadside devices were also included at key locations throughout the project area. These devices generate real time travel information and will convey travel times, delays, operation/weather-related messages and routing information. This \$30 million safety and mobility project was completed in late 2019.

### State’s Commitment to Sustainable Transportation Funding

With the passage of HB 2017, the Oregon Legislature made a \$5.3 billion investment in transportation over ten years to improve the things that Oregonians value—a vibrant economy with good jobs, strong communities with a good quality of life, a clean environment, and safe, healthy people.<sup>21</sup>

ODOT is effectively delivering programs and projects in an accountable, transparent, and efficient manner through this transportation investment bill. INFRA funding for Phase 2 leverages against the State’s investment in the transportation system, and will improve safety and reduce congestion bottlenecks, helping people get where they need to go more efficiently.

### Region’s Commitment to Transportation Funding

Traffic in the Portland region has reached a point of severe congestion and highly unreliable travel conditions during peak periods. Only minimal expansion of the region's infrastructure has occurred over the past 30 years, resulting in the rapid increase of congestion as demand exceeds capacity on all the region's freeway corridors. The population growth trajectory is anticipated to accelerate in the coming decades, with a 23 percent population increase from 2.5 million to over 3 million residents between 2018 and 2040, and a 38 percent increase to 3.4 million residents by 2060.<sup>22</sup> Clackamas County has identified the I-205 Improvements Project as their county’s highest regional priority for funding.

### ODOT’s Commitment to the Project

ODOT has recommended, and the OTC has approved, the dedication of \$53.7 million from a variety of sources for design of improvements of multiple phases of the I-205 Improvements Project. These funds keep the final design for Phase 2 on schedule with bid-ready plans by late 2023, consistent with

<sup>21</sup> [House Bill 2017](#), Keep Oregon Moving.

<sup>22</sup> [Transportation Performance Report](#), ODOT. 2020.

Many of Oregon’s top traded-sector industries originate in rural locations and communities, such as wood product manufacturing, forestry and agriculture.

The state’s economy and job base are transportation dependent, especially on its highways, for the connections they provide to domestic and international markets.

Oregon’s multimodal transportation network moves \$300 billion in goods annually.

**22%**

Projected employment increase in industrial lands accessible via the I-205 corridor.

This project is needed to support the development of these important employment lands.

*“Diverted traffic contributes to traffic delays, accidents, and accelerated deterioration of small secondary roads not built for such high use. Congestion also delays response times for emergency personnel.”*

-- City of Gladstone Mayor  
Tammy Stempel



legislative direction. In addition, ODOT programmed an additional \$495 million for the construction of the Abernethy Bridge in April 2022 as well as \$5.3 million for the construction of Active Transportation Management improvements which was completed in 2019 in anticipation of future construction phases.

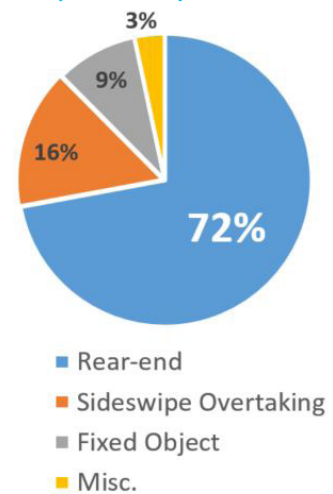
## V. Project Outcome Criteria

### Criterion #1: Phase 2 Safety

Phase 2 safety benefits include reduced crash frequency due to reductions in congestion. The average crash rate for I-205 through the Phase 2 Project corridor in both directions is 0.90 crashes per million vehicle miles traveled, averaged from 2015 through 2019 (See **Exhibit 8**). This is 60 percent higher than the state average of 0.56 for similar facilities in Oregon. There were 1,747 crashes in the corridor between 2015 and 2019, or 350 crashes per year on average, over half of which resulted in injuries (See **Table 4**). New lanes and enhanced ramp connections will decrease crash frequency in this area.

Phase 2 will improve corridor safety and operations and overall congestion and traffic friction will decline with the addition of the third through lane. Between the additional capacity and other improvements on the corridor, the congestion pricing strategy will provide better operating conditions with increased speeds and an associated 21 percent reduction in crashes on I-205.<sup>23</sup>

**Exhibit 8: Project Area Crash Data (2013-2017)**



**Table 6: Corridor Crashes by Severity**

Corridor	Fatal	Injury	Property Damage Only	Total
I-205	2	892	853	1,747
OR-43	0	154	125	279
SW Borland Rd	0	17	28	45
SW Stafford Rd	1	57	52	110
Willamette Falls Dr	0	48	50	98
<b>TOTAL</b>	<b>3</b>	<b>1,168</b>	<b>1,108</b>	<b>2,279</b>

### Criterion #2: Phase 2 State of Good Repair

#### Promote Resiliency through State of Good Repair

In addition to enhancing the resiliency of the Interstate system to keep freight and the public moving, INFRA funds will be used to seismically retrofit four of the bridges within Phase 2 limits and bring the I-205 infrastructure into a state of good repair.

