

Project Description

The Oregon Department of Transportation (ODOT) is requesting \$24,051,568 to complete construction of the I-5 Northbound (NB) Widening Project (Project). Federal funding will leverage over \$16 million in non-federal funding to increase capacity on Interstate 5 (I-5), the most important transportation asset on the entire West Coast. The Project will support increased freight and vehicular mobility, decrease congestion, improve safety and contribute to regional economic growth.

I-5 is the state's foremost route for the movement of people and freight both within the state and between neighboring states and nations. I-5 is one of the nation's high priority corridors and an important component of the national primary highway freight system. Unfortunately, the I-5 Corridor within the Project area is at capacity, contributing to congestion, queuing, and frequent crashes that will increase if not addressed.

The existing 3-lane section of I-5 northbound (NB) ends immediately north of the Commercial St. Exit Ramp (approximate mile point (MP) 248.9) in Salem, Oregon. This leaves an approximately 3-mile stretch of 2-lane freeway NB and southbound (SB), which creates a freight traffic pinch point and contributes to safety issues as high-speed traffic approaches congestion and slow-moving truck traffic. In the current year, NB lanes exceed the Oregon Highway Plan (OHP) mobility target. Under the no-build scenario, both directions of I-5 will not only exceed OHP and Oregon Highway Design Manual (HDM) mobility targets but will be over capacity.



Figure 1 Two-lane I-5 at Battle Creek Rd Overcrossing.

Planning documents have identified the need for increased capacity in this section of I-5 for decades. The Project was initially included in an Environmental Impact Study (EIS) completed in the mid-1980s for the I-5 corridor through Salem from the Hayesville Interchange to Battle Creek Road. The EIS was approved by FHWA and ODOT in 1988. Since then, due to budget constraints,

ODOT has undertaken a phased approach to provide desperately needed capacity to this critical section of I-5.

The I-5 NB Widening Project is the culmination of that approach, the final project in a series of targeted investments within this corridor. In addition to a reconstruction of the I-5/Kuebler Blvd Interchange [completed in 2019](#), this Project is the second and final phase of a larger project to widen approximately three miles of I-5 south of Salem. Phase 1, which is fully funded and going to bid in November 2023, will widen I-5 SB to three lanes and replace the SB Commercial Street overcrossing bridge. Phase 1 will also replace the Battle Creek Road bridge over I-5, which is required because the existing span length will not accommodate adding lanes to I-5 in either direction.

Federal funding would be used to complete final design, engineering, and construction of a third NB lane from MP 248.90 to the Kuebler Boulevard Interchange NB Exit Ramp (approx. MP 251.45) – a total of 2.55 miles. The Project is at 50 percent Design Acceptance Package level of design completion and work includes reconstruction of the roadway and replacement of the bridge carrying NB I-5 traffic over the NB Commercial Street exit ramp. The permanent NB I-5 alignment will be shifted slightly to provide the additional width needed and to meet the desired vertical clearance. With the extended NB lane, the following elements will also be constructed:

- Replacing the NB I-5 overcrossing structure over the NB Commercial Street Exit Ramp.
- Partial reconstruction and realignment of the NB Delaney Road Entrance Ramp.
- Full depth reconstruction of the current outside shoulder to convert to a travel lane.
- Shift of travel lanes to the right (east) to provide a 12-foot median shoulder.
- Pavement resurfacing of the entire section from NB MP 248.41 to MP 251.10 (2.5 to 3.0-inch inlay).

The additional travel lane, widened interstate shoulders, and adjacent undercrossing work will significantly improve freight mobility and safety through this corridor. ODOT prepared a Benefit Cost Analysis (BCA) for this project which reflects the Project's focus on improving safety, enhancing the efficient and reliable movement of passenger and commercial vehicles, and maintaining the system infrastructure in a state of good repair. The benefits of the project are based on the reduction in crashes/fatalities/injuries, economic competitiveness, equity, mobility and quality of life, and state of good repair. This \$40.1 million capital project (in year of expenditure (YOE)) converted to constant 2021 dollars and discounted at a seven percent rate has a Net Present Value of \$13.8 million and a Benefit-Cost ratio of 1.63. The BCA, along with all supporting documentation mentioned in this Proposal, is available on the [Project Website](#).

Constructing NB improvements in concert with ODOT's SB section construction will accelerate the enjoyment of safety benefits from NB safety improvements and capture \$1,197,500 in savings in construction costs compared to building NB improvements sometime after SB improvements are completed.

Project Location

The Project area is in Marion County, Oregon, at the southern end of the City of Salem. While this Project is more rural in nature, it is inside the Salem, OR Urbanized Area (UA). Since I-5 has been used as a dividing line for many Census tracts throughout Oregon, Project improvements fall within two and the project borders two more. Approximately 26 percent of Project costs will be located in an Area of Persistent Poverty (Census Tract 18.03). The majority of Project costs will be in Census Tract 27.01. Tract 10, which is immediately adjacent to the Project area, is a federally designated Area of Persistent Poverty and identified by ODOT as a Transportation Disadvantaged Community (please refer to Outcome Criterion #5 for more discussion).

The Project area encompasses approximately 3 miles of I-5 mainline between Kuebler Boulevard (Exit 252) and Delaney Road (Exit 248). This portion of the I-5 Freeway corridor provides an important link between Oregon's State Capitol – Salem – and the smaller cities to the north and south. Each of these smaller cities is populated by established and successful businesses, industries and residential communities. This section of I-5 also provides a critical link for interstate freight traffic between California to the south, Washington State to the north, as well as states east of Oregon.



Figure 2 Project Map

Project Budget, Sources and Uses of Funding

Based on a comprehensive construction cost estimate, the future eligible costs for the I-5 NB Widening Project are \$40,085,946 in YOE including all Planning, Preliminary Engineering, Right-of-Way (ROW), Construction, and contingencies. This estimate was generated in July 2023 and is based on ODOT's 50 percent Design Acceptance Package level of design completion and includes an appropriate construction contingency and an inflation/escalation allowance. The Project will be completed as a single project without phasing or separate project components. The Project is located entirely within an urbanized area and no requested MPDG funds are subject to the limit of freight rail, port, or intermodal infrastructure.

MPDG funds will be the final dollars needed to complete Phase 2 and ODOT will not solicit funding from other USDOT programs. The Project does not rely on any private, speculative, or conditional funding. All non-Federal matching funds detailed below will be allocated to this project upon award and programmed into the 2021-2024 Statewide Transportation Improvement Program (STIP). Matching funds will be provided by IJJA flexible funds set aside by the Oregon Transportation Commission to use as match on federal competitive grants.

The cost of this Project is well beyond existing resources. With Phase 1 nearly underway, ODOT estimates it will be at least 5 years before sufficient funding can be allocated to Phase 2 absent federal funding. This delay would significantly increase the cost of the Project and the prolonged disruption and construction impacts. By contrast, constructing the two phases consecutively with MPDG funding would save approximately \$1,197,500 in temporary construction costs.

