



Oregon

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DATE: April 24, 2025

TO: Oregon Transportation Commission

FROM: Kristopher W. Strickler
Director

SUBJECT: **Agenda Item L** – I-5 Rose Quarter Improvement Project: Updated Cost Estimate and Pathway to Construction

Requested Action:

Receive an informational update on the I-5 Rose Quarter Improvement Project cost estimate and process for federal authorization to begin Phase 1A construction start this summer.

Background:

The Commission will receive an update on the I-5 Rose Quarter Improvement Project's current cost estimate, including the cost progression between 2023 and 2025, and the steps the project team is taking to manage costs. The Commission also will receive an update on construction start this summer, with a summary of the Federal Highway Administration's (FHWA) federal major project requirements to authorize construction to begin.

Cost Estimate Update

Projects of significant size and scope are required by FHWA to conduct a final risk-based estimate prior to initial construction authorization. The project team is currently working with FHWA to complete the federally-required Major Project Requirements for Phase 1A construction authorization in response to the commission direction last December.

The FHWA defines a major project as one that receives federal funds and has an estimated cost of \$500 million or more – the project meets this definition. ODOT must complete the following FHWA Major Project requirements for FHWA construction authorization:

- Cost Schedule Risk Assessment (CSRA) by FHWA - Completed April 2025
- Initial Financial Plan – In Process
- Project Management Plan (PMP) - Completed April 2025

The June 2023 cost estimate was \$1.5 billion to \$1.9 billion and the April 2025 FHWA cost estimate is \$1.96 billion to \$2.08 billion (a risk-based cost estimate reported at the 50%-90% confidence range, referred to as the P₅₀ and P₉₀). This change in cost is driven not by scope changes, but by more a risk-based estimating process, updated inflation assumptions, delayed construction start and end date changes, and real-time market condition data.

The project team is implementing refinements to bring the total project cost back within the 2023 estimate range, including immediate refinements as a first step to reduce cost and a second step of exploring additional refinements that will require further investigation and coordination. With these refinements, the project team aims to bring the project cost back within the upper range of the 2023 estimate at \$1.7 billion to \$1.9 billion.

Rose Quarter Project Team Estimating Process: The project team has identified factors in the 2023 estimate that have been changed for the 2025 estimate to better reflect the rapidly changing market conditions, including:

- Not applying a risk-based methodology to generate the 2023 estimate. A risk-based estimate would have better illuminated the compounding effect of inflation and the impact of funding-related effects, outside stakeholder input and requests, and/or market conditions, that can significantly change project scope and/or cause project delay.
- Using a static contingency percentage in 2023 instead of a site-specific risk analysis.

2023 Estimate: In June 2023, ODOT reported the project's cost estimate range of \$1.5 billion to \$1.9 billion in the 2023 Urban Mobility Strategy Finance Plan. Based on the information available at the time and the use of industry standard contingency assumptions, the project team had confidence in the results when the cost estimate was developed in 2023.

The 2023 estimate included:

- The full project scope in the federally-approved environmental review document, inclusive of the southbound off-ramp flyover structure and reintegrated bicycle and pedestrian bridge over I-5 in response to public comment received on the 2022 Supplemental EA.
- Using a combination of quantity-based estimates and contractor-style estimating, with cost ranges established utilizing an assumed contingency value and varied ranges of escalation to account for inflation based on estimated year of expenditure. The project team used this cost estimating process given the preliminary level of design for the full project.
- Using static contingency at 30% to 40% instead of a site-specific risk register that was run through a model simulation.
- Using subcontractor estimates based on industry averages for the CM/GC's estimated base construction cost, but did not include actual pricing from subcontractors as the project was not approaching a construction phase in 2023.
- Project completion in 2033, with a range of 3% to 3.5% for assumed inflation, which was reflective of historic inflation trends used by ODOT and FHWA.

2025 Estimate: The 2025 estimate range is \$1.96 billion to \$2.08 billion (P₅₀ to P₉₀), with the "most probable" cost reported by FHWA at the 70th percentile (P₇₀) at a value of \$2.01 billion. In 2025, the project team transitioned to a risk-based cost estimating process as the project design was sufficiently advanced and to meet FHWA requirements for construction authorization. In February 2025, FHWA performed a Cost Schedule Risk Assessment (CSRA) for the project. FHWA presented this final CSRA result to the project team on April 2, 2025.

As mentioned above, the CSRA reports costs at confidence percentile levels and this updated cost estimate range reflects the 50th percentile cost (\$1.96 billion) to the 90th percentile cost (\$2.08 billion), with the 70th percentile cost (\$2.01 billion) being the “most probable.” This means that at the low end of the range there is a 50% probability that the final project cost will be at or below this value and at the high end of the range there is a 90% probability that the final cost will be at or below this value. A 100% confidence level (P₁₀₀) would be higher but is rarely used as an industry standard.