There is a 15 to 20 percent chance that an earthquake as large as Magnitude 9.0 will occur in Oregon within the next 50 years.<sup>24</sup> However, the existing bridges along the corridor were not constructed to withstand an earthquake that large.<sup>25</sup>

In the wake of a catastrophic earthquake, I-205 will be the only functioning route between Oregon and Washington.<sup>26</sup> Further, I-205 is the designated Tier 1 Seismic Lifeline route for the entire Willamette Valley

<sup>23</sup> [Crash Reports](#), ODOT, 2020.

<sup>24</sup> [Cascadia Regional Earthquake Working Group](#), 2013.

<sup>25</sup> [Bridge Condition Report & Tunnel Data](#), ODOT, 2021

<sup>26</sup> [Bridge Condition Report & Tunnel Data](#), ODOT, 2021

as outlined in the 2021 ODOT Bridge Condition Report.<sup>27</sup> The Willamette Valley is home to 70 percent of Oregon's population, including the Portland Metropolitan Area. This lifeline cannot operate without the bridges receiving seismic upgrades.

Following an earthquake, the I-205 corridor will also serve as:

- A key component in ODOT's resiliency plan as a Willamette River crossing;
- A reliable lifeline, the I-205 Glenn Jackson Bridge over the Columbia River has a seismic rating "not vulnerable" in a major seismic event<sup>28</sup>;
- An access route to the Portland International Airport and connector to I-5, I-84, and OR-212/US-26 corridors to the east, and the Washington state border to the north; and,
- A resource for continued movement of goods.

The addition of the third lane, replacement of existing bridges and seismic upgrades to the remaining bridges will bring the I-205 infrastructure into a state of good repair, providing essential access in a major seismic event and improved movement through the corridor on a day-to-day basis.

## Criterion #3: Phase 2 Economic Impacts, Freight Movement, and Job Creation

Funding for Phase 2 is critical to Oregon's economy. The Phase 2 is supported across the state, including the Governor-appointed OTC, state legislators, members of Congress, local and regional governments, and industry stakeholders ([see letters of support](#)). Due to its statewide significance, the Oregon Legislature included the I-205 Improvements Project as a priority project of the state with the passage of the transportation funding package, House Bill 2017.<sup>29</sup>

The economic benefits of this Phase 2 are based on eliminating a critical West Coast bottleneck. Oregon's economic success depends on an efficient transportation system. Consistent with national goals to improve freight networks and support economic development, this Project will address a significant bottleneck on the interstate system to keep Oregon's freight and economy moving and competitive.

### Increase Economic Competitiveness:

Historically, highway facilities that were reliable and uncongested provided Oregon with a competitive edge, supporting an export-dominant economy. Today, Oregon's economic and population growth is adding pressure to the transportation system, with increasing congestion and declining travel reliability. Between June 2020 to June 2021, total employment in the Metropolitan Statistical Area grew by 70,000 jobs, indicating that the regional economy is recovering from the COVID-19 pandemic-induced contraction.<sup>30</sup>

Traffic congestion in the Portland region can now occur at any hour of the day, including mid-day and weekends. On the average weekday, the entire region is congested for approximately 11.5 hours; almost half of the day. The additional traffic burden of congestion affects a region's economy, resulting in a significant impact to employment. The daily cost of trucks and cars delayed on freeways in the Portland metro region in 2019

<sup>27</sup> [Bridge Condition Report & Tunnel Data](#). ODOT. 2021

<sup>28</sup> [Bridge Condition Report & Tunnel Data](#). ODOT. 2021

<sup>29</sup> [House Bill 2017](#), Keep Oregon Moving.

<sup>30</sup> [Employment Statistics](#). U.S. Bureau of Labor Statistics. 2020.

was \$1.2 million.<sup>31</sup> Investing in the transportation network in order to protect and enhance the state’s economy and quality of life is critically important.<sup>32</sup>

Phase 2 will reduce congestion and is a significant step to improving national and regional economic competitiveness and maintaining the freight reliability of I-205. The net present value of Phase 2 is \$341.4 million in 2020 dollars, including safety benefits (\$150.4 million), state of good repair benefits (\$6.1 million), economic impact benefits (\$370.3 million), and climate change benefits (\$9.2 million). Based on economic impact analysis performed for the upcoming I-205 Toll Project Environmental Assessment, falling to invest in Phase 2 will have profound negative economic impacts.

### Facilitate Freight Movement:

Freight movement directly contributes to the state’s and region’s economic vitality. I-205 is a crucial complement to I-5 and serves as a bypass to the core downtown Portland area, especially for interstate commerce between California and Washington. I-5 and I-205 provide the only state border crossings in the Portland Metropolitan Area. Added capacity on I-205 in this strategic location will improve the current freight bottleneck and accommodate the expected doubling of truck traffic by 2040 to support the tri-state freight economy. I-205 is a primary north-south interstate freight route providing an eastside alternative to I-5.