Incurred Expenses and Future Eligible Costs

Project Phase	Incurred Expenses	Future Eligible Costs	Total Project Costs
Planning and Outreach		\$216,050	\$216,050
Preliminary Engineering and Design	\$1,248,055	\$3,521,880	\$4,769,935
Right-of-Way	\$584,438		\$584,438
Construction		\$36,348,016	\$36,348,016
Contingencies		\$5,933,275	\$5,933,275
Total:	\$1,832,493	\$40,085,946	\$41,918,439

Existing Project Funding Sources

Funding Source	I-5 NB Widening Funding Amount	Total Funding
MPDG Funds:	\$24,051,568	\$24,051,568
Other Federal Funds:	\$0	\$0
Non-Federal Funds:	\$16,034,378	\$16,034,378
Total:	\$40,085,946	\$40,085,946

Total Eligible Project Costs and Sources

Project Phase	Non-Federal	MPDG	Other Federal
Planning and Outreach	\$216,050		
Preliminary Engineering	\$3,521,880		
Roadway (Construction)	\$8,423,885		
Bridge Spans (Construction)	\$3,872,563	\$2,894,690	
Retaining Walls (Construction)		\$3,729,659	
Miscellaneous (Construction)		\$405,600	
Earthwork (Construction)		\$7,765,724	
Construction Engineering		\$3,322,621	
Contingencies		\$5,933,275	
Total	\$16,034,378	\$24,051,946	
Funding %	40%	60%	

Total Eligible Costs by Census Tract

Census Tract(s)	Project Costs per Census Tract
18.03 (APP)	\$10,422,346
21.01	\$29,663,600

Outcome Criteria Narrative

This Project will advance the fundamental objectives of the INFRA program, as illustrated by its clear alignment with all six of the program's Project Outcome Criteria.

Criterion #1: Safety

A principal goal of this Project is to improve safety. This freeway section has seen a steady increase in crash frequency in the last 10 years with 14 crashes in 2012, 20 crashes in 2017, and 32 crashes in 2021. Additionally, there was only one serious injury crash between 2012-2016, compared to four fatal and serious injury crashes between 2017-2021. According to the BCA produced for this Project, quantifiable, conservative safety benefits total more than \$20 million.

As vehicles approach the Salem Urban Growth Boundary (UGB), frequent queuing and congestion is observed as the NB freeway narrows from three travel lanes to two after Delaney Rd SE within the project area. Two travel lanes continue for 2.5 miles until I-5 meets Kuebler Blvd where it returns to three lanes. The freeway narrowing contributes to higher-than-average fixed object and sideswipe/overtake crashes that will be reduced by this project.



Figure 3 I-5 NB Transitions from two lanes back to three at Kuebler Blvd Interchange.

ODOT completed a Traffic Analysis for both phases of the project in March 2021 which examined the Project area's crash history, existing traffic operations (2020 pre-Pandemic), projected future traffic volumes (2045), and future traffic operations (No-Build and Phase 2 Build). A safety

analysis of five-years of crash history within the Project area was conducted to determine whether any significant, documented safety issues or trends exist. The crash analysis included a review of crash history data supplied by the ODOT Crash Analysis and Reporting Unit (CARU) for the period between January 1, 2014, and December 31, 2018, which were the most recent full years for which crash data was available at the time of the analysis. Now, the most recent available crash data is from 2017 to 2021.

There were 132 documented crashes within the study corridor between 2014 and 2018. Approximately 41 percent of crashes were rear-end collisions, followed by 31 percent fixed or other object collisions, and approximately 18 percent sideswipe-overtaking. One collision involved a pedestrian on I-5 SB at MP 250.5, which resulted in a fatality. Three crashes resulted in a suspected serious injury. The plurality of crashes (49 percent) resulted in either no apparent injury or property damage only, followed by 36 percent resulting in a possible injury, and finally 13 percent resulting in a suspected minor injury.

The 2014-2018 crash data mirrors what was collected between 2017 and 2021, where 51 percent of the 104 documented crashes in the corridor occurred on I-5 NB. While the total number of crashes decreased, the number of fatal and injury related crashes increased exponentially. There were four fatal and serious injury crashes between 2017 and 2021, and approximately 49 percent of the crashes on I-5 NB resulted in injuries, compared to 36 percent from 2014 to 2018.

The three leading causes of crashes in this corridor are sideswiping, rear-end, and fixed object collisions, all of which will be significantly reduced by this Project. Approximately 32 percent crashes between 2017 and 2021 were rear-end collisions, while 28 percent were caused sideswiping.

The Project is expected to reduce lane departure related collisions, including both fixed object and sideswipe/overtake. [Recent research](#) on self-explaining roads indicates that when expectations of self-explaining roads are violated, including sudden narrowing of the road, accidents are bound to happen. This project will address a portion of I-5 where the roadway narrows from three lanes to two. Continuing the three-lane interstate will create more predictable driving behaviors by removing the merge operation that often occurs during congested periods. The required processing effort for drivers to merge, accept merges and avoid collisions all within a congested roadway creates a complex driving environment and results in a high cognitive driving load which then increases crash risk. By adding a third lane (and standard shoulder widths and updated barrier), the driving environment is simplified, reducing cognitive load for drivers. It also adds more forgiveness to the roadway design for when driving errors do occur so people are more likely to avoid crashes.

Rear-end collisions are often a result of high-speed traffic approaching congestion caused by the narrowed freeway in peak traffic hours. The existing v/c ratio for I-5 NB for this corridor exceeds ODOT's standards during peak hours. Limited sightlines and speeds more than 65 miles per hour leave very little time to react to slowing and stopped traffic. With the extension of the 3rd NB

lane, the volume-to-capacity (v/c) ratio improves to 0.82 or less within the corridor during the life of the project (*please refer to Criterion #3 for more discussion on congestion and v/c ratios*).

Under the no-build alternative, ODOT's analysis projects 128 crashes involving 9.5 fatalities and 118 non-fatal within the Project area from 2028 to 2047. Conversely, the focused safety improvements included in this proposal would reduce Project area crashes expected over the same period by 38 percent to 73 crashes involving 5.4 fatalities and 67.5 non-fatal injuries. Overall, project safety improvements are expected to reduce vehicle fatalities and vehicle injuries by 43 percent and provide a present value of safety benefits that alone is nearly equal to the present value of Project costs.

Several Crash Reduction Factors (CRF) are incorporated into the project. In addition to adding lanes, ODOT will increase the paved inside and outside shoulders; improve street lighting illuminance and uniformity; install new lighting to meet current lighting standards; and install W-Beam guardrails or concrete barriers. All of which have been proven to reduce the number of crashes and their severity, particularly for interstate traffic traveling at high speeds. A full accounting of CRFs and their respective impacts can be found in the [BCA Calculations Spreadsheet](#).

Due to the high-speed travel of this major interstate corridor, there are no existing or proposed pedestrian or bicycle facilities on the entire length of Interstate 5 in Oregon. While interstate highways are dangerous for vulnerable roadway users, due to the state's rural nature, Oregon is one of only a few states to allow biking and walking along the shoulder of the interstate. As such, I-5 provides essential connections for people biking and walking. The outside shoulders of I-5 will be widened from 10 feet to 12 feet as part of the Project, providing more space and separation from traffic for vulnerable individuals who must use I-5.

