

3.20 Environmental Justice

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994) reinforces the National Environmental Policy Act of 1969 (NEPA) by requiring federal agencies to analyze the “disproportionately high and adverse” environmental effects resulting from federal actions on minority and low-income populations. EO 12898 also calls for the fair treatment and meaningful involvement of all people, which refers to proactive efforts to increase low-income and minority participation.

On April 21, 2023, the Biden Administration signed EO 14096, Revitalizing Our Nation’s Commitment to Environmental Justice for All. EO 14096 directs the federal government to build upon and strengthen its commitment to deliver environmental justice (EJ) through an updated definition of EJ, a change in the standard for what constitutes an EJ effect, and an expansion of EJ communities. Although formal guidance on how to apply EO 14096 to NEPA projects has yet to be published, the IBR Program has sought to meet the intent of the rule through a robust EJ analysis, coordinated with an equity analysis completed as part of the Equity Technical Report and summarized in Section 3.5, Neighborhoods and Equity.

Per U.S. Department of Transportation (USDOT) Order 5610.2C (May 14, 2021), determination of a “disproportionately high and adverse effect” depends on whether that effect is (1) predominantly borne by an EJ population, or (2) will be suffered by the EJ population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-EJ population. It is important to note that determination of disproportionately high and adverse effects takes into consideration the mitigation and enhancement measures that are planned for the proposed action.

The information in this section is based on the Environmental Justice Technical Report, which contains greater detail and analysis.

3.20.1 Changes or New Information Since 2013

The Columbia River Crossing (CRC) Selected Alternative identified in the 2011 Record of Decision (ROD), as revised by the 2012 and 2013 re-evaluations, is referred to as the CRC Locally Preferred Alternative (CRC LPA). Over the past 10+ years since the CRC LPA was identified, the physical environment in the study area, community priorities, and regulations have changed, which necessitated design revisions and resulted in the IBR Modified LPA (see Section 2.5.2). Evaluation of potential impacts associated with environmental justice has been updated in this Draft SEIS to include the following:

Legal/Regulatory Changes

- On April 21, 2023, EO 14096, Revitalizing Our Nation’s Commitment to Environmental Justice for All, was signed by the Biden Administration, providing updates to the definition of EJ, a change in standard for what constitutes an EJ effect, and an expansion of EJ communities.
- On May 14, 2021, USDOT Order 5610.2C was authorized, providing an update to the legal standard for “disproportionately high and adverse effects” on EJ populations.

Methods and Analysis Changes

- Updated EJ analysis methodology to identify “meaningfully greater” and high-priority EJ areas. This methodology is described in more detail in Section 3.20.2, below.
- Updated demographic information to assess low-income and minority populations within the study area.
- Changes in the project footprint necessitated by changed conditions resulted in shifting the light-rail transit alignment and stations.

Interstate Bridge Replacement Program

- Design modifications that would reduce residential and commercial property acquisitions.
- Updated long-term, short-term, direct, indirect, and cumulative effects on low-income and minority populations resulting from the Modified LPA.
- Updated discussion of the effects on EJ populations that would result from a future IBR tolling program.

The IBR Program identified some impacts from the Modified LPA that would differ from those of the CRC LPA. Table 3.20-1 compares the key EJ-related impacts and benefits of the CRC LPA, as identified in the Final EIS (2011), and the IBR Modified LPA. Only the impact categories that would affect EJ populations are shown in the table. Key design changes that would affect EJ impacts include replacing the full interchange on Hayden Island that was part of the CRC LPA with a partial interchange and moving the proposed light-rail transit alignment closer to I-5 in downtown Vancouver. The changes proposed under the Modified LPA would require a smaller design footprint, reducing the number of residential and commercial displacements in meaningfully greater and high-priority EJ areas.

Table 3.20-1. Comparison of CRC LPA Effects and IBR Modified LPA Effects

Type of Effect	CRC LPA Effects as Identified in the 2011 Final EIS	Modified LPA Effects Identified in This Section	Explanation of Differences
Residential Displacements	59 (approximately 18 in meaningfully greater and high-priority EJ areas)	43 for the Modified LPA, including all design options except the I-5 westward shift (none in meaningfully greater and high-priority EJ areas) The I-5 westward shift design option would shift I-5 west in downtown Vancouver, resulting in 33 residential units displaced in the Esther Short neighborhood (high-priority low-income neighborhood).	Modified LPA design changes would reduce residential property acquisition, including in meaningfully greater and high-priority EJ areas, for all design options except for the I-5 westward shift.
Business Displacements	69 (approximately 30 in meaningfully greater and high-priority EJ areas)	36 (13 in meaningfully greater and high-priority EJ areas) One design option would shift I-5 west in downtown Vancouver, resulting in 3 commercial displacements at the Regal City Center complex.	Commercial property acquisitions in meaningfully greater and high-priority EJ areas would also decrease due to the Modified LPA's smaller footprint.

Type of Effect	CRC LPA Effects as Identified in the 2011 Final EIS	Modified LPA Effects Identified in This Section	Explanation of Differences
Tolling	New toll would require a higher proportion of income for low-income drivers. Consideration of a variety of potential tolling schemes, including variable price tolls.	New toll would require a higher proportion of income for low-income drivers. Toll rates and policies, including a possible low-income toll program, would be jointly set by the OTC and WSTC. Both commissions have supported the study of a low-income toll program, including how such a program could be implemented in each state. They will work together to determine how to approach this for the IBR Program.	New analysis completed to understand the potential impacts of tolls on EJ populations under the Modified LPA.
High-Capacity Transit	The CRCLPA would bring new high-capacity transit to the I-5 corridor, including high-priority EJ neighborhoods such as Esther Short in Vancouver.	Same as CRC LPA.	None identified.
Social and Neighborhood Effects	Displacement of Hayden Island Safeway and bottle return.	None identified.	The Safeway grocery store (including a pharmacy and bottle return) closed after the CRC project was suspended. A new Target store, replacing some of these services, was constructed outside the Modified LPA footprint.

CRC = Columbia River Crossing; N/A = not applicable; OTC = Oregon Transportation Commission; WSTC = Washington State Transportation Commission

3.20.2 Affected Environment

Study Area

The IBR study area, also referred to as the primary study area, is a 5-mile segment of I-5 approximately between the SR 500 interchange in Washington and the I-5/Columbia Boulevard interchange in Oregon, as well as the Ruby Junction Maintenance Facility in Gresham, Oregon.

Impacts to EJ populations can extend beyond a project's limits. Therefore, the EJ analysis looked at a larger secondary study area, which extends over 15 miles from approximately 1 mile north of the I-5/I-205 interchange in Vancouver, south to the I-5/I-84 interchange, and 1 mile both east and west of I-5. The secondary study area captures the direct impacts as well as where the greatest potential for indirect impacts (e.g., traffic and development changes) could occur (Figure 3.20-1). The intent of using the secondary study area for the EJ analysis was to account for all EJ populations that could be directly and indirectly impacted by the Modified LPA. For the EJ analysis, references to the study area refer to this secondary study area unless noted otherwise.

Defining Environmental Justice Populations

EO 12898 instructs federal agencies and recipients of federal funds to integrate EJ into agency missions and to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on low-income and minority populations. Hence, the EJ analysis considers all potential impacts of the Modified LPA to determine whether the IBR Program would result in disproportionately high and adverse effects on low-income and minority populations, which are defined as EJ populations.

The first step of the EJ analysis was to identify all EJ populations within the study area using best practices and methods consistent with FHWA guidance (FHWA 2011) and guidance sourced from the publication *Promising Practices for EJ Methodologies in NEPA* (EJ IWG2016), a compilation of agency approaches for incorporating EJ into environmental reviews published by the Environmental Justice Interagency Working Group. Per this guidance, a “no-threshold” analysis was conducted to identify all minority and low-income populations within the study area regardless of concentration relative to the general population. This analysis used 2016–2020 American Community Survey (ACS) data published by the U.S. Census Bureau, analyzed at the U.S. Census block group level. For the Final SEIS, the analysis will be updated with the most recent ACS data available.

Building from the no-threshold analysis described above, a “meaningfully greater” analysis was used to identify concentrations of EJ populations relative to the average for the Portland-Vancouver region. As with the no-threshold technique, this methodology is sourced from *Promising Practices for EJ Methodologies in NEPA Reviews* (EJ IWG 2016).

For the purposes of this project, low-income and minority populations 1.5 times greater than the corresponding average for the Portland-Vancouver region are considered “meaningfully greater.” Low-income and minority populations that are 2 times greater than the average for the Portland-Vancouver Region are considered “high-priority” EJ areas.¹ Block groups where minority or low-income populations made up 50% or more of the population were also considered high-priority EJ areas. The purpose of identifying meaningfully greater and high-priority EJ areas is to provide a baseline reference for the relative concentration of where minority and low-income populations are present, and where disproportionately high and adverse effects could occur. Determining meaningfully greater and high-priority EJ areas also provides a reference for where there could be a need for additional outreach and analysis as part of the IBR Program.

The IBR Program acknowledges that demographic data providing population and household information are a valuable sampling tool and support analyses such as the EJ analysis. There are some limitations to the use of census data, however, and demographic data for a particular U.S. Census unit should not be the only factor used to determine disproportionality in EJ analysis. Consideration of the type, magnitude, severity, and distance of impacts in conjunction with demographic data forms a more complete understanding of potential impacts, including whether impacts would be disproportionately high and adverse to EJ populations.

Minority Populations

Minority populations are defined consistent with USDOT Order 5610.2C and FHWA’s Guidance on Environmental Justice and NEPA (FHWA 2011):

- Black: A person having origins in any of the black racial groups of Africa.

¹ The meaningfully greater thresholds of 1.5 and 2 times the corresponding county or regional average were selected given the regional significance of the IBR Program, such that the determination of meaningfully greater and high-priority EJ areas was relative to the broader region. These specific thresholds were also used in the Southwest Corridor Light Rail Environmental Impact Statement, another regionally significant program (FTA 2022).

- Hispanic or Latino: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- Asian American: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- American Indian and Alaskan Native: A person having origins in any of the original people of North America or South America (including Central America).²
- Native Hawaiian and other Pacific Islander: People having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Tribal governments (federally recognized tribes) are sovereign nations as recognized by the U.S. Government, and consultation with federally recognized tribes occurs through a government-to-government consultation process separate and distinct from public and community outreach and comment.

Table 3.20-2 summarizes non-white, minority populations living in U.S. Census block groups within the study area for Portland and Vancouver (U.S. Census Bureau 2022). Minority populations account for 27.8% of this population, representing approximately 35,000 people, which is comparable to the percentage of minority populations in the Portland-Vancouver region (27.6%). Within the study area, block groups in Portland have a somewhat higher percentage of minority residents (31.0%) than in Vancouver (25.0%).

Table 3.20-2. Minority Populations in the Study Area (Portland and Vancouver)

Study Area	Minority Population	Percent Minority
Portland Block Groups	18,283	31.0%
Vancouver Block Groups	16,534	25.0%
Study Area Total	34,817	27.8%

Source: American Community Survey 5-Year Estimates, 2016–2020, Table B03002 (U.S. Census Bureau 2022).