**Exhibit 9: Regional Centers and Industrial and Employment Lands**



I-205 carries the second highest truck volume in the Portland region with a daily volume of 7,000 to 14,000 trucks. This accounts for about 8 percent of total traffic on I-205.<sup>33</sup> I-205 also facilitates freight and traffic movement to and from several important regional industrial and employment areas. Most notable is the access to more than 2,000 acres of Regionally Significant Industrial Areas along the OR-212/OR-224 Sunrise Corridor (See Exhibit 9). Each day, the area of I-205 between Stafford Road and OR 213 facilitates the movement of over \$34 million and serves more than 8,000 freight vehicles.<sup>34</sup>

I-205 serves the Port of Portland, Portland International Airport (PDX), and the Columbia Corridor Regionally Significant Industrial Areas. The Abernethy Bridge lies along the primary route between the Port of Portland and shippers in the Willamette Valley, Southern Oregon, and Oregon Coast. Most of this cargo is exported. Whether it is live or prepared seafood, mushrooms, blueberries,

*“Without intervention, conditions on I-205 will result in travel time volatility and increased transportation expenses in our community.”*  
 - City of Happy Valley Mayor Tom Ellis

31 [Transportation Performance Report](#), ODOT. 2020.  
 32 [Transportation Performance Report](#), ODOT. 2020.  
 33 [House Bill 2017](#), Keep Oregon Moving.  
 34 [Transportation Performance Report](#), ODOT. 2020.

or other Oregon export products, much of what moves across this bridge is highly perishable and relies on quick, reliable transit times. This route also serves the Kroger/Fred Meyer regional distribution center in Clackamas, and the Safeway distribution center, both off of OR-212 just north of the project; and the domestic small package cargo service at the Port of Portland. Products such as medicine that are time critical as well as machine parts for the state's manufacturing industry, motorized vehicles, electronics, textiles, and more, move across the bridge in both directions each day.

### Accommodate Growth:

Oregon's transportation system is challenged to keep pace with population and economic growth. Metro, the Portland Metropolitan Planning Organization, predicts that employment in the designated regional centers, Regionally Significant Industrial Lands, and employment lands within the Project's influence area will grow up to 22 percent between 2010 and 2040, resulting in more people, freight, goods, and services traveling on the highway system. Add source This growth will put unsustainable pressure on the already strained I-205 corridor and Abernethy Bridge. Enhanced operations and added capacity will improve travel time reliability, as described above.

Based on an ODOT traffic count for the upcoming I-205 Toll Project environmental assessment, between 90,000 and 115,800 vehicles use I-205 between Stafford Road and OR-213 each day and will share the Phase 2 mobility benefits. ODOT has invested heavily in congestion relief along the I-205 corridor. As a result, the I-205 Phase 2 area is the last remaining four-lane segment on the 25-mile, six-lane I-205 freeway in Oregon. Investment in Phase 2 will fill a final capacity gap, significantly reduce congestion, and improve the surface transportation system efficiency.

### Reduce Congestion and Bottlenecks:

The Phase 2 area is the last remaining bottleneck on the I-205 corridor. Without Phase 2, regional growth will make peak periods of congestion last longer, further reducing the hours that vehicles can move on the system without major delays.

Phase 2 will improve mobility and travel time reliability. Upon the completion of the I-205 Improvements Project, travel times will be significantly improved realizing a reduction in congestion from 14 to 2 hours per day. Based on regional model output compiled for the I-205 Toll Project EA, upon completion of Phase 2, travel speeds during peak hours will further reduce travel times up to 53 percent depending on the direction of travel. Based on project dynamic traffic assignment model output for the I-205 Toll Project Environmental Assessment, even more profound is the results of a 2045 comparison of anticipated travel speeds with and without the Phase 2. Phase 2 will improve peak period travel speeds by 35 to 114 percent depending on direction, as shown in Table 5 below.

**Table 7: 2045 Forecast Travel Speed Between I-5 and 82nd Drive**

2045 Forecast Travel Speed Between I-5 and 82nd Drive	AM Peak		PM Peak	
	Southbound	Northbound	Southbound	Northbound
Without the Phase 2	41 mph	41 mph	42 mph	22 mph
With the Phase 2	55 mph	57 mph	56 mph	48 mph
<b>% mobility improvement</b>	<b>36%</b>	<b>39%</b>	<b>35%</b>	<b>114%</b>



## Enhance Mobility and Accessibility:

Phase 2 improves access to major regional employment and industrial centers, as well as major nearby education and health care facilities and recreational amenities, including Clackamas Community College, Kaiser Permanente Sunnyside Medical Center, Providence Milwaukie Hospital, Adventist Medical Center, and Legacy Salmon Creek Hospital. Recreational facilities include West Bridge, McLean House, Jon Storm, and Clackamette parks, End of the Oregon Trail Interpretive Center, I-205 Multi-Use Path, Springwater Corridor Trail, and Oregon City Esplanade.

Reducing congestion at this regionally significant bottleneck will further reduce barriers to efficient freight movement. Furthermore, the seismic retrofit leveraged by the INFRA grant funds will ensure that these mobility benefits are available if a large earthquake occurs.