In addition to shoulder widening, the bridge replacements in both phases of the Project will provide safer routes for pedestrians and bicyclists crossing under and over I-5. The Battle Creek Road overcrossing is being replaced in Phase 1. While Battle Creek Road SE is in the City of Salem urban growth boundary (UGB), the existing roadway is a rural, narrow two-lane road with guardrails and no shoulders. Phase 1 will transform this rural two-lane road into a complete street with sidewalks and bike lanes. The undercrossing of Commercial Street SE will be replaced for each phase of the Project. The existing roadway underneath I-5 is a one-way street with narrow shoulders and a ¼ mile passing lane. Phase 2 will eliminate that passing lane, creating 12 ft shoulders on each side of the roadway to improve sight distance, reduce speeds, and create a more comfortable experience for vulnerable users.

Both crossings are located within the City of Salem UGB, an area set to absorb a bulk of new higher density housing in Salem (more discussion in Criterion #5). As the City expands towards the southeast, this roadway will be a critical connection for vulnerable users. A review of [STRAVA's Global Heatmap](#), a dataset which includes 700 million entries over two years from Strava users, reveals Battle Creek Bridge is already a heavily utilized pedestrian and bicycle route,

despite the lack of dedicated infrastructure. This Project will make this portion of each route safer and lower stress for both existing and future vulnerable users.



Figure 4 Existing Battle Creek Rd Overcrossing without bike/ped facilities or shoulders.

Criterion #2: State of Good Repair

The current pavement in the Project area is in fair to poor condition. Rutting caused by the wear from vehicle wheel paths, particularly from the high volume of heavy trucks, makes it vulnerable to winter weather. Last paved in 2008, this section of I-5 reached the end of its service life in 2023. Patching the road will continue to be a burden on maintenance until fixed. The Project will restore this infrastructure at the end of its useful life to a state of good repair for 25 years. It will also displace one preservation cycle, ultimately realizing \$1,105,831 in State of Good Repair benefits.

In addition to the poor roadway quality, the narrow two-lane freeway has a substandard functional performance. Traffic routinely exceeds the capacity of this corridor leading to congestion and queuing. ODOT measures highway mobility using the volume-to-capacity (v/c) ratio. Higher v/c ratios indicate greater levels of congestion. The Oregon Highway Plan (OHP) mobility target for I-5 within UGB and MPO boundaries is 0.85 v/c. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur.

ODOT's Traffic Analysis showed that segments of the freeway exceed the OHP mobility standard v/c ratio of 0.85 in both the northbound AM peak and southbound PM peak currently. The pinch point of northbound AM is the entire Project area between the Delaney-Commercial Street collector distributor on-ramp and Kuebler Boulevard off-ramp. This segment has two lanes and is approximately one and a quarter mile in length. With higher future year 2045 volumes (No-Build), NB traffic exceeds the 0.85 v/c target at the same pinch point in both AM (0.93) and PM (0.96) peak periods, compared to just in the AM under Existing Conditions.

Completion of this project – combined with Phase 1 – will address these predicted vulnerabilities that will threaten future efficiency on I-5. With the extension of the 3rd northbound lane, NB v/c ratios improve to 0.82 or less within the corridor in year 2045.

The Project is consistent with all relevant State and local plans to maintain transportation in a state of good repair and address vulnerabilities, including the [2021-2024 STIP](#) and [Oregon Freight Plan](#). ODOT will be responsible for all aspects of the Project and has a long history of successfully completing and maintaining federally funded transportation projects. Total preservation costs for the Project's lifecycle equal \$2,841,156. ODOT maintains 8,000 miles of highway, ranging from six-lane, limited access freeways with metered entrances in Portland and Eugene, to a graveled state highway in central Oregon. State highways comprise a little more than 11 percent of total road miles in Oregon but carry 58 percent of the traffic and more than 20.7 billion vehicle miles per year.

Maximizing value from transportation investments is one of ODOT's fundamental priorities. ODOT integrates lifecycle cost management practices that maximize the efficiency of transportation revenue and minimize the need for costly replacement of infrastructure assets. ODOT's [Fix-it](#) and [Maintenance](#) programs provide dedicated, steady funding to preserve and maintain assets. Lifecycle cost considerations included in BCA calculations reflect practices and values presented in the [Oregon Transportation Asset Management Plan](#) and [2020 Pavement Condition Report](#). Together, they support achievement of ODOT's targets for the performance and condition of Oregon Pavements. The state's [performance measure target](#) of 0.5 percent of interstate pavement in poor condition is the third most aggressive target in the nation.

ODOT maintains the public infrastructure within the I-5 Right-of-Way (ROW). ODOT's Delivery and Operations Division maintains and repairs the state's existing highways to keep them safe and usable and supports the design and construction of projects, as well as the operation of the highway system and ODOT's Pavement Preservation Program (PPP). The goal of the PPP is to keep highways in the best condition possible, at the lowest cost, by taking a preventive approach to maintenance. Thanks to ODOT's asset management and investment strategies, pavement condition over the last few years has ranged between 85 and 90 percent "fair" or better. ODOT's pavement strategy is focused on preserving the interstate first, and nearly 100 percent of Oregon's interstate highway miles are in fair or better condition.

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

Completion of this Project is critical to ensuring efficient regional, national, and international freight movement and will conservatively produce over \$10 million in economic benefits. I-5 provides statewide and international mobility for travelers and freight and is the most important north-south transportation facility for the entire West Coast. I-5 truck facilities connect the three largest population centers of Portland, Eugene, and Salem and are the state’s primary arteries for truck and rail freight shipments. They connect Oregon’s primary population and production centers to California and Washington and beyond to Mexico and Canada. Together, this Western Corridor connects Oregon with the national freight transportation system via the following:

- Several truck, rail, seaport, and airport facilities, including Interstate 84, U.S. 30, U.S. 20, and U.S. 199
- Class I and short-line railroads
- Marine facilities at Astoria, Coos Bay, the Port of Columbia County, and the Port of Portland
- Air facilities at Portland International Airport

Marion County, situated in the heart of Oregon’s Willamette Valley, is the agricultural hub of the state. Each year, the County’s 288,671 acres of farm operations produce over \$700 million in commodity sales, generating \$119 million in net farm income. Its 864 farms employ over 13,000 people. The Willamette Valley is home to over two-thirds of Oregon’s wineries and produces over 44 percent of the state’s \$5 billion agricultural products sold each year.

Approximately 18 percent of the vehicles in this corridor are heavy trucks. The figure below depicts value and tonnage flows for the Agriculture, Forestry, and Fishing industry sector. Commodity flows by value for this industry group occur primarily on the I-5 and I-84 corridors. The heaviest tonnage flows occur on the I-5 corridor through the Project area, providing access to agriculture production and markets in California and Washington.