The CSRA process captures refined design progression-related costs, schedule and project-specific risk inputs since 2023 and generates (through a Monte Carlo Simulation, which simulates 10,000 combinations of risk occurrences) a probabilistic distribution of cost and schedule completion results.

The project team has a higher degree of confidence in the 2025 CSRA process and results relative to the 2023 cost estimate due to the inherent rigor of the CSRA process that also included relevant economic information and trends provided by FHWA from similar workshops they deliver nationally.

Factors influencing the cost estimate change are:

- **Methodology:** Shift from preliminary design and static contingency (30–40%) in 2023 to risk-based modeling (CSRA) in 2025. The 2025 estimate applied FHWA-required risk modeling, which was not used in 2023.
- **Inflation Assumption:** Shift from 3.0%–3.5% rate in 2023 to 4.0% rate in 2025 to reflect most recent inflation trends. The 1% increase in the inflation rate equates to \$50 million alone. This is in context of national construction costs having increased 95% between 2017 and 2024.
- **Subcontractor Pricing:** Shift from assumed industry averages in 2023 to incorporating current subcontractor pricing from early package (Phase 1A) bids in 2025. Assumed subcontractor pricing used in the 2025 estimate are higher than 2023 levels based on actual bids submitted for other regional projects in 2025.
- **Schedule Assumption:** Shift from completion by 2033 (assumed in 2023) to completion by 2034 to reflect uncertain funding availability (assumed in 2025). This was a result of the risk modeling that took into account the uncertainty of funding availability as well as risks associated with market conditions (e.g., subcontractor availability, competition with other projects, labor availability and cost, and supply and demand). This schedule risk was identified as key by the project team and FHWA concurred; this risk, along with all others in the risk register, were incorporated into the 2025 estimating tool and the modeling output determined that project completion would be delayed by one year. Each year of project construction delay equates to approximately \$70 to \$80 million.

The scope of the project has not changed since the June 2023 estimate, though there has been increased design development of the project scope to better inform the estimating process and associated risk management, which also influenced the change.

Cost Refinement and Containment: Actions to Bring Cost Down

Upon receiving the updated estimate from FHWA, it was clear that the project team has a responsibility to accurately reflect cost estimates and manage project costs within communicated ranges. In this case, the increase from 2023 to 2025 cost estimate ranges does not currently meet this expectation.

The project team has taken a first step to identify immediate scope refinements and schedule adjustments to reduce project cost, while still meeting the project's purpose, need, stated goals and maintaining partner and community commitments.

The first step of scope refinements reduces the 2025 estimated range down to \$1.84 billion from \$1.96 billion. This is based on the project team taking the following proactive cost management and schedule/funding assumptions:

- Implement immediate scope refinements and reductions, including adjustments to the I-5 northbound auxiliary lane between the I-84 on-ramp and Weidler off-ramp and construction efficiencies.
- If full project funding is dedicated in 2025, the project schedule would be accelerated by one year to a 2033 completion. Construction would be front-loaded to try to minimize the impact of inflation and workforce availability limitations.

As a second step, the project team will identify and evaluate the effectiveness of additional refinements with the goal of reducing the overall cost to within the upper range of the reported 2023 estimate between \$1.7 billion to \$1.9 billion. The project team has a work plan to identify and evaluate additional refinements by October 2025, for presentation to the Oregon Transportation Commission by November 2025.

Next Steps for Improved Cost Management and Accountability: Moving forward, the project team will manage project cost with a focus on managing and mitigating risk, integrating real-time estimating, and value engineering, including:

- Project team regularly reporting on cost, scope, risk, and schedule to ODOT leadership;
- Expanded use of independent estimators, workshops and risk models at design milestones;
- Ongoing tracking of value engineering and innovative ideas with real-time estimating to monitor cost adds/deducts to project;
- Closer integration with subcontractors and market data via CM/GC contractor;
- Continued federal oversight via FHWA reviews, audits, and annual finance plan updates; and
- Finally, updated CSRA results on an annual basis for unconstructed phases of the project. Results for annual CSRA evaluation will be reported in the FHWA annual finance plan update in September of each year.

Next Steps for Project Delivery: 2025 Construction Start

Phase 1A construction will begin in August 2025. A portion of the Commission's approved \$250 million in House Bill 2017 Urban Mobility Strategy Funds (January 2025) will be used to construct stormwater improvements and bridge preservation work. Phase 1A also maximizes opportunities for Disadvantaged Business Enterprises by utilizing the project's Mini Construction Management/General

Contractor program to give DBE firms a prime role on distinct packages of work under the mentorship of the prime contractor.

Updates on construction progress will be reported to the commission at least quarterly.

Outcomes:

This is an informational update on the I-5 Rose Quarter Improvement Project designed to provide context for the Commission for ongoing decision-making related to financial decisions and direction on the project.