Table 3.20-3 reports minority populations within the Rockwood neighborhood in Gresham. Demographics for Gresham are reported separately to account for its distance from the study area adjacent to the Interstate Bridge, distinct community characteristics, and separate but related set of improvements under the Modified LPA (Ruby Junction Operations and Maintenance Facility).

Table 3.20-3. Minority Populations in the Study Area (Gresham)

Study Area	Minority Population	Percent Minority
Gresham Block Groups (Rockwood)	8,227	60.0%
Study Area Total	34,817	27.8%

Source: ACS 5-Year Estimates, 2016–2020, Table B03002 (U.S. Census Bureau 2022).

² Not all American Indian and/or Native American populations are appropriately represented in U.S. Census data due to a history of termination, removal, and assimilation. Furthermore, tribal affiliation, citizenship, and/or sovereignty does not imply tribal ethnicity and cultural affiliation, and vice versa. The EJ analysis recognizes that the demographic analysis based on U.S. Census data is not fully representative of American Indian and/or Native American populations within the study area.

Figure 3.20-1. Environmental Justice Study Area



Table 3.20-4 summarizes minority populations in the study area by race and ethnicity (U.S. Census Bureau 2022). In the study area, white residents are the largest share of the total population (72.2%), followed by Hispanic or Latino (10.2%), Black or African American (6.7%), and two or more races (5.8%).

Within the study area, Portland’s population is somewhat more racially diverse than Vancouver’s. Compared to Vancouver, Portland study area block groups have a higher percentage of Black or African American, American Indian and Alaska Native, and Asian populations. However, Vancouver study area block groups have a higher percentage of Native Hawaiian and other Pacific Islander, two or more races, and Hispanic or Latino populations.

Table 3.20-4. Minority Populations in the Study Area by Race and Ethnicity (Portland and Vancouver)

Study Area	White Alone (Race)	Black or African American Alone (Race)	American Indian and Alaska Native Alone (Race)	Asian Alone (Race)	Native Hawaiian and Other Pacific Islander Alone (Race)	Some Other Race Alone (Race)	Two or More Races	Hispanic or Latino (Ethnicity)	Non-White Total
Portland Block Groups	69.0%	11.2%	0.8%	4.4%	0.3%	0.5%	5.7%	8.1%	31.0%
Vancouver Block Groups	75.0%	2.6%	0.5%	2.8%	0.6%	0.3%	5.9%	12.2%	25.0%
Study Area Total	72.2%	6.7%	0.7%	3.6%	0.5%	0.4%	5.8%	10.2%	27.8%

Source: American Community Survey 5-Year Estimates, 2016–2020, Table B03002 (U.S. Census Bureau 2022).

Table 3.20-5 reports minority populations by race and ethnicity within the Rockwood neighborhood in Gresham.

Figure 3.20-2 maps minority populations within the study area by U.S. Census block group.

Table 3.20-5. Minority Populations in the Study Area by Race and Ethnicity (Gresham)

Study Area	White Alone (Race)	Black or African American Alone (Race)	American Indian and Alaska Native Alone (Race)	Asian Alone (Race)	Native Hawaiian and Other Pacific Islander Alone (Race)	Some Other Race Alone (Race)	Two or More Races	Hispanic or Latino (Ethnicity)	Non-White Total
Gresham Block Groups (Rockwood)	40.0%	7.5%	1.6%	6.4%	2.1%	<0.1%	3.6%	38.7%	60.0%

Source: American Community Survey 5-Year Estimates, 2016–2020, Table B03002 (U.S. Census Bureau 2022).

Low-Income Populations

EJ analysis conducted for the IBR Program defines low-income populations consistent with FHWA EJ guidance and the definition established in USDOT Order 5610.2C, which states that a low-income person is an individual whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines (USDOT 2021). As of 2022, the poverty guideline for a household of four persons is \$27,750. The guidelines set by the U.S. Department of Health and Human Services are national and do not reflect distinct state and local economic realities; therefore, special attention must be paid to state and local thresholds.

FHWA allows localities to adapt poverty thresholds to local standards per the FHWA Environmental Justice Reference Guide (FHWA 2015). Regional agencies, such as TriMet and Metro, accept the regional poverty threshold to be 200% of the federal poverty level to reflect regional living costs and standards (Metro 2015; TriMet 2019). Under these regionally accepted standards, a household of four persons making \$55,500 or less would be considered low-income in 2022, as shown in Table 3.20-6. Therefore, a four-person household was selected as the basis for determining the low-income poverty threshold, consistent with regional best practices.

Table 3.20-6. Low-Income Populations as Defined for the IBR Program Environmental Justice Analysis

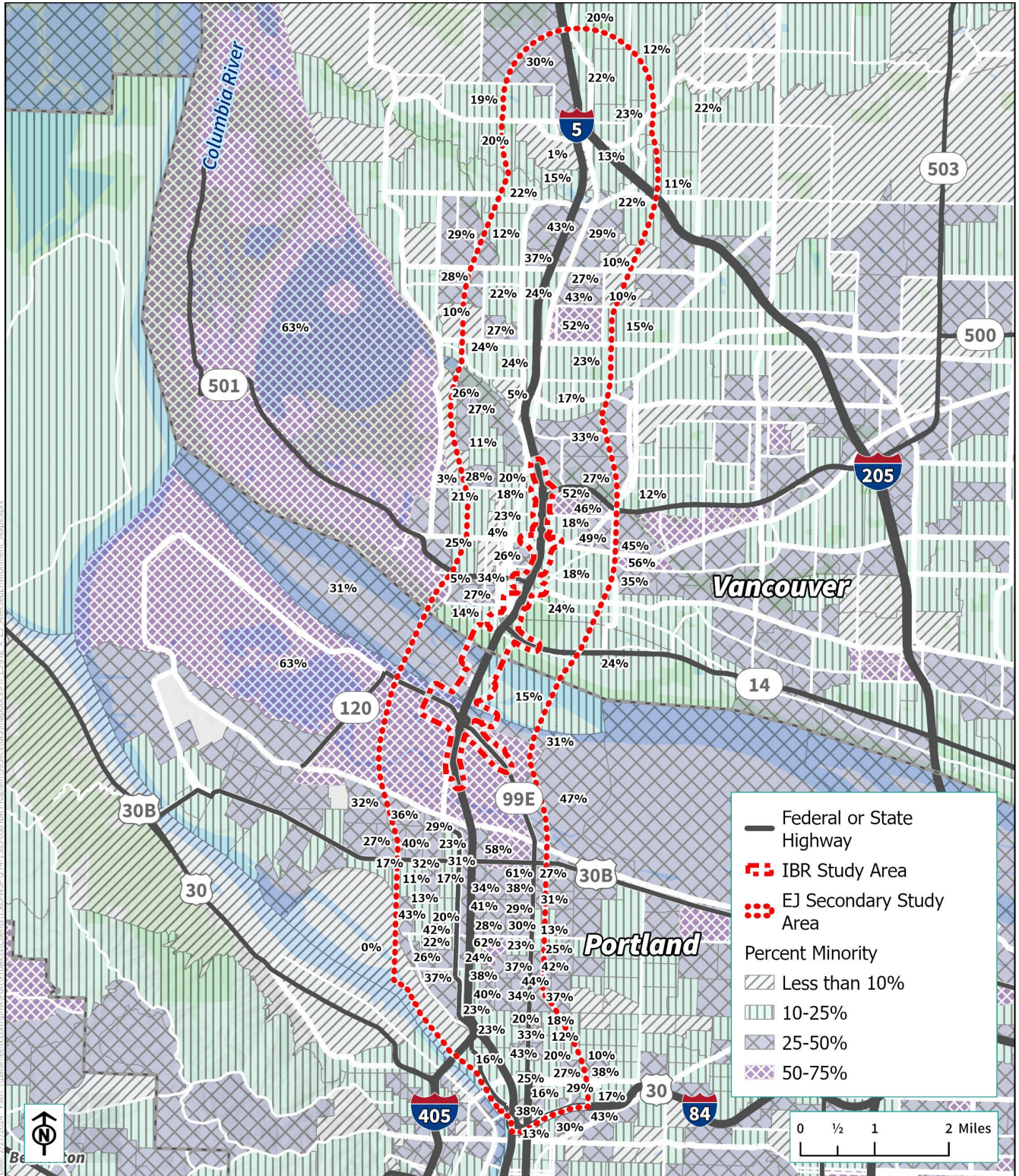
Low-Income Guideline	Household of Four	Individual
Federal Poverty Level	\$27,750	\$13,590
Low-Income (200% of Federal Poverty Level)	\$55,500	\$27,180

Source: U.S. Department of Health and Human Services Poverty Guidelines (HHS 2021).

Table 3.20-7 summarizes low-income populations in U.S. Census block groups within Portland and Vancouver (U.S. Census Bureau 2022). For the purposes of this EJ analysis, low-income populations also refer to an identifiable group of low-income persons, including houseless individuals and families in the study area.³

³ The EJ analysis discusses low-income and minority populations and acknowledges that other communities, such as houseless populations or limited-English proficiency populations, may also belong to the EJ population. The equity analysis discusses populations not explicitly referenced in EO 12898; see Section 3.5 Neighborhoods and Equity, for additional analysis of equity populations.

Figure 3.20-2. Percent Minority by Block Group in the IBR Study Area



Interstate Bridge Replacement Program

Within the study area, 25.8% of the population are low-income, approximately 32,000 people. Vancouver study area block groups have a higher percentage of low-income populations (27.1%) than Portland study area block groups (24.3%), which is comparable to the Portland-Vancouver region as a whole (23.7%).

Table 3.20-7. Low-Income Populations in the Study Area (Portland and Vancouver)

Study Area	Low-Income Population (200% of Federal Poverty Level)	Percent Low-Income
Portland Block Groups	14,269	24.3%
Vancouver Block Groups	17,592	27.1%
Study Area Total	31,861	25.8%

Source: ACS 5-Year Estimates, 2016–2020, Table C17002 (U.S. Census Bureau 2022).

Table 3.20-8 summarizes low-income populations in U.S. Census block groups within Gresham (U.S. Census Bureau 2022).

Table 3.20-8. Low-Income Populations in the Study Area (Gresham)

Study Area	Low-Income Population (200% of Federal Poverty Level)	Percent Low-Income
Gresham Block Groups (Rockwood)	14,269	49.6%

Source: American Community Survey 5-Year Estimates, 2016–2020, Table C17002 (U.S. Census Bureau 2022).