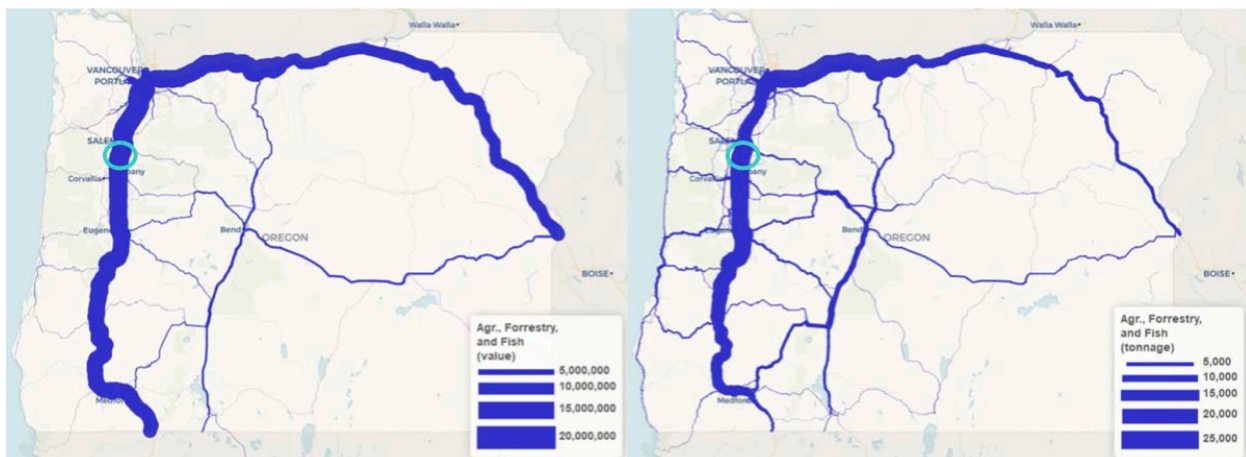


Figure 5 Estimated Agriculture, Forestry and Fishing Industry Commodity Flows by Value (left) and Tonnage (right), 2019

Preserving and enhancing the efficiency of Oregon’s freight system is essential to supporting economic development, prosperity, and the quality of life in Oregon. Whether it is carrying goods

from manufacturers, farmers, and other producers to markets, or delivering goods to homes and stores for consumption, the movement of freight supports the daily functioning of the state's businesses and residents. The Oregon Office of Economic Analysis estimates that Oregon is the tenth to fifteenth most trade-dependent state in the nation. In 2021, freight-dependent industries like manufacturing, agriculture, construction, transportation and warehousing, and retail provided nearly 700,000 jobs.

Unfortunately, segments of I-5 have exceeded their capacity and create bottlenecks throughout the state. While this specific location is not on FHWA's top 100 major freight highway bottlenecks or congested corridors on its Freight Mobility Trends Report of 2019, I-5 is included in two of the three identified in Oregon. The Project location is 40 miles south of the first major freight highway bottleneck on I-5 at Highway 26.

ODOT's transportation analysis of this Project confirms it will achieve excellent traffic performance for more than 20 years. Under the No Build scenario, the NB lanes will be over capacity in the year 2045 and exceed the OHB and HDM mobility targets. As discussed in Criterion #2, NB v/c ratios improve to 0.82 or less within the corridor in year 2045 with this Project. The improved movement of freight and vehicles through this corridor yields significant savings in travel time. During peak periods in 2045, ODOT's BCA projects 147,935 in yearly Vehicle Hours of Delay (VHD) savings and 80,181 gallons in yearly fuel savings compared to the No Build scenario.

In addition to improving interstate freight movement, alleviating this freight bottleneck is also critical to other regional investments realizing their full job creating potential. In 2019, ODOT completed improvements to the interchange of I-5 at Kuebler Blvd to increase capacity for additional freight and vehicle traffic associated with the Mill Creek Corporate Center (MCCC). MCCC, located northeast of the Kuebler Boulevard Interchange, is an innovative partnership between the State of Oregon and the City of Salem, and the Economic Development Administration to create a major employment center on agricultural land previously owned by the Oregon Department of Corrections in southeast Salem.

The MCCC is a 650-acre master-planned employment campus with 238 shovel ready acres of land available within the City of Salem, adjacent to the Project area. The property has easy access to I-5 and Highway 22, allows for flex-space, manufacturing, warehousing, and offices, and has up to 20 acres zoned for retail services. The properties adjacent to MCCC are already home to several top corporate employers, including Amazon, FedEx, Lineage Logistics, and Home Depot.

The City of Salem created the Mill Creek Industrial Park Urban Renewal Area (URA) to support development of the MCCC. The URA created over \$25 million in bonding capacity for major infrastructure (roads, utilities, traffic signals) needed to attract large industrial uses and family wage jobs to the site. In preparing the site for development, the City of Salem constructed almost 76 acres of centrally located mitigated wetlands so the surrounding lots can be developed unencumbered by the lengthy environmental process. The State of Oregon also completed an additional 25 acres of wetland mitigation, stormwater retention, and open space are to meet the

City of Salem stormwater management requirements and support future development. When fully developed, the MCCC is projected to generate \$400 million in private investment and create around 5,000 new jobs.



Figure 6 Mill Creek Corporate Center

Labor Equity Initiatives

ODOT spends hundreds of millions of dollars annually to improve the transportation system. While these projects benefit the state's construction, engineering, and technical industries, systemic and process barriers make it difficult for Black, Indigenous, People of Color, and women-owned businesses to compete successfully for our third-party contracts. In our [2021-2023 Strategic Action Plan](#), we set a goal to invest equitably in the local economy by increasing opportunities for Oregon Black, Indigenous, People of Color, and women-owned businesses.

After implementing a pilot strategy to incorporate community workforce agreements (CWAs) into our contracting and project delivery projects, ODOT will soon be the first DOT in the nation to establish a master CWA that would apply to large projects within specific parameters. CWAs are enforceable agreements between project owners and labor or between contractors and labor that outline how each will improve the project outcomes for the community. For this Project, ODOT will utilize a CWA to accomplish the following goals:

- Grow the workforce pipeline through enhanced access training programs and career opportunities.

- Provide contracting opportunities for certified firms,
- Maximize the impact of ODOT's investments to benefit communities.

More discussion on ODOT's labor equity initiatives for this Project can be found in Criterion #5.

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

The Project incorporates ODOT's ongoing efforts to reduce greenhouse gas (GHG) emissions and achieve environmental justice (EJ). ODOT's [2021-23 Strategic Action Plan \(SAP\)](#) identifies 10 strategic outcomes. Among the agency's highest priorities is to reduce its carbon footprint by selecting and building cleaner projects.

The [Oregon Statewide Transportation Strategy: A 2050 Vision for GHG Reduction](#) is ODOT's roadmap for reducing carbon emissions from transportation. Key actions include cleaner vehicles and fuels, low carbon modes, proximity of housing to jobs, and pricing and demand management strategies. It is ODOT's policy to pursue efforts within each of these categories statewide, and several are incorporated into the planning and project delivery of this proposal.

Cars, trucks, and other transportation sources significantly contribute to air pollution and are the largest source of GHG emissions in Oregon, constituting 35 percent of the total. This is exacerbated by queuing and congestion. As described in Criterion #1, #2, and #3, both NB and SB in the Project area experience queuing and congestion throughout the day.

Compared to the No Build alternative, the project will significantly reduce congestion and related emissions. The BCA anticipates \$532,667 in environmental sustainability benefits, eliminating more than 147,935 vehicle hours of delay (VHD) and associated diesel emissions during peak periods in 2045. Decreased travel time will improve air quality, save more than 80,000 gallons of fuel per year and reduce GHG emissions by reducing NOx, VOCs, PM2.5, Sox, and CO2. Please refer to the BCA Spreadsheet for a full accounting of environmental benefits.