## Criterion #4: Phase 2 Climate Change, Resiliency, and the Environment

Serving regional and national freight needs also yields community and environmental benefits. Phase 2 environmental benefits include reduced air pollutant emissions through reduced congestion. Reduced congestion also lowers greenhouse gas (GHG) emissions from idling vehicles and will improve the surrounding air quality. GHG emissions from cars and trucks have been rising since 2013 and represented 39 percent of total Oregon emissions in 2016.<sup>35</sup> ODOT conducted analysis to determine the impacts of traffic congestion on GHG emission rates in the region. The analysis indicated that corridors with slower speeds, due to more severe, recurring congestion bottlenecks, experience higher GHG emission rates than locations with higher peak period speeds.<sup>36</sup>

The addition of a third lane and variable rates tolls from Phase 2 will reduce GHG emissions by reducing the number of idling vehicles sitting in congested conditions. Further, new auxiliary lanes and widened shoulders will address bottlenecks that cause congestion and crashes, which create delays for travelers and freight. Stop and start traffic will be reduced, which will improve air quality and reduces GHG emissions.

Limiting environmental impacts was a primary criterion in the selection of the proposed design. ODOT evaluated different roadway widening alternatives and bridge alignments over the Tualatin River. The current design was selected because it has the least amount of impacts to the natural environment. The new Tualatin River bridges will require a new pier in the water. In-water work windows, wetland mitigation and a fish passage plan will be in place to minimize impacts to the Tualatin River.

## Criterion #5: Equity, Multimodal Options, and Quality of Life

### Equity

Equity is at the forefront of Phase 2 and the implementation of variable rate tolling on this corridor. ODOT's Strategic Action Plan<sup>37</sup> has informed the I-205 Improvements Project robust engagement with historically and currently underrepresented and underserved communities. The I-205 Improvements Project partners

<sup>35</sup> [Biennial Report to the Legislature](#). Oregon Global Warming Commission.2020.

<sup>36</sup> [House Bill 2017](#), Keep Oregon Moving.

<sup>37</sup> [Strategic Action Plan](#).ODOT.2022.

with Community Engagement Liaisons (CELs) to engage and inform multicultural community members. The CELs translate project information into five non-English languages frequently spoken within the I-205 corridor (Spanish, Vietnamese, Russian, and Traditional and Simplified Chinese). They also distribute project information to their community networks. The I-205 Improvements Project Team works with the CELs to develop or refine Project messages to ensure they are culturally appropriate.

ODOT is committed to working with industry and tribal partners and encouraging disadvantaged business enterprises (DBEs) to participate in Phase 2. Following the innovative strategies implemented in Phase 1, Phase 2 will use similar methods to provide better opportunities to increase workforce development opportunities and improve participation in existing training and education programs in the Portland Metropolitan Area. As an example, Phase 1 implemented priority hiring requirements for low-income zip codes to support the local economy. This was the first FHWA project of its kind to require priority hiring in the country. The OTC convened an Equity and Mobility Advisory Committee (EMAC) to advise them and ODOT on how tolling can address impacts and include benefits for communities that have been historically excluded and underserved by transportation projects. EMAC is involved in the following:

- Availability of transit and other transportation options.
- Transportation needs of, and benefits for, people of color and people with low incomes, limited English proficiency, or disabilities that live near or travel through the Project area.
- Better understanding of neighborhood benefits and impacts for the communities near the tolled facilities (e.g., changes to cut-through traffic, pedestrian and bicycle options, transit access).
- Developing an equitable engagement plan that will result in ongoing input and participation from communities that have been historically underrepresented in transportation planning.
- A Transit Multimodal Work Group has been formed to advise on transit and multimodal investments to complement the Project and mitigate for potential impacts, especially for underrepresented populations.

Toll mitigation measures are being evaluated to address significant impacts to social resources and communities, as well as to address past, present, and future impacts to environmental justice populations to avoid disproportionately high and adverse effects. Measures include, but are not limited to, an electronic toll system interface (e.g., website, mobile application, printed materials) that is simple to use, uses plain language, is printed in foreign languages, and is a combination of text and simple graphics; and customer service centers established across the region for assistance over the phone and in-person so drivers can use cash to purchase transponders, pay invoices, and establish prepaid accounts.

## Multimodal Options

ODOT is committed to supporting and investing in projects that provide a modern transportation system for all users. This includes multimodal transportation investments like public transportation, and bicycle and pedestrian facilities. A Transit Multimodal Work Group has been formed to advise on multimodal investments to provide transportation options and mitigate for potential impacts, especially for underrepresented populations. ODOT is working with EMAC and the Transit and Multimodal Working Group to identify multimodal and public transportation investments that ODOT will either incorporate into Phase 2 or identify as an opportunity to work with partner agencies to implement.

## Quality of Life

Overall, Phase 2 will lead to shorter travel times and trip reliability resulting in quality-of-life improvements that could lead to health benefits (e.g., increased accessibility to parks, recreation, health care facilities) and to pedestrians and bicyclists (e.g., higher level of safety and lower stress experienced). People will benefit from having more time to spend with family and friends, work or recreate; and from having access to an increased number of amenities and destinations in the same amount of time.