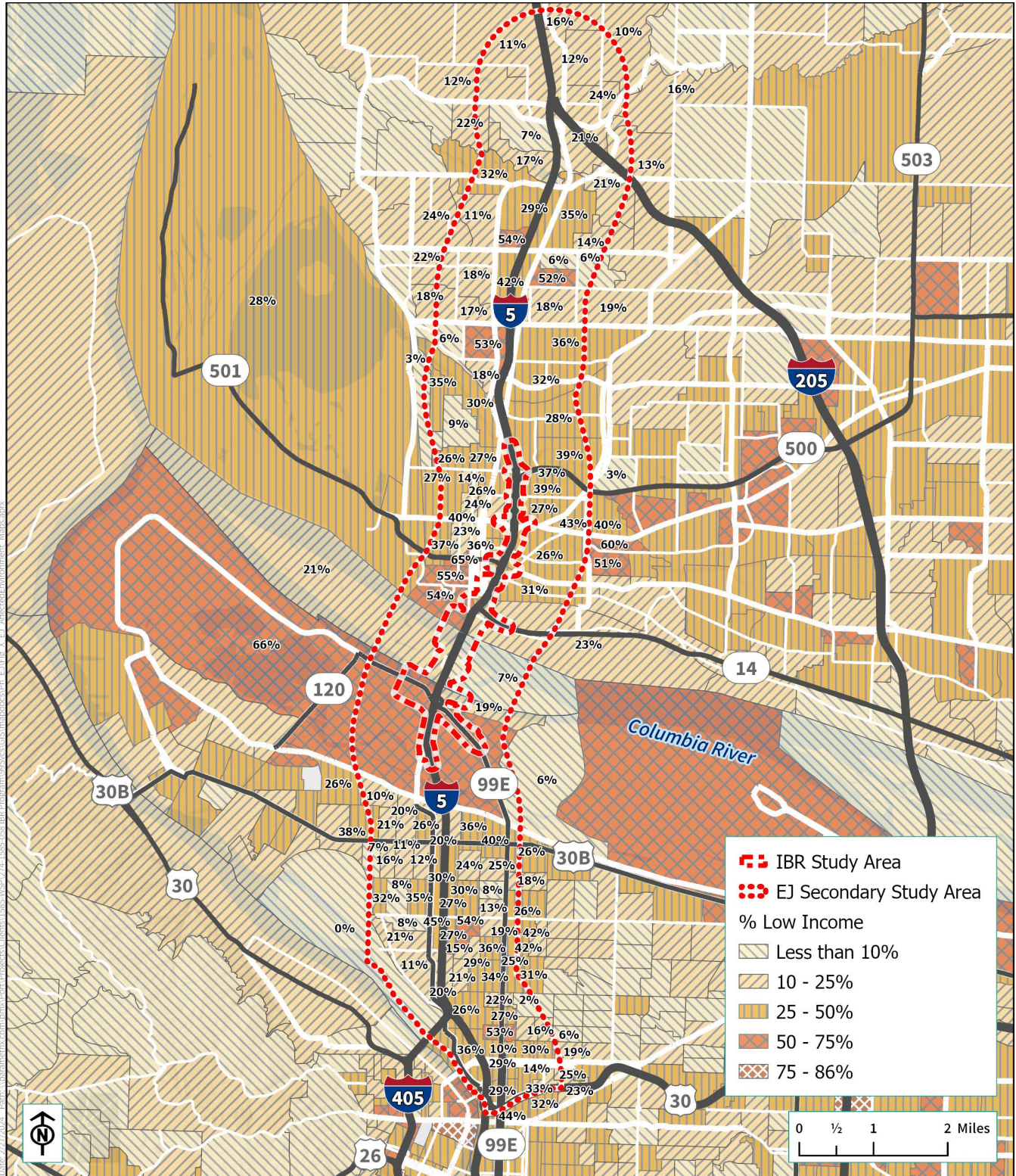
Figure 3.20-3 maps low-income populations within the study area by U.S. Census block group.

Meaningfully Greater and High-Priority EJ Areas

Building from the identification of all EJ populations based on the no-threshold analysis described above, additional analysis was conducted to identify concentrations of minority and low-income populations within the study area. Areas with higher concentrations of EJ populations provided a reference for where additional analysis and outreach may be needed as part of the IBR Program.

A “meaningfully greater” analysis methodology was used to identify higher concentrations of EJ populations relative to the general population. As with the no-threshold technique, this analysis technique is sourced from *Promising Practices for EJ Methodologies in NEPA Reviews* (EJ IWG 2016). The analysis considers EJ impacts in census block groups where levels of low-income or minority populations are meaningfully greater than corresponding county or regional averages—usually expressed in percentage ranges.

Figure 3.20-3. Percent Low-Income by Block Group in the IBR Study Area



Per the guidance set forth in the EJ methodology report, meaningfully greater analysis uses reasonable, subjective thresholds (e.g., 10% to 20% greater than the reference community) (EJ IWG 2016). For the purposes of this EJ analysis, low-income and minority populations 1.5 times greater than the corresponding average for the Portland-Vancouver region are considered meaningfully greater. Low-income and minority populations 2 times greater than the average for the Portland-Vancouver region are considered high-priority EJ areas⁴ for the purposes of this project. Furthermore, block groups where minority or low-income populations made up 50% or more of the population were also considered high-priority EJ areas.⁵

EJ analysis conducted for the IBR Program defines low-income populations consistent with FHWA EJ guidance and the definition

established in USDOT Order 5610.2C, which states that a low-income person is an individual whose median household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines (USDOT 2021). As of 2022, the poverty guideline for a household of four persons is \$27,750. The guidelines set by HHS are national and do not reflect distinct state and local economic conditions; therefore, special attention must be paid to state and local thresholds.

The FHWA allows localities to adapt poverty thresholds to local standards per the FHWA Environmental Justice Reference Guide (FHWA 2015). Regional agencies, such as the Tri-County Metropolitan Transportation District (TriMet) and Metro, consider the regional poverty threshold to be 200% of the federal poverty level to reflect regional living costs and standards (Metro 2015; TriMet 2019). Under these regionally accepted standards, a household of four persons making \$55,500 or less would be considered low-income in 2022, as shown in Table 3.20-6.⁶

The purpose of identifying meaningfully greater and high-priority EJ areas is to provide a baseline reference for the relative concentration of where minority and low-income populations exist, and where disproportionately high and adverse effects could exist. Determination of meaningfully greater and high-priority EJ areas also provides a reference for where there could be a need for additional outreach and

Evaluating Effects on EJ Populations

It is important to note that, while meaningfully greater and high-priority EJ areas were used as tools to help identify higher concentrations of EJ populations relative to regional averages, these thresholds were not used as the analytical or legal basis for determining whether an environmental effect is disproportionately high and adverse. Per USDOT Order 5610.2c., determination of a “disproportionately high and adverse effect” depends on whether that effect is (1) predominantly borne by an EJ population, or (2) will be suffered by the EJ population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-EJ population.

⁴ The meaningfully greater thresholds of 1.5 and 2 times the corresponding county or regional average were selected given the regional significance of the IBR Program, such that the determination of meaningfully greater and high-priority EJ areas was relative to the broader region. These specific thresholds were also used in the Southwest Corridor Light Rail Environmental Impact Statement, another regionally significant program (FTA 2022).

⁵ For the purposes of this project, the 1.5 and 2 times thresholds were developed based on an interpretation of the FHWA Environmental Justice Reference Guide that allows localities to adapt poverty thresholds to appropriate local standards (FHWA 2015). As described in the Defining Environmental Justice Populations section, TriMet and Metro accept the regional poverty threshold to be 200% of the federal poverty level to better reflect regional living costs and standards (Metro 2015; TriMet 2019). Meaningfully greater block groups indicate areas that are substantially impoverished relative to the Portland-Vancouver region—150%, or 1.5 times, below the “low-income” threshold established for the project. Block groups 200% or 2 times below are essentially the lowest-income block groups in the region. The same multipliers were applied to minority populations. Understanding these regional disparities served as one critical component for understanding the potential for disproportionately high and adverse impacts as part of the IBR Program.

⁶ The average size of household in the Portland-Vancouver region is approximately 2.5 residents. Household sizes of one and four were reported based on other recently completed NEPA EJ analyses that have been performed in the region. For the purposes of this analysis, the federal poverty guideline for a four-person household is used.

analysis as part of the IBR Program. However, the determination of meaningfully greater and high-priority EJ areas was not used as the analytical or legal basis for determining disproportionately high and adverse effects on EJ populations (see *“Evaluating Effects on EJ Populations”* above).

As discussed above, low-income and minority populations 1.5 times greater than the corresponding regional average are considered meaningfully greater, and low-income and minority populations with 2 times the average are considered high-priority areas in the EJ analysis. Table 3.20-9 defines these values for the Portland-Vancouver-Hillsboro metropolitan area as defined by the U.S. Census.

Table 3.20-9. High-Priority and Meaningfully Greater Reference Values for EJ Areas

Reference Value	Low-Income (200% of Federal Poverty Level)	Minority
Portland-Vancouver-Hillsboro Metropolitan Average	23.7 %	27.6%
Meaningfully Greater (1.5 times)	41.4%	35.6%
High-Priority (2 times)	55.2%	47.4%

For the purposes of this discussion, meaningfully greater and high-priority EJ areas are described according to the neighborhoods within which they are located. The study area includes 43 neighborhoods, 19 of which are in Portland, 23 in Vancouver, and one in Gresham. Of these 43 neighborhoods, 10 contain meaningfully greater or high-priority percentages of EJ populations (either low-income or minority populations). Two of these neighborhoods are in Portland, one is in Gresham, and the remaining seven are in Vancouver.

The percentage of minority residents in the study area (27.8%) is higher than in the Portland-Vancouver region (23.7%). Both Portland and Vancouver neighborhoods in the study area have a higher percentage of low-income populations than the Portland-Vancouver region as a whole (23.7%).

Figure 3.20-4 displays neighborhood boundaries within the study area. Figure 3.20-5 shows meaningfully greater and high-priority low-income block groups in the context of neighborhood boundaries. Figure 3.20-6 shows meaningfully greater and high-priority minority block groups in the context of neighborhood boundaries.

3.20.3 Engagement Activities

23 CFR 771.111 requires the provision of public involvement opportunities and meaningful access to public information for minority populations and low-income households. Per FHWA and FTA guidance on Environmental Justice and NEPA, EJ documentation should include a discussion of major proactive efforts to ensure meaningful opportunities for public participation, including activities to increase low-income and minority participation. Public engagement information should also include affected populations’ perception of the project and steps to resolve potential controversy. Additionally, EJ documentation should describe the degree to which affected minority and/or low-income populations have been involved in decision-making related to project alternatives, impacts, and mitigation.

The IBR Program team is engaged in an ongoing public outreach campaign that offers a wide range of opportunities for public involvement throughout the environmental review process. Meaningful public involvement in the IBR Program has included forming four advisory groups: the Community Advisory Group, Equity Advisory Group, Community Benefits Advisory Group, and Executive Steering Group. The advisory groups are composed of regional community members who were identified and appointed to represent a diverse range of perspectives, including EJ populations, as well as representatives from local agencies and

community-at-large members. The IBR Program has been engaging with partner agencies, tribal governments, and community-based organizations since late 2020 and has been conducting more formal intentional community engagement since January 2021. This process is documented in Section 2.5 of the Environmental Justice Technical Report, as well as in the IBR Community Engagement Report (IBR 2021) and Appendix B, Public Involvement, of this Draft SEIS.

