

# I-205 Toll Project

## DRAFT Executive Summary



**Date** July 7, 2020  
**To** Lucinda Broussard, Oregon Toll Program Director  
**From** I-205 Toll Project Consultant Team  
**Subject** Executive Summary: Comparison of I-205 Screening Alternatives Technical Report  
**CC** Chi Mai, ODOT R1 Major Projects  
 Alex Bettinardi, ODOT Transportation Planning and Analysis Unit

### PURPOSE

This report summarizes the recommendations for alternatives to carry into the National Environmental Policy Act (NEPA) analysis for the I-205 Toll Project and highlights key findings supporting those recommendations.

### OVERVIEW

Table 1 summarizes the overall assessment of screening alternatives based on evaluation categories. Alternatives 3 and 4 are the initial alternatives recommended for advancement to the NEPA process.

**Table 1: Overall Assessment of Alternatives by Evaluation Category**

Evaluation Category	Alt 1 & Alt 2	Alt 3	Alt 4	Alt 5
Transportation System Demand				
I-205 Traffic				
Diversion Effects				
Cost and Revenue				
Implementation and Operations				
<b>Recommendation</b>	<b>Do Not Advance</b>	<b>Advance for Further Evaluation</b>	<b>Advance for Further Evaluation</b>	<b>Do Not Advance</b>

<b>Substantially worse</b> outcomes than other alternatives 	<b>Worse outcomes</b> than other alternatives 	<b>Average or typical</b> outcomes among alternatives 	<b>Better outcomes</b> than other alternatives 	<b>Substantially better</b> outcomes than other alternatives 
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WSP evaluated five alternatives for tolling I-205 between the Stafford Road and OR 213 interchanges. These alternatives constitute geographic location options where tolls will be charged (toll gantries) and different structure for assessing tolls (e.g., single point, segment-based, and zonal).

Table presents the list of screening alternatives, the rationale behind their development, and a brief assessment of each.

**Table 2: I-205 Screening Alternatives Under Consideration for Further Evaluation**

Alt.	Description	Development Rationale	Assessment	Recommendation
1	Abernethy Bridge Toll (Concept E from the 2018 Value Pricing Feasibility Analysis)	Recommendation of the Value Pricing Feasibility Analysis, simple to implement	Manages demand on I-205 around the Abernethy Bridge but results in significant traffic increases near the Arch Bridge and in downtown Oregon City	Not recommended for further evaluation
2*	Abernethy Bridge Toll with Off-Bridge Gantries	Modification of Alternative 1 to limit rerouting in downtown Oregon City	Manages demand on I-205 around the Abernethy Bridge but results in significant traffic increases near the Arch Bridge and in downtown Oregon City	Not recommended for further evaluation
3	Bridge Tolls - Abernethy Bridge and Tualatin River Bridge	Tolling a second bridge reduces the cost of crossing the Abernethy Bridge, which reduces the incentive for some trips to take alternative toll-free routes	Manages demand on I-205 at the Abernethy Bridge and between Stafford Road and 10th Street, traffic increases on nearby routes are less concentrated	Recommended for further evaluation
4	Segment-Based Tolls - Between Stafford Road and OR 213	Tolling multiple roadway segments lowers the average toll cost and reduces the incentive for some trips to take alternative toll-free routes	Manages demand on I-205 between Stafford Road and OR 213 without resulting in concentrated traffic increases, offers significant flexibility to limit rerouting and manage traffic operations	Recommended for further evaluation
5	Single-Zone Toll - Between Stafford Road and OR 213	Single toll rate applied for any travel within the tolled area, intended to reduce the incentive for regional trips to use alternative toll-free routes	Manages demand on I-205 between Stafford Road and OR 213, results in traffic increases on the edges of the toll zone, limited ability to better manage demand and scale the system to the region	Not recommended for further evaluation

\*Note: Alternative 1 and Alternative 2 perform the same in all model-based performance measures, as the regional travel demand model does not provide significant differentiation between these alternatives.

All the alternatives considered could provide a tolling system on I-205 that would both manage congestion and raise revenue. However, there are tradeoffs among the alternatives, and no single alternative scores the best on all criteria. In general, alternatives were evaluated based on their ability to manage demand on I-205 and limit rerouting to nearby roadways (taking

different roads to avoid the toll) while generating similar levels of revenue to fund congestion relief projects.

The screening analysis is focused on evaluating five potential configurations for the I-205 Toll Project. The analysis compares the alternatives against one another considering key evaluation criteria and performance measures. The technical analysis is the basis for recommending which alternatives be advanced for further study in the NEPA process. In the NEPA analysis, the technical analysis tools and models are expected to be refined to better assess local impacts and a wider range of performance measures.

### **Initial Screening Criteria**

Alternatives were assessed in five evaluation categories with 12 qualitative and quantitative performance measures. Alternatives were assessed relative to one another on these performance measures, with quantitative measures based on results from the Metro regional travel demand model. General performance of each alternative in these categories was summarized in Table 1, while Table 3 provides additional detail by performance measure.