In addition to ODOT's GHG-related congestion mitigation efforts, the agency also supports Transportation Options (TO) programs aimed at reducing single occupancy vehicle trips and corresponding fuel usage and emissions. Once the Project is complete, ODOT will promote the [Get There](#) online tool for carpool matching and the [Ride Board](#) for one-time trip matching, as well as safety outreach and education for people walking and bicycling. Materials will be provided in both English and Spanish and include radio ads, social media targeted at relevant zip codes, and consideration of a direct mail piece. TO will also be utilized during construction to alleviate congestion while the Project is being built.

The Project will also recycle materials known to reduce carbon emissions. The Project will recycle the maximum allowable percentages of Reclaimed Asphalt Pavement and Recycled Asphalt Shingles. ODOT will also construct storm water treatment facilities to remove pollutants from the new impervious surface and the existing impervious surface. Stormwater management will be accomplished with bioretention ponds, filter strips, and natural dispersion. The project area is

within the Willamette River watershed and stormwater runoff has potential to affect federally listed salmon and steelhead trout in the Columbia River Basin Group, which includes all ESUs in the Columbia and Willamette Rivers. The project will use the FAHP BO for ESA compliance. ODOT, NMFS, and DEA, Inc. met on-site for a FAHP pre-application meeting on February 16, 2021. Reconstruction of the roadway and changes in stormwater conveyance patterns on I-5 will require water quality treatment and flow control meeting FAHP criteria. Based on project development NMFS will allow use of either the 2012 or the 2021 FAHP for this project. Stormwater treatment and flow BMPs discussed include bioswales and infiltration/detention basins. Currently, it is anticipated that 100% of the project area will be treated on-site. If possible, the project will provide over treatment, allowing ODOT to use treatment credits on future projects.

Climate change is leading to more frequent and extreme weather events in Oregon, making the transportation system and the traveling public more vulnerable to natural hazards like wildfire, landslides, flooding, extreme heat, winter storms, coastal erosion, and others. These events can lead to road closures that impact freight, the economy, and people's ability to obtain critical services.

The Project is located in ODOT Region 2. Region 2 includes much of west side of the state and has historically been prone to floods and landslides. Between 2013 and 2021, the region experienced 1,099 flood and high-water emergency events that impacted the transportation system. Costs from sinks and landslides between 2009 and 2021 totaled \$12.2 million. Region 2 ranks first for future, expected exposure to high risk of very heavy precipitation and wildfire increases. It ranks second for highest future landslide and flood risks. Coastal erosion rates are already high and risk is expected to increase. Changes to heat and fire risk are less familiar to the region and together they will worsen existing challenges like erosion and landslides.

ODOT identified resilience corridors throughout the state to provide a clearer path for decision makers to prioritize resilience work. The sources informing the resilience corridors include multiple projected hazards (mid-century), historical hazard impacts (TOCs data), social disparity and asset condition. The resilience corridors show where overlapping resilience challenges coexist to help the agency target resources where they are needed most. Tiering criteria considers future climate, historical hazard events, social disparity status and asset (bridge and culvert) conditions. Future climate conditions reflect mid-century warming projections, which assume a "business as usual" emissions trajectory. Higher risk is determined as a higher number of projected hazard types (flood, wildfire, landslide, etc.) along a corridor, combined with a high number of historical hazard events.

This portion of I-5 is considered a Tier 1 resilience corridor with the highest risk of future climate hazard impacts, climate risk, highest social disparity, total historical events, and assets in poor or critical condition. There have been over 951 hazard events through this corridor. This corridor will be critical in the event of a serious climate hazard and/or evacuation. In addition to climate hazards, earthquake hazards have been recognized as one of the major natural hazards in Oregon

since the late 1980s. Oregon has the potential for a 9.0+ magnitude earthquake caused by the Cascadia Subduction Zone. The significant existing and future congestion, combined with seismically vulnerable overcrossings, will threaten the reliability of this critical corridor. The increased capacity and new seismically resilient overcrossings included in both Phase 1 and Phase 2 will significantly enhance the resiliency of this critical resilience corridor.

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

Since initiating Phase 1 in 2018, ODOT has prioritized a robust community engagement process to ensure active participation by those affected by the project, particularly those located in Areas of Persistent Poverty. In July of 2021, ODOT sent 6,500 mailers to residents and businesses in the area with Project information and asked residents to sign up for future emails on the Project. ODOT has partnered with the local South Gateway Neighborhood Association to reach residents along the highway offering both in-person and virtual options for learning about the projects and asking questions. To date, ODOT has hosted 3 neighborhood events for stakeholders and residents to learn about the Project and answer questions.

ODOT has partnered closely with a targeted list of interested parties in South Salem which includes residents, businesses and other community organizations to engage on current and future projects in the area and on I-5. The Project Team has worked closely with Cherriots Public Transit to reach riders and users in the project area that use the bus and other alternate modes of transportation. ODOT also uses the social application, NextDoor, to engage and target specific neighborhoods impacted by the project.

A primary concern expressed by residents and external partners was noise, fearing that additional travel lanes will make the freeway significantly louder and disrupt their daily life. Two soundwalls will be included as part of this project, addressing much of the noise concerns, and improving present and future noise levels in the corridor. In addition, per the request of the locals, modern textures and vegetation are being included on the soundwalls to make them more aesthetically pleasing.

An online Open House was hosted by ODOT in June of 2022. It was advertised via mailers, email, twitter, Facebook, Instagram, and at other public meetings. This provided the public with information on the project and an opportunity to comment and add input. This Open House was recorded and posted online for those that were unable to attend.

Upon receiving funding, ODOT's community engagement process will accelerate. A Communications and Public Involvement Plan (PIP) will be created. This will define the means and methods by which Statewide Goal 1 (Public Involvement) will be met. Additional outreach will continue throughout the life of the project including the following strategies:

- A webpage would be publicized with a timeline for the project.

- An initial community survey (in English, Spanish and Russian) will be linked to the webpage and advertised through social media, emails, mailers, and contact lists (both ODOT and City).
- From project design through construction, additional outreach efforts would be made to ensure that we are on the right track with the proposed solutions.
- At key project milestones, the Communication Team reviews and signs off on the PIP and engagement strategies to date to ensure on-going public involvement.

The Project will directly support ODOT's Strategic Action Plan which describes ODOT's priorities, goals and outcomes for the next three years. It has three main priorities, the first of which is prioritizing diversity, equity and inclusion by identifying and addressing systemic barriers to ensure all Oregonians benefit from transportation services and investments. ODOT is committed to serving all Oregonians equitably. The agency looks beyond merely improving the system to improving the quality of life of every Oregonian. ODOT is mindful of the benefits and burdens created by its work and ensures they are distributed equitably. Equity goals focus ODOT on workforce diversity and opportunities for advancement, expanding economic opportunities for minority groups, climate equity, and creating more representative public engagement processes.