The IBR Program is consulting with 10 federally recognized Indian tribes. Federally recognized tribes are sovereign nations as recognized by the U.S. Government, and consultation with federally recognized tribes occurs through a government-to-government consultation process separate and distinct from public and community outreach and comment. The government-to-government consultation goals and process are documented in Appendix A, Agency and Tribal Coordination. Additional discussion of federally recognized tribes is included in 3.5, Neighborhoods and Equity.

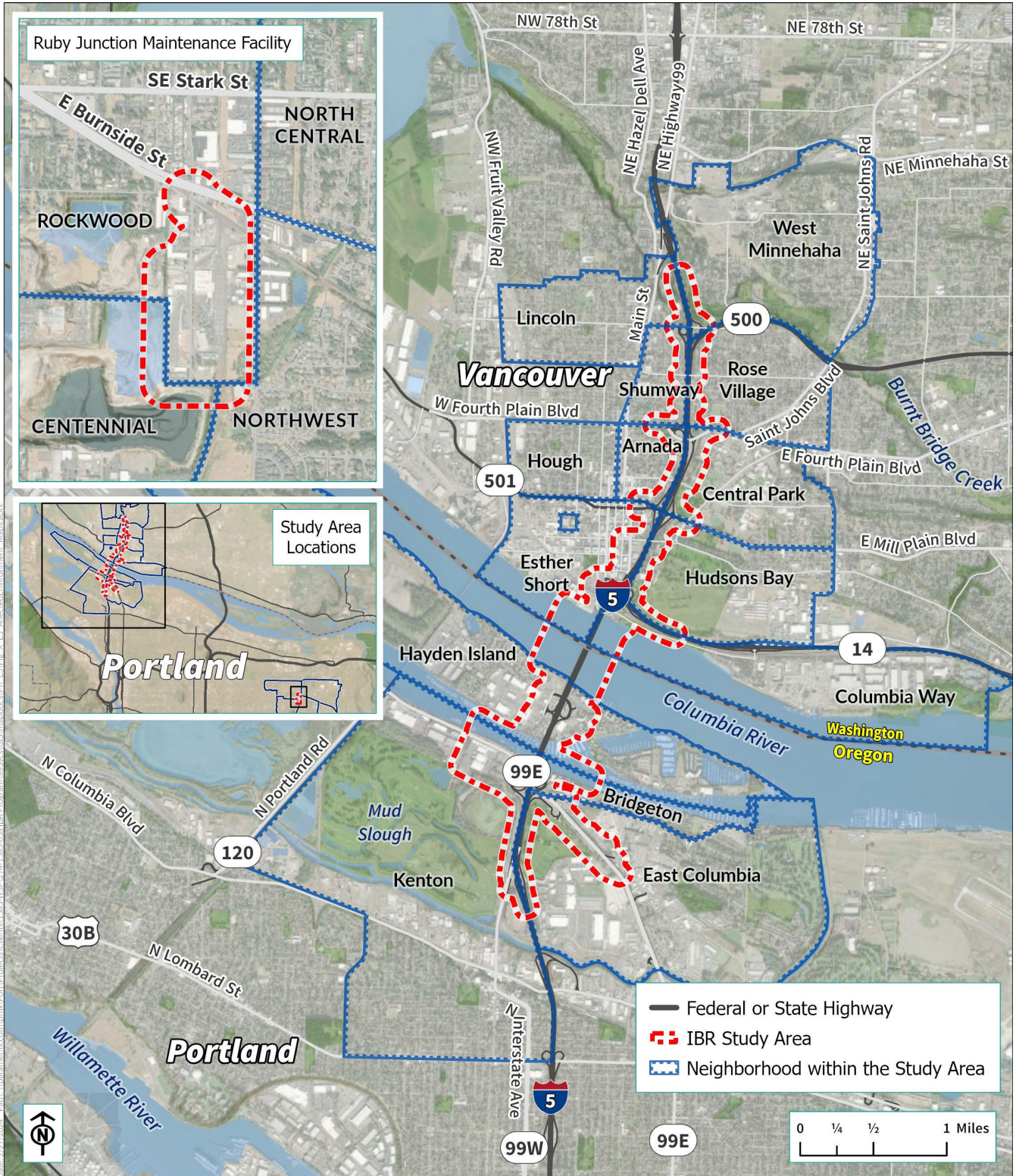
3.20.4 Long-Term Effects

In general, long-term impacts of the IBR Program were determined by evaluating the location and intensity of environmental impacts that would occur during operation of the Modified LPA in areas where EJ populations have been identified. In particular, the EJ analysis assessed whether impacts to EJ populations would be disproportionately high and adverse compared to the general population. The impact analysis included impacts derived from several IBR Program technical reports: Acquisitions and Displacements, Neighborhoods and Populations, Land Use, Economics, Visual Resources, Air Quality, Noise and Vibration, and Transportation.

All environmental resource topics were reviewed in coordination with subject matter experts to assess whether the effects identified for those resources under the Modified LPA had the potential to be predominantly borne by EJ populations or could be suffered by an EJ population in a manner appreciably more severe or greater in magnitude than the non-EJ population. Environmental resource topics with the potential to result in a disproportionately high and adverse effect on EJ populations under the Modified LPA became the focus of the EJ analysis and were studied further. Environmental resources that would not or were unlikely to result in disproportionately high and adverse effects under the Modified LPA were not studied further.

Table 3.20-10 summarizes all IBR environmental resource topics and indicates the relevant topics for the EJ analysis.

Figure 3.20-4. Neighborhoods in the IBR Study Area



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Source: City of Portland, Clark County, City of Gresham, ODOT, WSDOT, Mapbox, OpenStreetMap

Figure 3.20-5. Meaningfully Greater and High-Priority Minority Block Groups and Study Area Neighborhoods

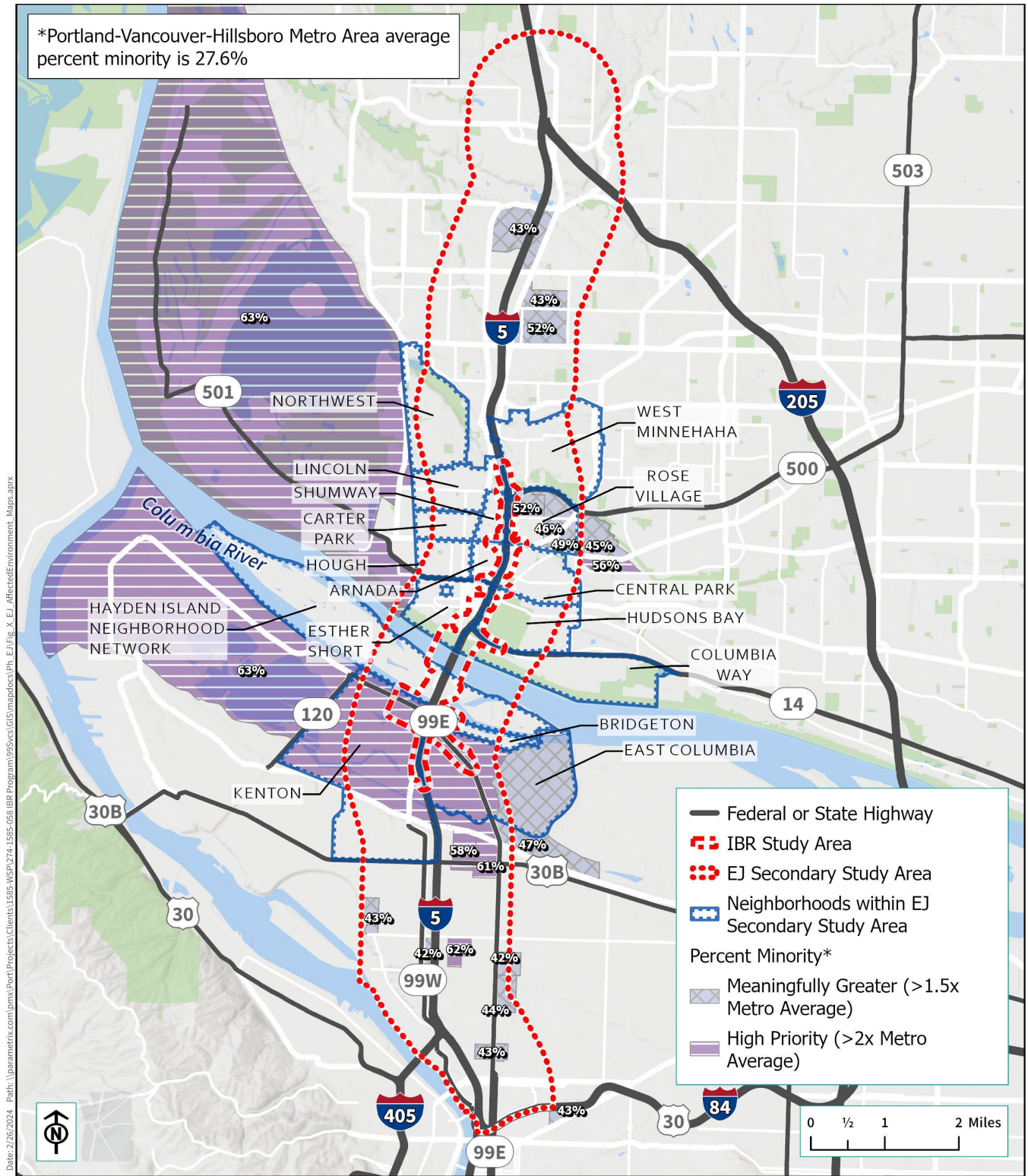


Figure 3.20-6. Meaningfully Greater and High-Priority Low-Income Block Groups and Study Area Neighborhoods



Table 3.20-10. IBR Environmental Resource Topics – Potential Impacts to Environmental Justice Populations

Environmental Resource Topic	IBR Reference	Potential Impact to EJ Populations?
Acquisitions, Displacements, and Relocations	Acquisitions Technical Report	Yes.
Air Quality	Air Quality Technical Report	Yes.
Archaeology	Archaeological Resources Technical Report	Yes.
Aviation	Aviation Technical Report	No; effects evaluated were limited to protected airspace and air navigation hazards.
Climate	Climate Technical Report	No; this is a larger-scale analysis of greenhouse gas emissions and climate resiliency that is not scalable to EJ population areas.
Economics	Economics Technical Report	Yes.
Ecosystems	Ecosystems Technical Report	No; this analysis evaluated effects to fish, wildlife and plants.
Energy	Energy Technical Report	No; this is a larger-scale analysis of energy usage that is not scalable to EJ population areas.
Electromagnetic Fields	Electromagnetic Fields Technical Report	No; this is a larger-scale analysis of EMF that is not scalable to EJ population areas.
Geologic Hazards	Geology and Groundwater Technical Report	No; this is a larger-scale analysis of geological hazards that is not scalable to EJ population areas.
Hazardous Materials	Hazardous Materials Technical Report	No; effects evaluated were site specific, whereas EJ population areas were evaluated at a neighborhood level.
Historic Resources	Historic Built Environment Technical Report	No; this analysis evaluated historic resources within the context of historical significance under the National Historic Preservation Act Section 106.
Land Use	Land Use Technical Report	Yes.
Noise and Vibration	Noise and Vibration Technical Report	Yes.
Social and Neighborhood Effects	Neighborhoods and Populations Technical Report	Yes.
Public Services	Public Services Technical Report	No; this analysis evaluated effects limited to public services without decreases in services to general and EJ populations.
Transportation	Transportation Technical Report	Yes.