## Criterion #6: Innovation Areas: Technology, Project Delivery, and Financing Innovative Technology

### Innovative Technology

Five of the seven Active Transportation Management improvements planned along the I-205 Improvements Project corridor were installed in 2019, ahead of Phases 1 and 2. These signs will be used during Phase 1 and Phase 2 construction to provide traffic detour and delay information. After completion of the improvements these signs will provide additional safety benefit with up to a 21 percent reduction in crashes.

### Innovative Project Delivery

Phase 2 was assessed through ODOT's procurement matrix to determine optimal delivery approach. Due to the complexity of the project and technical construction elements included, the A (Price) + C (Qualifications) + D (Approach) method, also known as the best value procurement method, has been identified as the best method for Phase 2. This procurement method allows for quantifying experience, means and method to the overall selection score along with cost. By selecting a contractor based on a combination of best price and approach, cost and quality will be better balanced, and risk associated with the Phase 2 construction schedule and cost will be better managed. ODOT will submit the SEP-14 documentation to FHWA for this contracting method in late 2022. This will allow Phase 2 to increase workforce development opportunities with local hiring preferences in economically distressed zip codes in the surrounding counties. Similar to Phase 1 that will begin construction in June 2022, this delivery method will allow flexibility in Phase 2 requirements such as added DBE goals.

### Innovative Financing

On Tuesday, January 8, 2019, FHWA approved ODOT's application to implement Value Pricing<sup>38</sup> and to toll I-205 at or near the Abernethy and Tualatin River Bridges. ODOT submitted an application in December 2018 to toll this route to raise money for transportation improvements and reduce congestion, as required by HB 2017.<sup>39</sup> With FHWA's response, ODOT has moved forward, and the I-205 Toll Environmental Assessment is underway. The state is looking to leverage these potential funding scenarios with federal financial assistance through opportunities such as the FY22 INFRA grant.

The preliminary toll revenue projections for I-205 assume gross revenue of \$92 million in the first full year of operations. The revenue dollars are projected to steadily increase each year as the area continues to grow. The projected total gross revenue over the 35 year study period is projected to exceed \$7 billion dollars.

<sup>38</sup> [Value Pricing Feasibility Analysis and Proposed Implementation](#). ODOT. 2018.

<sup>39</sup> [House Bill 2017](#), Keep Oregon Moving.

## VI. Benefit Cost Analysis

### Phase 2 Benefit Cost Analysis Description, Assumptions, and Factors

The net present value (PV) of Phase 2 benefits is \$341.4 million in 2020 dollars, and the benefit cost ratio (BCR) is 2.52 (See Table 8).

Phase 2 realizes economic benefits from reduced congestion and improved travel times, which is a significant step to improving national and regional economic competitiveness while maintaining I-205’s freight reliability. According to the Benefit Cost Analysis (BCA), ODOT expects Phase 2 to have a net present value of \$341.4 million and a benefit-cost ratio of 2.52 relative to a no build baseline (See Table 8).

**Table 8: Benefit Cost Analysis Summary Data**

<b>Present Value (PV) of Capital Costs</b>	<b>-285,897,984</b>
PV of State of Good Repair Benefits	\$6,067,046
PV of Economic Competitiveness Benefits	\$370,298,985
PV of Quality of life Benefits	\$9,868,125
PV of Environmental Sustainability Benefits	\$9,169,463
PV of Safety Benefits	\$150,413,029
PV of Residual Value	\$20,692,063
PV of Additional Maintenance	(\$345,308)
<b>PV of Benefits Total</b>	<b>\$566,163,403</b>
<b>Net Present Value</b>	<b>\$341,420,833</b>
<b>Benefit: Cost Ratio</b>	<b>2.52</b>

**Table 9: Benefit Cost Ratio**

Corridor	Present Value of Capital Costs	Benefits Total	Net Present Value	Benefit/Cost Ratio
I-205 Corridor	(\$87,430,298)	\$324,707,768	\$237,277,450	2.52

Following USDOT’s March 2022 BCA guidance,<sup>40</sup> the analysis valued travel time, reliability, and congestion improvements for existing users at \$370.3 million, with about 20 percent of that benefit going to freight traffic in the first year. According to traffic modeling estimates, Phase 2 will also see a 21 percent reduction in total crashes relative to pre-pandemic average crashes, resulting in \$150.4 million in benefits over the life of the project. An additional \$9.2 million in environmental benefits come from avoided vehicle idling during congestion events. See the full BCA [spreadsheet](#) and [summary](#).

The baseline for this project is a no build alternative that would result in no tolling and no lane additions. The main economic benefits of the project also align with INFRA criteria and include the following benefits (net present values (NPV) in 2020 dollars):

- **Safety: \$150.4 million**
- **State of good repair: \$6.1 million**
- **Economic impacts of including freight movement benefits: \$370.3 million**
- **Climate change benefits through emissions and vehicle hours driven reductions: \$9.2 million**

This BCA quantifies benefits from those categories according to March 2022 US DOT BCA Guidance.<sup>41</sup> The congestion and safety benefits are 65.4 percent and 26.6 percent of the project benefits claimed in this analysis, respectively. It is possible there are additional non-quantifiable safety benefits from increased resilience to earthquake damage not claimed here. Phase 2 benefits are robust to uncertainty about future benefits, as well. For example, even if only 8 percent of the claimed VHD reductions occur, this project will still have positive net present value.