Specifically, the Project would achieve these goals by supporting transportation and economic opportunity for underserved, minority populations. ODOT recently completed a statewide Transportation Disadvantaged Community Index (TDI) to help prioritize improvements on highway segments that serve areas with high numbers of transportation disadvantaged residents and Environmental Justice communities that have been historically underserved. It considers the following populations: elderly, youth, non-white and Hispanic, low-income (less than 200 percent of the poverty level as determined by the census), limited English proficiency, households without access to a vehicle, people with a disability, and crowded households.

In Oregon, the index ranges from 0-3.22, and most areas have scores between 1-1.5. A score greater than one means that the average population in an area meets more than one of the criteria included in the index. While the Project location is more rural in nature, the interchange of Kuebler Blvd and I-5 scores in the top quartile of ODOT's TDI and is a federally designated Area of Persistent Poverty. While the project goals are focused on congestion relief statewide, any improvements to the transportation system in this area, especially those as significant as the proposed Project, will benefit transportation disadvantaged communities.

ODOT has operated a Disadvantaged Business Enterprise (DBE) Program for its federally funded contracts since the 1980s. For 2023 through 2025, ODOT's goal is to meet at least 23.43 percent DBE participation in ODOT's FHWA-funded contracts. To help it achieve this level of DBE participation, ODOT sets goals for the utilization of DBEs on many of its individual FHWA-funded contracts. Bidders on those contracts must either meet the goal ODOT has set for the contract or make good faith efforts to do so. ODOT also makes race- and gender-neutral efforts to encourage participation of DBEs in its contracts.

ODOT has routinely exceeded its aggressive DBE goals. Between October 2017 through September 2020, approximately 20 percent of the dollars of ODOT's FHWA-funded contracts went to minority and women-owned businesses. This exceeded the 2017-2020 goal of 15.4 percent¹.

One of the most significant barriers to community participation and feedback is unpaid time for participation in an activity. For many people, it costs time and money to engage with ODOT. They may have to take time off of work, there may be travel and sometimes even childcare expenses. Unfortunately, this means we don't hear from people and communities impacted by our work. The Equitable Engagement Compensation Program, or EECPP, pays participants for their time spent in engagement activities with ODOT such as, but not limited to: Advisory committees, focus groups, workshops, and evaluation panels. ODOT pays \$20-30 per hour via prepaid cash card for scheduled time to participate. The engagement activities are based on specific geographic areas and the project that exists or will exist there.

We recognize the need to offer payment to Oregonians who may not be able to provide ODOT feedback without being paid. We believe this will help minimize economic barriers and increase the voices of all people in communities impacted by our work. Participation from multiple and diverse communities leads ODOT to make better informed and equitable decisions.

While there are no existing or proposed improvements for bicycle or pedestrian facilities along the freeway mainline or ramps, bicycle and pedestrian improvements on two I-5 crossings will significantly improve access for vulnerable users in this rapidly growing area. As discussed in Criterion #1, Oregon is one of only a few states to allow biking and walking along the shoulder of the interstate. The outside shoulders of I-5 will be widened from 10 feet to 12 feet as part of the Project, providing more space and separation from traffic for vulnerable individuals who must use I-5. Adding capacity to I-5 also has the potential to relieve the local network that are more encouraging for bicycle/pedestrian use.

The bridge replacements in both phases of the Project will provide safer routes for pedestrians and bicyclists crossing under and over I-5. Phase 1 will transform Battle Creek Road from a two-lane road into a complete street with sidewalks and bike lanes. The undercrossing of Commercial Street SE will be replaced to eliminate that passing lane, creating 12 ft shoulders on each side of the roadway to improve sight distance, reduce speeds, and create a more comfortable experience for vulnerable users.

Both crossings are located within the City of Salem UGB, an area set to absorb most of the new housing within Salem over the next twenty years. The City, including its UGB, is expected to be home to 273,902 people by 2035, up from 199,030 in 2015. Salem's latest Comprehensive Plan update in 2022 rezoned large tracts of SE Salem for high density apartments. As the City expands

¹https://www.oregon.gov/odot/Business/OCR/SiteAssets/Lists/DBE_Dis_List/EditForm/KeenIndependent_2022ODOTDisparityStudy_FinalSummaryReport_06302022.pdf

towards the southeast, this roadway will be a critical connection for vulnerable users. A review of STRAVA data reveals Battle Creek Bridge is already a heavily utilized pedestrian and bicycle route, despite the lack of dedicated infrastructure. The Project will make this portion of the route safer and lower stress for both existing and future vulnerable users.

In addition to bicycle and pedestrian benefits, the I-5 mainline carries several regional bus routes by Cascades POINT, Greyhound, Groome Transportation, and FlixBus. These bus routes are expected to remain the same before and after the Project but will benefit from reduced congestion and travel time savings.

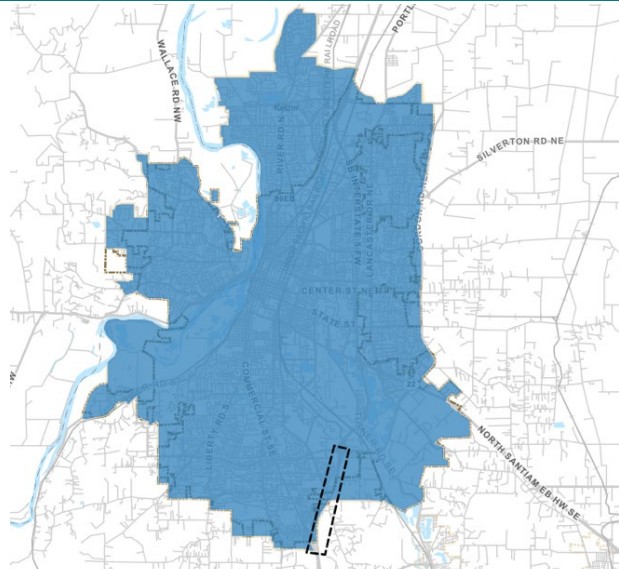


Figure 7 Salem UGB with Project Area Outlined

These active transportation benefits of the Project will improve vehicular and nonvehicular access to and through the area. Quantifiable, conservative quality of life benefits, primarily from reduced fuel use and vehicle maintenance costs, total \$458,645.

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

The Project will incorporate innovative strategies in all three MPDG-identified innovation categories. The Project utilizes most [Every Day Counts \(EDC\) Innovation Techniques](#) identified by the FHWA Center for Accelerated Innovation. The EDC Innovation Techniques associated with each innovation category are identified below.

Innovative Technology

The Project incorporates innovative technology guided by the following EDC Innovation Techniques: [Using Data to Improve Traffic Incident Management](#); and [Data-Driven Safety Analysis](#).

Innovative Project Delivery

The Project utilizes innovative project delivery methods guided by the following EDC Innovation Techniques: [Programmatic Agreements](#); [Implementing Quality Environmental Documentation](#); [Planning and Environmental Linkages](#); [Clarifying the Scope of Preliminary Design](#); and [Flexibilities in Utility Accommodation and Relocation](#).

ODOT pioneered the use of DOT-funded Permitting/Authorization Agency Liaisons to promote interagency cooperation, improve permit compliance, and make the permitting timelines of federal-aid projects more reliable. ODOT is using this approach to permit the Project, along with existing agreements for ESA consultation to streamline the processes. Oregon's [Federal-aid Highway Program programmatic agreement](#) covers most federally funded transportation

projects that affect ESA Section 7 consultation and Magnuson-Stevens Act consultation with the National Marine Fisheries Service for federal threatened and endangered aquatic species, and terrestrial and aquatic species administered by the U.S. Fish and Wildlife Service.