Environmental Resource Topic	IBR Reference	Potential Impact to EJ Populations?
Tolling	Economics Technical Report	Yes.
Utilities	Utilities Technical Report	No; this analysis evaluated effects limited to utilities and potential utility relocations without impacts to service.
Visual Resources	Visual Quality Technical Report	Yes.
Water Quality and Hydrology	Water Quality and Hydrology Technical Report	No; this is a larger-scale analysis of water quality, and proposed changes would result in benefits to general and EJ populations.
Wetlands and Jurisdictional Waters	Wetlands and Other Waters Technical Report	No; this analysis evaluated wetlands and jurisdictional waters within the context of Clean Water Act Sections 401 and 404, as well as applicable state and local regulations.

EJ = environmental justice; EMF = electromagnetic field

The long-term impact assessment methods for each of the environmental topics relevant to the EJ analysis are summarized below.

- Acquisitions and displacements.** The EJ analysis reviewed proposed property acquisitions and displacements within census block groups⁷ and neighborhoods in the study area to determine impacts to EJ populations. The analysis reviewed the concentration of EJ populations compared with identified acquisitions and displacements to assess whether EJ populations within the study area would be disproportionately impacted by proposed acquisitions and displacements compared to the general population.
- Air quality.** The EJ analysis reviewed changes to air quality resulting from the Modified LPA to determine whether EJ populations would be adversely and disproportionately impacted by airborne pollutants compared to the general population. The analysis was conducted for the study area and region and reviewed the six criteria pollutants regulated by the National Ambient Air Quality Standards, including carbon monoxide, lead (Pb), particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂), ozone (O₃), and sulfur dioxide (SO₂).
- Archaeology.** Investigations to determine the presence of archaeological resources within the study area are underway. If present, potential impacts to archaeological resources will be reviewed to determine if they would be culturally significant to EJ populations.
- Land use and economics.** The EJ analysis evaluated the economic impact of the IBR Program to low-income and minority populations within the study area by reviewing several economic factors, such as the potential effects of business and employee displacements, changes to land uses in block groups with high concentrations of EJ populations, and the impact of tolling.
- Noise and vibration.** Noise impacts were evaluated in block groups with high concentrations of EJ populations within the study area. The noise and vibration analysis used noise sample location data and noise modeling to compare existing and future noise and vibration levels. Adverse noise impacts were

⁷ Block groups are statistical divisions of census tracts used by the U.S. Census Bureau, consisting of clusters of blocks within the same census tract. Block groups are generally defined to contain between 600 and 3,000 people and are used to present data and control block numbering.

evaluated to determine whether they would be predominantly borne by EJ populations within the study area as compared to the general population.

- **Social and neighborhood effects.** The EJ analysis evaluated community resource displacements and community cohesion impacts in block groups with high concentrations of EJ populations within the study area. The analysis evaluated whether adverse impacts to community resources or community cohesion caused by the IBR Program would be predominantly borne by EJ populations within the study area compared to the general population. The EJ analysis also considered potential impacts and access changes to facilities and services used by EJ populations, including healthcare centers, community facilities, and social service providers that serve low-income and minority populations.
- **Transportation.** The EJ analysis reviewed adverse transportation impacts resulting from implementation of the IBR Program. A range of impacts was considered, including construction-related and long-term changes to access, traffic impacts, public transportation impacts, and impacts to the nonmotorized transportation system. The analysis assessed whether these adverse transportation impacts would disproportionately burden block groups with high concentrations of EJ populations within the study area.
- **Tolling.** The EJ analysis assessed the potential impact of tolling on EJ populations. The analysis used two potential pricing scenarios currently being studied for the I-5 corridor—a typical commuter trip profile, and tolling prices as a percentage of median household income—to determine whether adverse tolling impacts would result in disproportionately high and adverse effects on EJ populations within the study area.
- **Visual resources.** The EJ analysis reviewed adverse impacts to views and visual resources to determine whether such impacts would disproportionately impact block groups with high concentrations of EJ populations.

The long-term impact assessment methods also accounted for potential benefits the IBR Program could bring to EJ communities, such as improved seismic resilience, multimodal access, and accessibility upgrades within the study area.

Table 3.20-11 summarizes the effects of the No-Build Alternative, Modified LPA, and design options on environmental justice. Detailed analysis of the effects is provided in the following sections.

No-Build Alternative

The No-Build Alternative would not displace residents, businesses, community resources, or jobs for any populations, including EJ populations. Travel times would increase by approximately 50% compared to existing times for drivers traveling within the I-5 corridor. This increase in travel times is not anticipated to impact EJ populations differently than the general population. The No-Build Alternative would not bring high-capacity transit to Hayden Island or downtown Vancouver, which would not be a benefit to EJ populations that may rely more on transit than the general population.

Modified LPA

Table 3.20-12 summarizes long-term impacts and benefits to EJ populations associated with the Modified LPA and all design options.

Table 3.20-11. Comparison of No-Build Alternative and Modified LPA Design Options

1 No-Build Alternative	2 Modified LPA With Double-Deck Fixed-Span Configuration, One or Two Auxiliary Lanes, with or without C Street Ramps, Centered I-5, all Park-and-Ride Site Options	3 Modified LPA Double-Deck Fixed-Span Configuration, One Auxiliary Lane, C Street Ramps, I-5 Westward Shift, all Park-and-Ride Site Options	4 Modified LPA Single-Level Fixed-Span Configuration, ^a One Auxiliary Lane, C Street Ramps, Centered I-5, all Park-and-Ride Site Options	5 Modified LPA Single-Level Movable-Span Configuration, One Auxiliary Lane, C Street Ramps, Centered I-5, all Park-and-Ride Site Options
<ul style="list-style-type: none"> • No displacement of residents, businesses, community resources, or jobs. • Travel times would increase by approximately 50% compared to existing times. Would not bring high-capacity transit to Hayden Island or downtown Vancouver. • Environmental conditions under the No-Build Alternative would affect EJ populations the same as the general population. Therefore, no disproportionately high and adverse effects have been identified. 	<ul style="list-style-type: none"> • Increased access to high-capacity transit and active transportation, and reductions in vehicle travel time. Impacts to EJ populations would be the same as to the general public. • Increase in job access due to faster travel times. Because faster times would result from tolling, tolling would result in disproportionately high and adverse effects on EJ populations. • Residential and business displacements. Displacements in high-priority and meaningfully greater EJ areas such as the Esther Short neighborhood in Vancouver and the Rockwood neighborhood in Gresham would result in disproportionately high 	<ul style="list-style-type: none"> • Similar to Column 2, but would increase residential and business displacements. Additional displacement of the Normandy Apartments in the Esther Short neighborhood as a result of the I-5 westward shift would result in disproportionately high and adverse effects on EJ populations. 	<ul style="list-style-type: none"> • Similar to Column 2, except shared-use path users would have more exposure to noise, but would also have a shorter distance to climb and would be more visible and therefore feel safer. Noise and visual impacts to EJ populations would be the same as to the general population. 	<ul style="list-style-type: none"> • Similar to Column 2, except bridge openings could delay transit and active transportation users. • Delays to transit and active transportation users as a result of bridge openings could also contribute to adverse effects on EJ populations. These effects would be the same for EJ populations as for the general population.

1	2	3	4	5
	<p>and adverse effects on EJ populations.</p> <ul style="list-style-type: none"> • Increased traffic and noise impacts from construction. Impacts to EJ populations would be the same as to the general public. • Improved air quality. Benefits to EJ populations would be the same as to the general public. • Some adverse impacts to community cohesion. Impacts to EJ populations would be the same as to the general public. 			

a The long-term effects associated with the single-level fixed-span configuration would be the same for all bridge types, unless otherwise specified.

A preliminary determination has been made based on the current assessment of environmental impacts, benefits, and mitigation strategies under the No-Build Alternative, as described in Table 3.20-11, above. Given that increased travel times under the No-Build Alternative would affect EJ populations the same as the general population, and given that all other environmental conditions would remain the same as of this writing, the No-Build Alternative would not result in a disproportionately high and adverse effect on EJ populations within the IBR study area. The remainder of this analysis, therefore, focuses on the effects of the Modified LPA on EJ populations, with a preliminary determination for the Modified LPA presented in Section 3.20.8.

Table 3.20-12. Summary of Potential Long-Term Effects from the Modified LPA on Environmental Justice Populations ^{a,b}

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
Acquisitions, Displacements, and Relocations	<p>Full acquisition of 46 properties and partial acquisition of 132 properties, resulting in 43 residential displacements and 36 business displacements.</p> <p>Oregon Neighborhoods</p>	<p>The Modified LPA would acquire properties and displace residences and businesses in the identified high-priority and meaningfully greater EJ areas.</p> <p>Oregon Neighborhoods</p> <ul style="list-style-type: none"> • East Columbia: 11 partial acquisitions of East Delta Park; no residential or business 	None.