<sup>40</sup> [BCA Guidance](#).USDOT.2022.  
<sup>41</sup> [BCA Guidance](#).USDOT.2022.

*“As a community that hosts over 20,000 jobs—with over half of the positions in family-wage traded-sector industrial occupations—where 9 out of 10 employees commute from elsewhere to work in Wilsonville, a well-functioning I-205 is crucial for employee commuting, timely conduct of commerce and advancing national and regional economic-development goals.”*

- City of Wilsonville Mayor Julie Fitzgerald and SMART Director Dwight Brashear



Demand management through tolling significantly improves congestion outcomes on an important freight corridor. Traffic volumes along the corridor are expected to adjust accordingly, even seeing reduced traffic volumes during some peak hours relative to the no build alternative. The corridor sees a high volume of freight traffic, averaging 8 percent of total traffic counts in the pre-pandemic traffic study.<sup>42</sup> While the share of freight traveling on the road is held constant, it is possible this share will increase over time following demand management through tolling. Because of this, the quantified benefits to freight likely understates the value of travel time savings and congestion benefits for freight.

Safety benefits are quantified based on the Enhanced Interchange Safety Analysis Tool (ISATe)<sup>43</sup>. This tool showed a 21 percent reduction in crashes for the Build over the No Build scenario for this project, which saw multiple fatalities in the study period. It is possible there are additional non-quantifiable safety benefits from increased resilience to earthquake damage not claimed here due to the difficulty of predicting such an event. However, costs of the earthquake retrofits are quantified and included.

<sup>42</sup> [Transportation Performance Report](#). ODOT. 2020.

<sup>43</sup> [Enhanced Interchange Safety Analysis Tool](#). FHWA. 2007.

## VII. Project Readiness and Environmental Risk

### A. Technical Feasibility

ODOT has invested \$65.3 million to study the I-205 Corridor Project, defining the I-205 Improvements Project and assessing the technical feasibility of the improvements. Recently, ODOT programmed an additional \$495 million to construct Phase 1, which includes the Abernethy Bridge widening and seismic retrofit. At 60-90 percent design, the project is only 18 months away from being ready for construction. Specifically, the following studies demonstrate the Technical Feasibility of Phase 2.

- **2003 I-205 Reconnaissance Report:** Determined the limits of the I-205 widening project from the Abernethy Bridge to Stafford interchange. Established construction feasibility and environmental impacts of the widening.
- **2013 Corridor Bottleneck Operations Study (CBOS):** Identified recurring freight and commuter bottlenecks on the regional freeway system. CBOS developed low-cost solutions (\$5 - \$10 million). CBOS identified the I-205 Improvements Project, but it did not fit the low-cost criteria.<sup>44</sup>
- **2016 ATM Project Atlas:** Defined opportunities for I-205 northbound and southbound Active Transportation Management, including the Abernethy Bridge.<sup>45</sup>
- **2018 Cost to Complete Report (CTC):** The CTC Report provided the plan for how ODOT would deliver the Project. The CTC Report,<sup>46</sup> which was based on a 15 percent level of design, provided the Project's scope and benefits, a recommended Project phasing plan and delivery method, and future steps for the OTC and the Oregon Legislature to consider.
- **2018 Design Acceptance Package (DAP):** The Final DAP utilized the recommendations in the CTC Report as its basis and progressed the design to approximately a 30 percent level. Per ODOT's 2017 Project Delivery Guidebook,<sup>47</sup> the DAP is a critical decision point that establishes the geometric boundaries of a project footprint and allows for the concurrent right-of-way, permitting and construction contract document activities to move forward. Design Acceptance also considers the Americans with Disabilities Act (ADA), environmental and land use requirements and how

<sup>44</sup> [Corridor Operations Bottleneck Study](#). ODOT. 2013.

<sup>45</sup> [ATM Project Atlas](#). ODOT. 2016.

<sup>46</sup> [Cost to Complete Report for Combined Interstate Abernethy Bridge and Widening Projects](#). HDR. 2018

<sup>47</sup> [Project Delivery Guide](#). ODOT. 2017.

they affect the permitting, and development of construction contract documents. Design Acceptance requires that all project disciplines have reviewed the design for balance of context with standards and policies; this occurs when the project obtains management signatures.