Innovative Financing

The Project utilizes innovative financing methods guided by the [Project Bundling](#) EDC Innovation Technique. The expansion of ODOT’s existing Phase 1 project to complete the NB improvements using MPDG funds will have the same effect as other forms of project bundling, because the project will complete the work that otherwise would be slated for two separate projects at a greatly accelerated schedule and lower total cost. This is further emphasized by the opportunity to utilize the Phase 1 project temporary traffic staging to accommodate the proposed Phase 2 construction. Some preservation work on the NB bridge and pavements currently planned for Phase 1 could also be removed from the project, with funding reallocated to the Phase 2 widening and bridge replacement.

Benefit Cost Analysis

The benefit-cost analysis (BCA) of the I-5 NB Widening Project reflects the project focus on improving safety, enhancing the efficient and reliable movement of passenger and commercial vehicles, and maintain the system infrastructure in a state of good repair. The benefits of the project are based on the reduction in crashes/fatalities/injuries, economic competitiveness, equity, mobility and quality of life, and state of good repair. This \$40.1 million capital project (in year of expenditure (YOE) converted to constant 2021 dollars and discounted at a seven percent rate has a Net Present Value of \$13.8 million and a Benefit-Cost ratio of **1.63**. A summary can be found in the excel BCA Calculations spreadsheet on tab “PV summary 7%.”

The baseline for the project is a no-build option that makes no improvements to the northbound section of I-5 between Kuebler Boulevard and Delaney Road. The following table summarizes the current project area status/baseline and problems to be addressed, changes to the baseline, and examples of improvement benefits.

Current Status/Baseline and Problems to be Addressed	Changes to Baseline	Improvement Benefits
Traffic slowdowns and vehicle fatalities and serious injuries regularly occur in this freeway section transitioning from 3 lanes to 2 lanes	Widen current freeway section to 3 lanes, widen shoulders, and replace existing overcrossings to accommodate additional lane and widened shoulders	Enhanced passenger and commercial vehicle traffic flow and travel reliability. Vehicle fatalities and injuries reduced by 43 percent.
Freeway section has limited safety features	Widen shoulders on each side of travel lanes, improve area lighting, install V-Beam guardrails or concrete barriers	Reduce freeway crashes, improve traffic flow,
Seismic vulnerability of overcrossings	Replace project area overcrossings with seismic resilient structures	Enhance roadway resiliency, I-5 is a major lifeline route for Oregon and the nation

Project Readiness

Environmental Risk

Project Schedule

ODOT has positioned the Project to make immediate use of INFRA funding. The Project will begin and complete construction in a timely manner. All necessary activities will be complete in advance of the September 30, 2026, statutory deadline for the obligation of funds. Not only will construction funds be obligated by the obligation deadline, but construction work will also be more than 50 percent complete by that date.

Project Phase	2023				2024				2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Plans																				
Advance Plans																				
Final Plans																				
PS&E																				
Right-of-Way																				
Bid Period																				
Construction																				

NEPA Status

The PCE Closeout was approved on December 13th, 2022. The PCE Approval document is available on the [Project Website](#) and covers both the Phase 1 and Phase 2 projects. The project is a Class 2 Action: Programmatic Categorical Exclusion (PCE) because it does not have any components that would kick it out of the programmatic agreement listed below:

1. Involves unusual circumstances as described in 23 CFR 771.117(b);
2. Involves use of properties protected by Section 4(f) of the Department of Transportation Act (49 U.S.C. 303) that require preparation of an Individual Section 4(f) Evaluation;
3. Results in a determination of “Adverse Effect” on historic properties protected by Section 106 of the National Historic Preservation Act (NHPA) by FHWA;
4. Requires a U.S. Coast Guard permit;
5. Requires an Individual Permit under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act;
6. Results in an increase in the designated regulatory floodway elevation, or an increase of more than 1 foot of surface water elevation in the 100-year floodplain when no regulatory floodway is designated;
7. Requires a Wild and Scenic River Section 7 determination from the river administering agency;
8. Results in changes that substantially affect traffic patterns temporarily or permanently;
9. Requires the acquisition of more than minor amounts of right-of-way or displacement of owners and/or tenants;
10. Does not conform to the Air Quality State Implementation Plan;

11. Requires an individual project-level formal consultation under Section 7 of the Endangered Species Act because the project cannot be processed with the Federal-Aid Highway Programmatic Biological Opinion with USF&WS and NMFS;
12. Requires an exception to Oregon Statewide Planning Goals; or
13. Is controversial. In cases when controversy is anticipated, ODOT will discuss the potential for controversy with FHWA to determine if the project can be processed under this Agreement.
14. Is identified subsequent to the execution of this agreement by FHWA via written notification to ODOT.

Reviews, Approvals, and Permits by Other Agencies and Environmental Studies

In addition to Federal Highway Standards, Marion County and City of Salem standards are applicable for this project and the project is being designed in accordance with these standards. Standards and documents used with their appropriate web links are as follows:

Marion County Standards and Documents:

- [Engineering Standards \(ES\)](#) - 1990, Marion County Department of Public Works
- Rural Transportation System Plan (RTSP) - [2005](#) and [2013](#) Updates, Marion County
- Marion County [Average Daily Traffic Site](#)

City of Salem Standards and Documents:

- [City of Salem Transportation System Plan](#) (TSP) (Jan. 13, 2020)
- [City of Salem Public Works Design Standards](#) (Jan. 2016)

Other Standards and Documents:

- [Highway Design Manual \(HDM\)](#) - 2012, Oregon Department of Transportation
- [Traffic data](#) - ODOT TransGIS
- A Policy on Geometric Design of Highways and Streets (Green Book)- 2011 (6th ed.), American Association of State Highway and Transportation Officials (AASHTO)

While there are no expected local land use permits, widening of I-5, sight distance improvements (e.g., tree and vegetation removal), and construction of some of the temporary and permanent roadside features (e.g., retaining walls) may result in impacts to the local roadside drainage system, vegetation and trees along the corridor, and adjacent wetland areas along the project limits. The 30-inch culvert at MP 248.5 (Delaney Road ramps) and Battle Creek box culverts at MP 249.39 will not be replaced as they were deemed by the Project Development Team (PDT) to be structurally and functionally adequate and the current design will not trigger fish passage requirements.

An IGA with Marion County is required for work on Battle Creek Road and Wiltsey Road. That IGA has been finalized and signed by both parties. The project development team has met several times with Marion County regarding design progress and status on County roadway facilities.

No work is planned in either of the waterways, and no impacts to waterways or fish passage are proposed. The project is anticipated to include wetland impacts less than 0.5 acre. Therefore, permits from Oregon Department of State Lands (DSL), US Army Corps of Engineers, and Oregon Department of Environmental Quality (DEQ) are likely to be required. In-water work periods will not apply to this project.