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<ul style="list-style-type: none"> 68 total acquisitions (25 full acquisitions, 43 partial acquisitions). 36 residential displacements. 26 business displacements. <p>Residential displacements would occur in the Kenton and Hayden Island neighborhoods. Business displacements would occur in the Bridgeton, Kenton, Hayden Island, and Rockwood neighborhoods. Additional partial acquisitions from East Delta Park would occur in the East Columbia neighborhood. No residential or business displacements would occur in the East Columbia neighborhood.</p> <p>Washington Neighborhoods</p> <ul style="list-style-type: none"> 110 total acquisitions (21 full acquisitions, 89 partial acquisitions). 7 residential displacements. 10 business displacements. I-5 westward shift design option: 33 additional residential displacements and 3 business displacements. <p>Residential displacements would occur in the Esther Short and Shumway neighborhoods, and business displacements would occur in the Esther Short neighborhood, a high-priority EJ area. Additional acquisitions would occur at Marshall Park in the Central Park neighborhood (partial), Columbia Way (partial), Hudson’s Bay (temporary), Lincoln (partial), and Rose Village (partial); none of these acquisitions would result in business or residential displacements.</p> <ul style="list-style-type: none"> I-5 Westward Shift Design Option: One design option would shift the I-5 mainline and ramps approximately 40 feet to the west between SR 14 and Mill Plain Boulevard. The impacts or 	<p>displacements; East Columbia is a meaningfully greater minority neighborhood. Partial acquisitions at East Delta Park within the East Columbia neighborhood would result in disproportionately high and adverse impacts to EJ populations.</p> <ul style="list-style-type: none"> Rockwood: 7 total acquisitions; 3 business displacements; Rockwood is a high-priority low-income and minority neighborhood. Rockwood acquisitions would result in disproportionately high and adverse impacts to EJ populations. <p>Washington Neighborhoods</p> <ul style="list-style-type: none"> Esther Short: 27 total acquisitions; 10 business displacements; Esther Short is a high-priority low-income neighborhood. Esther Short acquisitions would result in disproportionately high and adverse impacts to EJ populations. The design option that shifts I-5 westward would impact the Normandy Apartments, resulting in 33 additional residential displacements in Esther Short. Normandy Apartments displacements would result in disproportionately high and adverse impacts to EJ populations. Rose Village: 8 total acquisitions; no displacements; Rose Village is a meaningfully greater low-income and minority neighborhood. Rose Village acquisitions would result in disproportionately high and adverse impacts to EJ populations. I-5 Westward Shift Design Option: Although the Normandy Apartments are not identified by the U.S. Department of Housing and Urban Development as a low-income housing tax credit property (HUD n.d.), the 33 residential 	

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>benefits to EJ populations associated with this design option would be similar to those described for the centered I-5 mainline, with two additional property acquisitions:</p> <ul style="list-style-type: none"> - Normandy Apartments, where 33 residential units would be displaced. - Regal City Center complex, where 3 businesses would be displaced. 	<p>displacements would occur within the Esther Short neighborhood, a high-priority EJ area for low-income populations. As described above, Normandy Apartments and Esther Short acquisitions would result in disproportionately high and adverse impacts to EJ populations.</p>	
Air Quality	<p>Emissions for all Mobile Source Air Toxics and criteria pollutants are expected to be substantially lower than existing emissions, and the study area would remain in attainment for National Ambient Air Quality Standards.</p>	<p>No disproportionately high and adverse effects to EJ populations have been identified.</p>	<p>Improved air quality compared to existing conditions for all people, including EJ populations.</p>
Land Use and Economics	<ul style="list-style-type: none"> • Permanent conversion of approximately 39 acres to transportation use (not inclusive of temporary construction staging). This land conversion would comprise a small portion of the total land in the Portland/Vancouver area and would not be substantial in a regional context. Converted land would be used for the extension of high-capacity transit, park-and-ride structures, and other transportation infrastructure, consistent with the goals and policies of adopted plans. • Business/employee displacements are anticipated to reduce tax revenues in Multnomah County and Clark County by approximately 0.2% and 0.3% to 0.4%, respectively. • The Modified LPA’s direct impacts to Hayden Island, and, to a lesser extent, Vancouver, could have a substantial effect on wage earning opportunities for those seeking service industry employment. Some displaced businesses may 	<p>Although Hayden Island is not a meaningfully greater or high-priority EJ area, impacts to service industry workers and the conversion of property could impact low-income and minority workers in the study area. However, these land use and economic impacts would impact EJ populations the same as the general population, so no disproportionately high and adverse effects have been identified.</p>	<p>Increased jobs and economic development opportunities near the interstate and transit stations for all communities, including EJ populations.</p>

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>choose to not relocate locally, and some employees would be displaced during construction.</p>		
Noise and Vibration	<p>Oregon Neighborhoods Increased noise levels (up to 10 dBA) at up to three sensitive receptors in Jantzen Beach RV Resort. This increase would remain below ODOT’s Noise Abatement Criteria. No increase in vibration levels at Jantzen Beach RV Resort.</p> <p>Washington Neighborhoods Substantial noise impacts compared to No-Build are predicted to occur at up to six residences located between E 33rd Street and E 35th Street. No increase in vibration levels would occur at residences located between E 33rd Street and E 39th Street.</p>	<p>Oregon Neighborhoods None; Jantzen Beach RV Resort is not located in a meaningfully greater or high-priority EJ area, and impacts to EJ populations would be the same as to the general population. Therefore, no disproportionately high and adverse effects on EJ populations have been identified.</p> <p>Washington Neighborhoods The area between E 33rd Street and E 39th Street encompasses the Rose Village neighborhood—a meaningfully greater EJ area for both low-income and minority populations. The residences that would experience a substantial noise impact may include EJ populations. Therefore, noise impacts to the Rose Village neighborhood would result in a disproportionately high and adverse effect on EJ populations.</p>	None.
Social and Neighborhood Effects	<p>Impacts to cohesion could result from potential residential and business displacements and impacts to the visual landscape of neighborhoods.</p> <p>Oregon Neighborhoods</p> <ul style="list-style-type: none"> • Displacements: Residential and/or business displacements would occur on Hayden Island, Bridgeton, Kenton, and Rockwood in Gresham. • No change to community resources. • Effects on cohesion: Adverse impacts to community cohesion have been identified on Hayden Island due to the high number of displacements within floating home communities. 	<p>Oregon Neighborhoods Social and neighborhood effects on EJ populations include displacements in the Rockwood neighborhood, a high-priority EJ area for both low-income and minority populations. These displacements would result in a disproportionately high and adverse effect on EJ populations.</p> <p>Washington Neighborhoods Social and neighborhood effects on EJ populations include displacements in the Esther Short neighborhood, a high-priority EJ area for low-income populations. These displacements would result in a disproportionately high and adverse effect on EJ populations.</p>	Improved access, reliability, connectivity, and service frequency to transit for all communities, including EJ populations.

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>Washington Neighborhoods</p> <ul style="list-style-type: none"> • Displacements: Residential and/or business displacements would occur in the Shumway and Esther Short neighborhoods. • Impacts to community resources: None identified. • Effects on cohesion: None identified. 		
Tolling	<p>Tolling on I-5, paired with other Program improvements such as increased transit and active transportation options, is expected to reduce travel times and improve travel reliability; however, tolls would result in higher transportation costs as a portion of household spending. Households in the region would expend an additional \$1,600 per year on transportation, representing approximately 2% of median annual household income in the Portland-Vancouver metropolitan area.</p> <p>As described in this table under Transportation, the Modified LPA with all design options would not result in substantial diversion to I-205 as a result of tolling. Changes in vehicle volumes on I-205 on any of the studied screenline locations during the peak period range from -3% to +12% compared to the No-Build Alternative.</p>	<p>The cost of tolls on the Columbia River bridges would impact low-income populations disproportionately compared to the general population. Two of the toll price scenario schedules were used to study impacts to EJ populations, ranging from \$2.15 to \$3.55 (Scenario Schedule A) and \$1.50 to \$3.15 (Scenario Schedule B).</p> <p>For median-income households in Portland and Vancouver, the difference resulting from the new tolls would be relatively small for median-income households (a 2% increase from 14% to 16% of median annual household income in Portland and a 3% increase from 15% to 19% of annual household income in Vancouver).</p> <p>Four-member households at or below the federal poverty level would be the most significantly impacted by a future tolling program. Since these households already spend a relatively larger proportion of household income on transportation, the effect of tolling would increase household transportation costs from 29% of total household income under the No-Build Alternative to 35% under the Modified LPA. Tolling impacts to households at or below the federal poverty level constitute a disproportionately high and adverse effect on EJ populations.</p>	<p>Reduced travel times and improved travel reliability resulting, in part, from tolling would benefit all communities, including EJ populations.</p>

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
		<p>Low-income households would be impacted similarly to the general population and would experience an increase in household transportation cost of approximately 3%.</p> <p>Several tribes have preemptions⁸ from tolling per treaties with the U.S. Government. For members of tribes with those preemptions, there would be no adverse effect from tolling. Several tribes consulting on IBR have requested exemption from tolling on the existing Interstate Bridge and future Columbia River bridges.</p> <p>The bi-state transportation committee made up of representatives of the Washington State and Oregon Transportation Commissions determines tolling exemptions or discounts and is considering a low-income toll program.</p> <p>In conclusion, tolling on the proposed Columbia River bridges would result in a disproportionately high and adverse effect on EJ populations.</p>	
Transportation	<p>The Modified LPA would reduce regional vehicle-miles traveled and provide the following changes by mode and facility type:</p> <ul style="list-style-type: none"> • I-5 Highway: Key bottlenecks would be reduced along segments of I-5. The Oregon segment of I-5 northbound would meet ODOT’s mobility performance standards during the AM peak. The Washington segment of I-5 southbound would meet WSDOT’s mobility standards during the PM peak. • Diversion Impacts: AM and PM peak-hour screenline volumes within the study area were 	<p>Changes to local traffic circulation resulting from the Evergreen Station would occur in the Esther Short neighborhood, a high-priority EJ area.</p> <p>Single-Level Movable-Span Configuration: Disturbances to transit and active transportation resulting from bridge opening delays can negatively affect EJ populations. However, a disproportionately high and adverse effect on EJ populations is not anticipated (per FHWA and USDOT guidance), given that the impacts would be the same for all populations traveling through the study area.</p>	<p>The following would benefit all travelers, including EJ populations:</p> <ul style="list-style-type: none"> • Reduction in bottleneck conditions for some I-5 segments during the AM and PM peaks. • Faster total travel time on I-5 between I-205 north of Vancouver and the Marquam Bridge in Portland.

⁸ A preemption is an inherent right retained, while an exemption is granting freedom from an obligation.

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>analyzed using the regional travel demand model to determine the relative differences in traffic volumes between the No-Build Alternative and the Modified LPA. Generally, the Modified LPA would result in increased traffic on adjacent facilities compared to the No-Build Alternative. However, the increases would be relatively minor, ranging from approximately +4% to +12%. In Vancouver, most volume increases would divert to I-5 rather than to surrounding north-south facilities, reflecting greater capacity on I-5 during the peak period with the Modified LPA compared to the No-Build Alternative. In Portland, traffic diversion under the Modified LPA during both peak and off-peak times have differences of less than 50 vehicles compared to the No-Build Alternative. Compared to the No-Build Alternative, the Modified LPA with all design options would not see substantial changes in vehicle volumes on I-205 on any screenline location in the peak period (-3% to + 12%). Therefore, diversion impacts to I-205 are not anticipated to be substantial based on the analysis.</p> <ul style="list-style-type: none"> • Freight Mobility and Access: Improved conditions on I-5 would similarly benefit freight and trucks. • Arterials and Local Streets Impacts would include changes to traffic circulation, property access, and traffic control, primarily around station areas. • Transit Impacts: Impacts would include extension of high-capacity transit and express bus across the Columbia River. Stations would accommodate connections with C-TRAN Vine, C- 	<p>Design Option without C Street Ramps: The removal of the C Street ramps would eliminate an access and egress point for downtown Vancouver and would shift between 300 and 600 vehicles per hour to the Mill Plain Boulevard ramps and roadways during the peak hours. This could cause additional traffic in Arnada, a neighborhood with a meaningfully greater concentration of low-income populations. However, impacts to EJ populations under this design option would be the same as for the general population. Therefore, no disproportionately high and adverse effect has been identified.</p>	<ul style="list-style-type: none"> • Transit, active transportation, and safety enhancements associated with the Evergreen high-capacity transit station, and the Community Connector pedestrian bridge over I-5 near Evergreen Boulevard, would benefit EJ populations in Esther Short neighborhood. • More reliable transit service benefitting EJ populations that use transit to travel through the study area. • Improved bicycle level of traffic stress (BLTS) in Vancouver would improve the local network quality across and around the I-5 corridor for all users, including identified EJ populations in the East Columbia and Esther Short neighborhoods. • In Portland, the BLTS scores of nearly all affected streets would improve to a low stress standing for all travelers, including EJ populations. • Single-Level Movable-Span Configuration: Fewer