- **2018 CRA-VE:** A group of industry experts comprised of Agency and Consultant staff performed a joint Cost Risk Assessment (CRA) and Value Engineering (VE) using the 30 percent level plans for the program area. Cost risks were identified and a Monte-Carlo evaluation was performed to determine the most likely cost for the project given the construction/bidding environment at the time. A value engineering study and report was generated by the VE team and responded to by the ODOT/Consultant design staff.
- **2019 Operational Improvements:** Early construction package completed five Intelligent Transportation System (ITS) sites including retrofits to existing infrastructure and new sign bridges for Variable Message Systems (VMS) and Vehicle Activated Signage (VAS) to provide valuable traveler information through the corridor.
- **2020 Preliminary Plans:** Preliminary plans were developed and progressed design to approximately a 60 percent to 90 percent level for Phase 2 and the remaining sections of Phase 1, respectively. This provided refinements in structure types, traffic control scenarios, and more detailed cost estimates.
- **2020 CER-VE:** A group of industry experts comprised of Agency and Consultant staff performed a joint Cost Estimate Review (CER) and Value Engineering (VE) using the 60 percent level plans for the program area. Costs were identified and a Monte-Carlo evaluation was performed to determine the most likely cost for the project given the construction/bidding environment at the time. A value engineering study focused on the Phase 1 area between OR-213 and the 10th St. Interchange was conducted. A report was generated by the VE team and responded to by the ODOT/Consultant design staff.
- **2021 CER:** A group of industry experts comprised of Agency and Consultant staff led by FHWA performed a joint Cost Estimate Review (CER) using the 90 percent level plans for the program area. Costs were identified and a Monte-Carlo evaluation was performed to determine the most likely cost for the project given the construction/bidding environment at the time.

## ODOT's BASIS OF DESIGN

The final Design Acceptance Package consisted of two principle categories of work for the Project:

**1. I-205 Added Capacity:** Phase 2 adds a third lane in each direction on the section of I-205 between the Stafford Road and OR-43 interchanges, removing the existing bottleneck, providing added capacity and reducing travel times. This will also complete a continuous three lane section throughout the entire corridor, currently being the only remaining section with only two lanes in each direction.

**2. Bridge Replacements and Seismic Upgrades:** Phase 2 replaces six existing bridges and seismically upgrades four existing bridges to withstand a major earthquake. ODOT designated I-205 as a statewide north-south lifeline route, which means it must be operational quickly after a disaster renders other roadways unusable or impassable. This critical route will provide supplies and services to the region. Following the Phase 1 improvements directly north of the Phase 2, this will complete the lifeline route for the Portland metropolitan area.

## B. Project Schedule

Construction of the project will begin in 2024. As planned, ODOT will submit Plans, Specifications, & Estimates by December 2023 and will then select a construction contractor to begin construction in 2024.

The I-205 Improvements Project Phase 2 schedule includes additional detail and all major project milestones.

## C. Required Approvals

Phase 2 will seek all required local, state, and national approvals as demonstrated in the sections below.

### a. NEPA Status

The preliminary design work performed throughout 2017 and 2018 resulted in an FHWA-approved Categorical Exclusion for the full I-205 Improvements Project on December 20, 2018. A re-evaluation of the Categorical Exclusion determined all project elements not related to Phase 1A should be evaluated as part of the I-205 Toll Project Environmental Assessment. This Environmental Assessment is currently underway and ODOT anticipates receiving a NEPA decision in the first quarter of 2023 in order to meet Phase 2 funding obligation and construction schedule.

### b. State and Local Approvals

ODOT obtained the following permits and approvals for the Categorical Exclusion. They will be updated through the Environmental Assessment currently underway.

- ODFW Fish Passage Approval
- City of West Linn Type II Land Use
- Clackamas County Type II Land Use
- Oregon Division of State Lands Fill/Removal Permit
- Oregon Department of Environmental Quality 401 Certification

### c. Environmental studies or other documents

In addition to the FHWA NEPA approval and the approvals and other clearances listed in Sections a and b above, the following studies were completed to understand the anticipated level of impacts.

- Historical Resources Technical Report, November 2017
- Migratory Bird and Bat Technical Memorandum, January 2018
- Section 4(f) Technical Memorandum, March 2018
- Level 1 Hazardous Material Corridor Study and Hazardous Buildings Materials Paper Survey, April 2018
- Environmental Justice Technical Memorandum, June 2018
- Air Quality Technical Report, October 2018
- Fish Biological Resources Technical Memorandum, September 2018
- Noise Technical Report, December 2018
- Wetland Delineation, January 2019
- Archaeological report, March 2019
- Level 2 Preliminary Site Investigation – October 2020
- Structure Survey – October 2020
- Shoulder Material Investigation report – November 2020

In addition, the following studies and documents have been finalized as part of the current NEPA environmental review.

- I-205 Toll Project Revised Final Purpose and Need Statement
- I-205 Toll Project Final Comparison of Screening Alternatives Technical Report
- I-205 Toll Project updated performance measures for the environmental review

Additional technical reports to address impacts to environmental resources are in progress.

## VIII. Large Project Requirements

### Performance and Accountability

Performance metrics and accountability are an integral part of the funding identified in HB 2017 and will be enacted as part of the implementation of the funds obtained for Phase 2. In addition to the performance metrics and accountability outlined in the bill, ODOT has identified performance metrics to measure the

short and long-term performance directly related to the construction project elements and the innovations implemented on the project with the goals of improving safety and system reliability and reducing congestion. Phase 2 meets all requirements for a large project per [23 USC 177 \(g\)](#)<sup>48</sup>. (See **Table 10 and 11**).