The project area is within the Willamette River watershed and stormwater runoff has potential to affect federally listed salmon and steelhead trout in the Columbia River Basin Group regulated by the Endangered Species Act (ESA). Because the project is funded by FHWA, and administered by ODOT, the Federal Aid Highway Program (FAHP) Programmatic Biological Opinion will be used for ESA compliance. A required FAHP site visit was conducted on February 16, 2021 to review stormwater treatment options, and a FAHP Initiation form was submitted to ODOT.

Stormwater treatment and flow BMPs discussed include bioswales and infiltration/detention basins. Currently, it is anticipated that 100% of the project area will be treated on-site. If possible, the project will provide over treatment, allowing ODOT to use treatment credits on future projects.

Right-of-Way Acquisition Plans

The entire project has been designed to minimize project footprint and right-of-way needs to avoid displacement and environmental impact. ODOT has acquired all necessary ROW for this project and there are no anticipated displacements.

Public Involvement

As described in Criterion # 5, ODOT has prioritized a robust and diverse community engagement strategy since the project's inception. Due to the COVID-19 Pandemic, in-person open houses or meetings were limited. Still, ODOT created a project website, sent over 6,500 mailers to stakeholders, as well as more than 5,000 emails (with a 25 percent open rate) and social media posts. This outreach included information about the project, how to sign up for alerts, and links to questionnaires and surveys. ODOT utilized NextDoor, a neighborhood specific app to target residents in and near the Project area. While the PIP will not commence until Project kickoff, below is a sampling of public outreach activities completed by ODOT to date:

- 3/11/2021 - South Gateway Neighborhood Associations project presentation
- 5/10/2021 - Robins Lane area public meeting to discuss scope and schedule of project.
- 4/13/2022 - Commercial Ramp Sound Wall presentation (virtual)
- 4/14/2022 - Robins Lane and Kuebler Soundwall presentation(virtual)
- 5/12/2022 - South Gateway Neighborhood Associations project presentation
- 5/16/2022 - Nextdoor Survey and Polling (~9K)
- 6/6/2022 - 6/15/2022 Online Open House (translation option in the footer)
- 6/15/2022 - Live Virtual Event

State and Local Approvals

This Project has the broad and enthusiastic support of state and local officials, agencies, and stakeholders. The Project website includes additional letters of support from federal, state and local officials and agencies, businesses, and other external partner groups. The Project is identified in the [2021-2024 STIP](#) as Key Number 19929 and the [2023 Oregon Freight Plan](#) as I-5: Kuebler Blvd to Delaney Road Widening.

Federal Transportation Requirements Affecting State and Local Planning

- This is not a port, rail, or intermodal project, and it is not located at an airport facility.
- The project is included in all relevant state and local planning documents, as detailed in the “State and Local Approvals” section.
- This project supports freight movement and is included in the Oregon Freight Plan, as detailed and linked in the “State and Local Approvals” section above.
- This project does not involve other modal administrations beside FHWA.

Assessment of Project Risks and Mitigation Strategies

The project underwent a Value Engineering (VE) study July 27 to 31, 2020. The design team spent much of August through November of that year combining and refining the alternatives recommended by the VE team and documented in the VE Study report. The final refined design incorporates many of the cost-saving and risk-reduction measures, including shifting of the I-5 alignments closer together over Commercial Street to eliminate impacts to Battle Creek, elimination of retaining walls, and realignment of Battle Creek Road to a reduced-skew crossing over I-5. The VE proposal included a roundabout intersection with Wiltsey Road, but the intersection was later revised to stop control based on traffic volumes.

After this process, only three potential material risks remain relating to traffic control staging, subsurface conditions and potential hazardous material which may increase costs if discovered. None is anticipated to delay the project, because all have been or can be reasonably mitigated.

Technical Capacity

ODOT is the applicant and will be responsible for all aspects of the Project. The agency has a long history of successfully completing and maintaining federally funded transportation projects. ODOT maintains 8,000 miles of highway, ranging from six-lane, limited-access freeways with metered entrances in Portland and Eugene, to a graveled state highway in central Oregon. State highways comprise a little more than 11 percent of total road miles in Oregon by carry 58 percent of the traffic and more than 20.7 billion vehicle miles per year.

Statutory Project Requirements

The BCA of the I-5 NB Widening Project reflects the project focus on improving safety, enhancing the efficient and reliable movement of passenger and commercial vehicles, and maintain the system infrastructure in a state of good repair. The benefits of the project are based on the reduction in crashes/fatalities/injuries, economic competitiveness, equity, mobility and quality of life, and state of good repair. This \$40.1 million capital project (in year of expenditure (YOE) converted to constant 2021 dollars and discounted at a seven percent rate has a Net Present Value of \$13.8 million and a Benefit-Cost ratio of 1.63. The Project's effect on the mobility in the state and region is discussed in Outcome Criterion #3. The effect of the proposed Project on safety of a freight corridor is described in Outcome Criterion #1, while resiliency is described in Outcome Criterion #4.

While a small project is not required to meet the seven statutory requirements of the INFRA program, the table below outlines how this Project does satisfy those requirements.

Statutory Selection Requirement	Project
1. The project will generate national, or regional economic, mobility, or safety benefits.	I-5 provides statewide and national mobility for travelers and freight and is the most important north-south transportation facility for the entire West Coast, including Oregon. Outcome Criterion #3 provides data on the state and regional importance of the project to freight mobility and Outcome Criterion #1 describes the Project's safety benefits.
2. The project will be cost effective.	The yields a BCR of 1.63.
3. The project will contribute to 1 or more goals described under Section 150.	<p>Safety: Reduction in traffic fatalities and serious injuries. The project significantly reduces fatalities and serious injuries compared to the No Build scenario (Outcome Criterion #1).</p> <p>Infrastructure Condition: Mobility performance exceeds all v/c standards for the design life of the Project (Outcome Criterion #2 and #3).</p> <p>Congestion Reduction: During peak periods in 2045, ODOT's BCA projects 147,935 in yearly VHD savings and 80,181 gallons in yearly fuel savings compared to the No Build scenario.</p> <p>Freight Movement and Economic Vitality: Project significantly improves freight mobility and efficiency and facilitates economic development (Outcome Criterion #3).</p> <p>Environmental Sustainability: Project eliminates more than 147,935 yearly VHD, along with associated emissions.</p> <p>Reduced Project Delivery Delays: Project design and permitting has already achieved the 50 percent Design Acceptance Package level of design.</p>
4. The project is based on the results of preliminary engineering.	Project design and permitting has already achieved the 50 percent Design Acceptance Package level of design.

5. With respect to related non-federal financial commitments, 1 or more stable and dependable sources of funding and financing are available to construct, maintain, and operate the project, and contingency amounts are available to cover unanticipated cost increases.

The Project is in the 2021-2024 STIP. Non-federal funding is committed and Criterion #2 outlines maintenance and operation capabilities. ODOT's budget includes an appropriate construction contingency and an inflation/escalation allowance.

6. The project cannot be easily and efficiently completed without other federal funding or financing available to the project sponsor.

Due to funding constraints, the Project has been divided into two phases. The purpose of this proposal is to construct Phase 2 NB improvements immediately after Phase 1 SB improvements.

7. The project is reasonably expected to begin construction not later than 18 months after the date of obligation of funds for the project.

Yes. The Project Readiness section includes the Project Schedule.