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>TRAN and TriMet local bus, other TriMet MAX lines, nonmotorized, and park-and-ride trips.</p> <ul style="list-style-type: none"> • Active Transportation Impacts: New shared-use path facilities that would enhance safety and comfort of walking, biking, and rolling access across the Columbia River, along the rebuilt segments of highway and interchanges, and new station areas. • Safety Impacts: Forecast reduction of crashes by 15% to 30% and changes in crash types, severities, and locations due to modifications involving the Columbia River bridges, I-5 mainline, ramps, and ramp terminals. In Vancouver, bike level of traffic stress (BLTS) scores of nearly all affected streets would improve. • Single-Level Movable-Span Configuration: The Modified LPA with a single-level movable-span configuration would continue to subject transit and active transportation users to delays during bridge openings, even though there would be fewer openings overall compared to the No-Build Alternative. • Design Option without C Street Ramps: Under this design option, I-5 would be accessed from downtown Vancouver through the Mill Plain interchange rather than C Street. The removal of the C Street ramps could cause additional congestion at the Mill Plain Boulevard ramps. 		<p>bridge openings compared to the No-Build Alternative.</p> <ul style="list-style-type: none"> • Design Option without C Street Ramps: None.
Visual Resources	<p>The scale, form, and materials of the Columbia River bridges and structures would not contrast with the existing visual character. New transit, bicycle, and pedestrian structures would be new visual elements similar in visual character to other proposed elements. An increase in ambient light</p>	<p>The downtown Vancouver and Ruby Junction landscape units include neighborhoods identified as high-priority EJ areas (Esther Short and Rose Village in Vancouver and Rockwood in Gresham). Changes to visual quality in these areas are expected to be neutral overall, given that there is an</p>	<p>None.</p>

Interstate Bridge Replacement Program

Environmental Resource	Modified LPA Long-Term Impact Summary	Impact Specific to Minority and Low-Income Populations	Benefit Specific to Minority and Low-Income Populations
	<p>levels may be perceptible; however, replacement lights would be designed to limit light and glare. New landscape views crossing the Columbia River bridges.</p>	<p>existing bridge structure with similar visual characteristics. Changes in Ruby Junction are expected to be low because the added structures and uses would be consistent with existing character and uses. Therefore, no disproportionately high and adverse effect has been identified.</p>	

- a All data and findings are based on the IBR technical reports for each environmental resource.
- b The long-term effects associated with the Modified LPA would be the same for all design options, unless otherwise specified.

3.20.5 Temporary Effects

No-Build Alternative

There would be no temporary effects on EJ populations under the No-Build Alternative.

Modified LPA

Construction of the Modified LPA, which includes construction of the new bridges and removal of the existing bridge, is expected to last up to 15 years, affecting all modes of transportation within the study area and adjacent corridors. Temporary transportation effects, including road closures, detours, and construction-related delays, would occur to varying degrees. Table 3.20-13 summarizes temporary impacts to EJ populations associated with the Modified LPA, including all design options. The analysis identified a potential for disproportionately high and adverse effects on EJ populations with regard to noise (specifically in the East Columbia and Esther Short neighborhoods) and transportation (as a result of transit disruptions and temporary closures of cross-river bicycle and pedestrian facilities). Disproportionately high and adverse effects on EJ populations are not anticipated for the other impact categories evaluated.

Table 3.20-13. Summary of Potential Temporary Effects on EJ Populations from the Modified LPA ^a

Type of Impact	Temporary Impact Summary for the Modified LPA	Temporary Impacts Specific to EJ Populations
Acquisitions, Displacements, and Relocations	<p>Temporary construction easements and staging areas for each project subarea are:</p> <ul style="list-style-type: none"> • Oregon Mainland: 12 parcels; 45 acres. • Hayden Island: 3 parcels; 13.2 acres. • Downtown Vancouver: 51 parcels; 6.7 acres. • Upper Vancouver: 20 parcels; 4.8 acres. • Ruby Junction Maintenance Facility Expansion: None. <p>Two sites have been identified as possible major construction staging areas that could be temporarily acquired or leased:</p> <ul style="list-style-type: none"> • Vacant Thunderbird Hotel site (Hayden Island): 3.5 acres. The hotel site, in addition to 13.2 acres on Hayden Island, would constitute the largest staging area for the IBR Program. • Former WSDOT rest area along I-5 in Vancouver: 5 acres. 	<p>Temporary construction easements would occur at two properties in downtown Vancouver identified as providing low-income housing: Evergreen Inn and Lewis and Clark Plaza. Downtown Vancouver includes the Esther Short neighborhood, a high-priority EJ area. No residential or business displacements would occur as a result of these temporary construction easements. Activities at the sites would consist of temporary staging for construction and equipment and other construction support activities. These temporary construction easements would result in a disproportionately high and adverse effect on EJ populations.</p>
Air Quality	<p>Short-term impacts to air quality from construction activities would occur during the construction period. Construction-related activities would result in increased particulate matter in the form of fugitive dust (from demolition, ground clearing and preparation, grading, stockpiling of materials, on-site movement of equipment, and transportation of construction materials). Dust emissions typically occur during dry weather, ground-disturbing construction activities, or high wind conditions. Air quality may also be affected by exhaust emissions from material delivery trucks, construction equipment, and workers' private vehicles.</p>	<p>The anticipated temporary air quality impacts within the study area are not expected to result in a disproportionately high and adverse effect on EJ populations because construction-related air quality impacts would be the same for EJ populations as for the general population.</p>

Type of Impact	Temporary Impact Summary for the Modified LPA	Temporary Impacts Specific to EJ Populations
Land Use and Economics	<p>Construction has the potential to cause negative economic effects by blocking visibility and access to businesses, resulting in patrons choosing other locations for goods and services. Construction can also cause traffic delays and detours that increase travel times, increase the cost of deliveries, and make access to some locations difficult. Construction activities and temporary detours could extend the peak period traffic congestion, negatively impacting businesses whose employees commute using the I-5 corridor. Likewise, the movement of freight, goods, and services could be negatively affected if construction activities make travel times longer and/or less predictable due to increased traffic and congestion.</p>	<p>Adverse land use and economic impacts (excluding acquisitions and displacements) would not be experienced disproportionately by meaningfully greater and high-priority EJ neighborhoods within the study area compared to the general population. Similarly, freight impacts would impact EJ populations the same as the general population. Therefore, no disproportionately high and adverse temporary land use and economic impacts to low-income and minority populations have been identified.</p>
Noise and Vibration	<p>All neighborhoods in the study area could experience temporary noise and vibration increases from construction equipment and activities, particularly in areas adjacent to I-5.</p>	<p>Although the entire study area would be impacted by increased noise and vibration, some areas with higher concentrations of EJ populations could be impacted disproportionately. Particularly high levels of noise and vibration from pile-driving activities are anticipated near the Interstate Bridge span. However, additional noise and vibration impacts are also anticipated within the East Columbia and Esther Short neighborhoods, which are high-priority and meaningfully greater areas. Therefore, noise and vibration impacts would result in disproportionately high and adverse effects to EJ populations in these neighborhoods.</p>
Social and Neighborhood Effects	<p>Neighborhood quality and cohesion could be negatively affected throughout the construction period. All neighborhoods in the study area could experience temporary congestion, traffic detours, noise, air quality impacts, and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5. The use of temporary construction staging would minimize some of these negative impacts. The net impact of air, traffic, noise, and construction impacts would constitute social and neighborhood effects within the study area.</p>	<p>Neighborhood quality and cohesion impacts would be experienced throughout the study area, and impacts to EJ populations are anticipated to be the same as to the general population. Furthermore, the negative impacts that have been identified would be reduced through the use of construction best management practices. Therefore, disproportionately high and adverse effects on EJ populations have not been identified.</p>

Type of Impact	Temporary Impact Summary for the Modified LPA	Temporary Impacts Specific to EJ Populations
Tolling	<p>Pre-completion tolling would be implemented on the Interstate Bridge when construction begins. This tolling is expected to occur between 5 a.m. and 11 p.m.; overnight hours would not be tolled, as construction activities may reduce the number of lanes travelers could use. Pre-completion tolling would have similar impacts as long-term tolling for travelers except during the overnight hours.</p>	<p>I-5 is currently not tolled, and there are currently no plans to toll the bridge independently of the IBR Program. Pre-completion tolling would have similar impacts on EJ populations as long-term tolling. It is anticipated that pre-completion tolling would result in a slightly lesser impact than long-term tolls given that pre-completion tolling would only occur between 5 a.m. and 11 p.m. EJ populations crossing the Interstate Bridge during the overnight hours would not be tolled. However, although the impacts resulting from pre-completion tolling would be reduced compared to long-term tolls, any tolling of I-5 would still impact low-income populations disproportionately compared to the general public. Furthermore, it is uncertain whether a low-income or equitable tolling program would be operational during construction or if it would not be launched until post-construction. In the absence of tolling mitigation, there is a potential for pre-completion tolling to result in a greater impact to EJ populations than a long-term toll and associated low-income tolling program. Therefore, pre-completion tolling is anticipated to result in a disproportionately high and adverse effect on EJ populations traveling across I-5 during the construction period.</p>
Transportation	<p>Construction would result in temporary bridge closures, highway lane closures, bus stop relocations, light-rail station closures, partial or full temporary closures of park-and-ride facilities, and rerouting of sidewalks and bicycle lanes. Traffic diversion during construction would lead to higher traffic volumes on detour streets, which could lead to a temporary increase in collision frequency. To minimize disruptions to peak period and daytime transportation travel on I-5, some construction activities could occur during nighttime hours and on weekends with approval by ODOT and/or WSDOT.</p> <p>Additional impacts to transportation include:</p> <ul style="list-style-type: none"> • Bus Service Impacts. Bus service could experience delays from increased congestion due to potential roadway or 	<p>Interruptions to bus and light-rail transit service in the study area could affect EJ populations more than the general population, as low-income populations are more likely to rely on transit to get to work, school, or other essential destinations. Transit interruptions would be likely to result in detours and out-of-direction travel, particularly for cross-river trips.</p> <p>Short-term closures of cross-river bicycle and pedestrian facilities could result in an adverse and disproportionate effect on EJ populations that rely on cycling or walking to cross the river. Bicycle and pedestrian facility closures on I-5 leave few options for crossing the river on foot or by bike, as the only other option would be to cross using the facilities on I-205. The</p>