**Table 10: Large Project Requirements**

Large Project Determination	Guidance
<p><b>#1. The project will generate national or regional economic, mobility, or safety benefits.</b></p>	<p><b>See Sections V and VI.</b> This project will complete the I-205 Improvements Project totaling \$453 million in expended state and federal funding and is expected to create \$292.8 million in economic benefits, as measured by benefits to Oregon's Gross Domestic Product, traveler non-monetary benefits and societal benefits. The Project also will create approximately 1,075 new jobs during the four-year construction period.</p>
<p><b>#2. The project will be cost-effective.</b></p>	<p><b>See Section VI.</b> This \$453 million capital project (in year of expenditure dollars) has a net present value of \$341.4 million and a benefit/cost ratio of 2.52.</p>
<p><b>#3. The project will contribute to the accomplishment of one or more of the goals described in 23 U.S.C. §150 (and shown below).</b></p> <p>b. National Goals -It is in the interest of the United States to focus the Federal-aid highway program on the following national goals:</p> <p>(1) Safety – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.</p> <p>(2) Infrastructure condition – To maintain the highway infrastructure asset system in a state of good repair.</p> <p>(3) Congestion reduction – To achieve a significant reduction in congestion on the National Highway System.</p> <p>(4) System reliability – To improve the efficiency of the surface transportation system.</p> <p>(5) Freight movement and economic vitality – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.</p> <p>(6) Environmental sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment.</p> <p>(7) Reduced project delivery delays – To reduce project costs, promote jobs, and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.</p>	<p><b>See Sections V and VI.</b></p> <p>(1) Safety: The project implements design features to improve safety along I-205 by widening the roadway and bridges, improving ramp connections, upgrading signing and implementing Active Transportation Management (ATM) systems.</p> <p>(2) Infrastructure: INFRA funding will be used to towards pavement and bridge preservation on the corridor to maintain this infrastructure. Four structures will be seismically retrofitted, eight will be replaced and 6.3 miles of pavement will be reconstructed.</p> <p>(3) Congestion reduction: Peak hour traffic volumes in the project area exceed capacity of the current facility. This project will add a third lane in each direction and complete the last 6.3 miles of two-lane section on the entire I-205 corridor and significantly reduce congestion.</p> <p>(4) System reliability – The high crash frequency in the project area degrades I-205 reliability. Widening the roadway, reconfiguring ramps and adding ATM throughout the corridor will reduce congestion and provide reliable travel times and reduce crashes.</p> <p>(5) Freight movement and economic vitality – I-205 carries the 2nd highest truck volume in the Portland region and provides critical access for agricultural products from around the state to port facilities. As a bypass, it is a crucial supplement to I-5, especially for interstate commerce between California and Washington. This project will significantly benefit local, regional and national economies.</p> <p>(6) The project completed an FHWA-approved Categorical Exclusion (CatEx) and determined that the design and construction approach does not impact the surrounding environment. A re-evaluation of the CatEx determined the project should be evaluated with the I-205 Toll Project EA.</p> <p>(7) Reduced project delivery delays – ODOT plans to use the A (Price) + C (Qualifications) + D (Approach) method, best value procurement method for the project. This procurement method allows for quantifying experience, means and method to the overall selection score along with cost. By selecting a contractor based on a combination of best price and approach, cost and quality will be better balanced, and risk associated with the construction schedule and cost will be better managed.</p>

<sup>48</sup> [Title 23 U.S.C. § 117\(g\)](#)



**Table 10: Large Project Requirements, continued...**

Large Project Determination	Guidance
#4. The project is based on the results of preliminary engineering.	<b>See Section VII.</b> The project will complete preliminary engineering to a 70%, 90% and 100% design submittals to develop the construction documents.
#5. With respect to related non-Federal financial commitments, one or more stable and dependable funding or financing sources are available to construct, maintain, and operate the project, and contingency amounts are available to cover unanticipated cost increases.	<b>See Section IV.</b> The non-Federal funding source will be revenue from the variable rate tolling proceeds that will be implemented in late 2024. Other ODOT funding sources may be used initially, but any alternate funds will be repaid with toll bond proceeds.
#6. The project cannot be easily and efficiently completed without other Federal funding or financial assistance available to the project sponsor.	<b>See Section IV.</b> ODOT is requesting \$120 million in Infra funding (~30 percent of the project cost) to leverage \$330 million in state and federal funds.
#7. The project is reasonably expected to begin construction no later than 18 months after the date of obligation of funds for the project	<b>See Section VII.</b> ODOT proposes to obligate funding by September 30, 2023. Construction is expected to commence within 120 days of obligation. ODOT has extensive experience delivering large, federally funded highway projects in an effective manner.

**Table 11: Performance Metrics**

Performance Objectives	Metrics
Reduce crashes	Number and severity of crashes in the project area
Reduce congestion on I-205	AM peak hour travel time PM peak hour travel time
Improve efficient use of roadway infrastructure and travel reliability	Vehicle miles traveled Vehicle hours traveled
Improved transit services	Transit level of service Transit travel times during peak periods