The criteria and their associated performance measures are as follows:

- **Transportation System Demand** – Assesses the extent to which tolling affects vehicle travel by estimating the impact of each alternative on total vehicle miles travelled (VMT) and vehicle hours of travel (VHT) in the regional transportation system. The alternatives generally shift vehicle demand away from freeways to non-freeways but result in an overall decrease in demand on the regional system.
- **I-205 Traffic** – Assesses the extent to which tolling changes the volume of vehicles using I-205 by estimating the change in vehicular throughput between Stafford Road and OR 213. Tolling is expected to decrease daily vehicle volume and improve traffic flow on I-205.
- **Diversion Effects** – Assesses the extent to which drivers avoid the toll by either switching their travel mode or switching their route. Modal switch is assessed in terms of trips shifted from single-occupancy vehicles (SOV) to high-occupancy vehicles (HOV), transit, and active modes like biking or walking. Rerouting is assessed by changes in travel volume on various regional roadways and facilities and communities near the alternatives. While shifts in mode are generally small and consistent across all alternatives, the location of rerouting effects can vary substantially between alternatives.
- **Cost and Revenue** – Assesses the net revenue potential after accounting for operations and maintenance costs, and capital costs. Alternatives are assessed relative to one another with values, indexed to Alternative 1 as it represents the original recommendation from the Value Pricing Feasibility Analysis. All alternatives were developed with the intention of generating similar net revenues.
- **Implementation Criteria** – Assesses various issues associated with implementation of tolling including difficulty of implementation, scalability to a regional tolling system, flexibility for managing traffic operations, and eligibility under federal tolling authorization

programs. Unlike the other evaluation criteria and performance measures, this assessment was qualitative in nature.

**Table 1: Assessment of Alternatives by Performance Measure**

Evaluation Category	Performance Measure Assessment	Alt 1 & ALT 2	Alt 3	Alt 4	Alt 5
Transportation System Demand	Reduce VMT on freeways and non-freeways	○	○	○	○
	Reduce VHT on freeways and non-freeways.	◐	○	○	◑
I-205 Traffic	Higher vehicle throughput on I-205 segments between Stafford Road and OR 213	○	○	◐	◑
Diversion Effects	Person-trips shifting away from SOV travel to other modes (e.g., HOV, transit, active)	○	○	○	○
	Limit increased traffic due to rerouting on non-tolled regional roads	○	○	○	◑
	Limit increased traffic due to rerouting on local and adjacent roadways	◐	○	○	○
Cost and Revenue	Higher net toll revenue (adjusted gross toll revenue collected less operations and maintenance costs)	◐	◑	●	○
	Lower capital costs for physical toll infrastructure and procuring toll vendor services	◑	○	◐	○
Implementation and Operations	Difficulty of implementation	◑	◑	○	○
	Flexibility for managing traffic operations	◐	◑	●	○
	Scalability to a future regional tolling system	○	◑	●	○
	Eligibility under federal tolling authorization programs	◑	◑	○	○

Substantially worse outcomes than other alternatives ○	Worse outcomes than other alternatives ◐	Average or typical outcomes among alternatives ○	Better outcomes than other alternatives ◑	Substantially better outcomes than other alternatives ●
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## Recommendations

Federal tolling authority is provided under Title 23, Section 129 of the U.S. Code, and projects that are eligible under this code provide greater certainty of implementation because no further approvals are required. Alternatives 1, 2, and 3 are likely eligible under Section 129. It is possible that neither Alternative 4 nor 5 would be eligible under Section 129 and that federal tolling authority would instead be required under the Value Pricing Pilot Program (VPPP). The VPPP allows for a wider range of configurations but requires discretionary approval of the U.S. Secretary of Transportation and entails a significant amount of uncertainty regarding when approval can be expected. Advancing at least one alternative that is eligible under Section 129 federal tolling authority is recommended.

Alternative 3 and Alternative 4 are **recommended** for advancement. Both effectively manage traffic on I-205 while generating revenue. While these alternatives do result in rerouting from vehicles avoiding the toll, the rerouted traffic would be distributed along the I-205 corridor so that no one particular facility or community receives the full impact. Because it has more tolled segments, Alternative 4 offers added flexibility in terms of using variable toll rates to manage traffic on I-205 while limiting rerouting effects. Both alternatives can be readily scaled to other regional facilities.

Alternatives 1 and 2 are **not recommended**. Both would result in significant traffic increases in Downtown Oregon City, on the Oregon City Arch Bridge, and near the OR 43 interchange with I-205 as a result of traffic rerouting to avoid a toll. Furthermore, these alternatives would be less effective at managing traffic along I-205 beyond the Abernethy Bridge.

Alternative 5 is **not recommended**. While the single-zone toll approach of this alternative would be effective at limiting rerouting of through trips on I-205, it would not be as effective at managing traffic patterns for trips entering and exiting I-205 near the tolled zone and would potentially result in concentrated rerouting effects. Because there would be one toll rate for all trips regardless of distance travelled, the alternative would have limited flexibility to manage traffic operations and would be difficult to scale to other facilities in the region as currently structured.

## Limitations

The initial recommendations above are intended for ODOT consideration. To date, the technical evaluation and recommendations have not been reviewed by technical working groups or agency stakeholders.

The technical analysis is focused on comparison of the alternatives against one another using a limited set of evaluation criteria that do not fully assess the potential impacts the I-205 Toll Project. Full consideration of environmental and social impacts will be assessed in the NEPA analysis.

The analysis relies heavily on outputs from the Metro regional travel demand model for 2027 scenarios. The technical analysis tools, models, and assumptions are expected to be refined to better assess local impacts and a wider range of performance measure in the NEPA analysis.

DRAFT

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