Type of Impact	Temporary Impact Summary for the Modified LPA	Temporary Impacts Specific to EJ Populations
	<p>interchange closures. Buses that travel through downtown Vancouver could encounter temporary closures and reroutes as the transit guideway is installed at the north end of the light-rail transit alignment.</p> <ul style="list-style-type: none"> • TriMet MAX Impacts. Construction along Expo Road and the Marine Drive interchange may require temporary relocation or closure of the TriMet MAX Yellow Line terminus station near Expo Center. These temporary relocations, closures, or schedule adjustments could occur for 4 years. • Pedestrian and Bicycle Impacts. Construction could temporarily and intermittently close or reroute sidewalks, bicycle facilities, and/or shared-use paths or reduce facility widths within construction areas. Limited opportunities would be available for active transportation crossings of I-5 and would therefore be maintained to the extent practical. 	<p>distance between I-5 and I-205 may not be a practical distance to travel for some pedestrians and bicyclists, which may fully prevent cross-river trips during certain periods. Furthermore, low-income populations that rely on walking and cycling as their primary mode of transportation may have fewer resources and access to alternative transportation modes than the general population.</p> <p>Therefore, interruptions to bus service, light-rail service, and cross-river bicycle and pedestrian facilities would result in a disproportionately high and adverse effect on EJ populations.</p>
Visual Resources	<p>Construction is expected to last up to 15 years, during which views to and from the area of visual effects would be altered. Temporary effects on visual quality would result from visual distractions, high-visibility signage, and additional lighting during nighttime construction.</p> <p>Vegetation may be removed from some areas to accommodate the construction of the new bridge structures, new ramps, transit guideways, staging areas, and casting yards. Each area would be revegetated upon completion.</p>	<p>None. Changes in views and visual effects are anticipated to be the same for EJ populations as the general population.</p>

a The temporary effects associated with the Modified LPA would be the same for all design options, unless otherwise specified.

3.20.6 Indirect Effects

No-Build Alternative

As described in Table 3.20-11 above, the No-Build Alternative would not displace residents, businesses, community resources, or jobs. Environmental conditions would generally remain the same as they are the time of this writing. However, the No-Build Alternative would maintain worsening traffic growth and congestion patterns on I-5, with travel times anticipated to increase by 50% in the future compared to existing travel times. Increasing travel times and congestion on I-5 could negatively affect freight movement and the local and regional economy; increase vehicle idling and associated air emissions; and reduce access to key destinations and community resources in Vancouver and Portland. Furthermore, the No-Build Alternative would not bring high-capacity transit to Hayden Island or downtown Vancouver, forgoing potential benefits to EJ populations that may depend more on transit and active transportation as their primary mode of transport compared to the general population. However, most of these indirect effects would impact EJ populations the same as, or similarly to, the general population. Therefore, the indirect effects of the No-Build Alternative are not anticipated to result in disproportionately high and adverse effects to EJ populations.

Modified LPA

The areas with the highest likelihood of indirect effects from the Modified LPA are Hayden Island and downtown Vancouver, as the addition of high-capacity transit stations in these neighborhoods would have the potential to support transit-oriented development. Hayden Island has not been identified as a meaningfully greater or high-priority EJ area. The Esther Short neighborhood within downtown Vancouver has been identified as a high-priority EJ neighborhood due to its high concentration of low-income populations. It is important to note that transit-oriented development would not be undertaken by the IBR Program; rather, the addition of light-rail transit as part of the Program would facilitate redevelopment that is already provided for in community plans in anticipation of the high-capacity transit stations (see Section 3.4, Land Use and Economic Activity, for further discussion of this topic). Other indirect effects could include increased noise and pollution in neighborhoods directly adjacent to the corridor, including Arnada and Rose Village, which have been identified as high-priority and meaningfully greater EJ areas, respectively. Indirect effects on Esther Short, Arnada, and Rose Village have the potential to result in disproportionately high and adverse effects on EJ populations residing within these neighborhoods.

The analysis of indirect effects also considered the potential for gentrification, which refers to the causal relationship between investment and redevelopment and demographic changes. As rents and property taxes increase, properties can become unaffordable for low-income property owners and tenants, who move out and are replaced by higher-income populations. Increased property values and rents in downtown Vancouver could result in the types of demographic changes that are frequently characterized as gentrification; this could be considered an indirect effect of the IBR Program on EJ populations. Though the Modified LPA would not on its own cause gentrification, it could help accelerate it relative to the No-Build Alternative by increasing the value of property directly or indirectly affected by investments resulting from the IBR Program. If low-income renters were forced to move because rents and associated costs of living increased downtown, this could result in adverse effects. However, low-income homeowners could benefit from the same rise in property values and rents.

The City of Vancouver has adopted goals and policies that support affordable housing and a mix of housing types, and the Vancouver Housing Authority works to maintain affordable units in the city through voucher programs and the development of new affordable housing units. Even if low-income renters faced adverse effects, it is not clear that such effects would be disproportionate, as rising rent levels can also displace middle-income earners. Renters as a group typically move with some regularity, and the vast majority of affordable rental properties in Vancouver would not experience direct or indirect effects from the Modified LPA.

3.20.7 Potential Avoidance, Minimization, and Mitigation Measures

Long-Term Effects

Mitigation for long-term effects on EJ populations includes measures that would be used to avoid, minimize, and/or mitigate impacts from each of the impact categories evaluated for this analysis (acquisitions and displacements, traffic, noise, etc.). Some of these measures are required by existing regulations or design and construction standards, while others are Program-specific. The sections below describe both regulatory and Program-specific mitigation measures for each impact category analyzed for EJ. The following is a discussion of proposed mitigation to address impacts resulting from the Modified LPA. The IBR Program will continue to engage with EJ populations to identify impacts and benefits and to gather meaningful input on avoidance, minimization, and mitigation measures to address adverse effects.

Regulatory Requirements

The applicable regulatory requirements are listed below:

- Title 42 USC Section 4601, the Uniform Relocation Assistance and Real Property Policies Act (1970).
- Title 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.
- ORS 467.010, Chapter 340, Division 35, Noise Control Regulations.

The following subsections describe the effect of these regulatory requirements and related state policies in more detail as they relate to disproportionately high and adverse effects on EJ populations within the study area.

Acquisitions and Displacements

Title 42 USC Section 4601, the Uniform Relocation Assistance and Real Property Policies Act (1970), provides uniform and equitable treatment of persons displaced from their homes or businesses by federal and federally assisted programs and establishes uniform and equitable land acquisition policies for federal and federally assisted programs. These policies require that property be purchased at fair market value and that all residential displacements be provided with replacement housing and/or relocation assistance. Federal law requires replacement housing based on the characteristics of individual households. Relocation benefit packages for residents may include replacement housing for owners and renters, moving costs, and assistance in locating replacement housing. Relocation benefits for businesses can include moving costs, site search expenses, and business re-establishment expenses. Eligibility and terms of relocation assistance would be determined during future project planning. Discussion of the Uniform Relocation Assistance and Real Property Policies Act can also be found in Section 3.3, Property Acquisitions and Displacements.

For low-income populations or populations with special circumstances, a relocation program could include housing assistance. For example, the Washington State Department of Commerce participates in the U.S. Department of Housing and Urban Development's HOME Rental Development Program, a housing block grant program used to preserve and create affordable housing for low-income households. The extent to which similar housing programs could help offset displacement impacts resulting from the Modified LPA would depend on the availability of adequate housing stock to relocate EJ populations in the same general area.

Noise

FHWA requires consideration of noise abatement measures for highway projects where noise levels exceed certain thresholds. Long-term noise impacts to EJ populations were identified in the Rose Village neighborhood in Vancouver. After reviewing the locations of the predicted noise impacts, it was determined that noise walls are the only feasible form of noise abatement. The construction of noise walls is already considered a best management practice (BMP) for offsetting noise and vibration impacts.

The noise analysis completed for this Draft SEIS (see Section 3.11, Noise and Vibration) proposed 18 noise walls to mitigate traffic noise impacts predicted under the Modified LPA.⁹ Noise impacts in the Rose Village neighborhood would be mitigated by Noise Wall 4, which would be located in the area east of I-5 between E 33rd Street and SR 500. Noise Wall 4 would replace an existing 4- to 8-foot-tall, approximately 200-foot-long wall located just north of the 33rd Street overcrossing and would continue along the WSDOT right of way until reaching the bridge over E 39th Street. The final decision and recommendation to include noise wall mitigation would be made during final design. As design advances, factors that affect the feasibility and cost-effectiveness of noise walls can change. In addition, should the noise-impacted residents oppose recommended noise mitigation, the mitigation measure may not be incorporated into the Modified LPA.

State requirements mandate noise and vibration monitoring. In addition to compliance with ODOT and WSDOT standard specifications for noise abatement that apply to highway construction activities, monitoring would include the following:

- Establish a complaint hotline to investigate noise complaints during construction. A construction monitoring and complaint program would help ensure that all equipment meets state, local, and manufacturer specifications for noise emissions. Equipment not meeting the standards would be removed from service until proper repairs were made and the equipment retested for compliance. This procedure would apply to all haul trucks, loaders, excavators, and other equipment that would be used extensively at the construction sites and that would contribute to potential noise effects.
- Conduct vibration monitoring of all activities that might produce vibration levels at or above 0.5 inches per second where structures are near the construction activity. This would include pile driving, vibratory sheet installation, soil compaction, and other construction activities with the potential to cause high levels of vibration. There is no effective method to completely eliminate vibration effects from construction; however, by restricting and monitoring vibration-producing activities, vibration effects from construction can be kept to a minimum.

Tolling

No regulations are currently in place to offset the impacts of IBR Program tolls on low-income populations, though such regulations may be implemented in the future in support of a low-income tolling program or equitable tolling policy that would reduce or offset the economic burden of tolling on low-income and minority populations. Toll rates and policies implemented on the existing Interstate Bridge (pre-completion tolling) and the replacement Columbia River bridges under the Modified LPA (long-term tolling) would be jointly set by the Oregon Transportation Commission (OTC) and the Washington State Transportation Commission (WSTC). The commissions would consider possible exemptions and discounts, which may include a low-income discount program. Both commissions would work together to determine how to apply such exemptions and discounts to the IBR Program.

Program-Specific Mitigation

Proposed Program-specific mitigation would include an attempt to minimize relocation impacts to residences, businesses, and public facilities as the project design is refined. The Modified LPA is currently at a conceptual level of design, and key features such as the number of auxiliary lanes, bridge type, and other design elements will not be determined until later stages of design. Furthermore, input from the IBR Executive Steering Group, Equity Advisory Group, Community Advisory Group, Community Benefits Advisory Group, and the public will support the refinement of the Modified LPA. The Program will attempt to minimize relocation impacts as these design and cost refinements occur.

⁹ The final number of noise walls, considering feasibility and cost-effectiveness, will be determined as part of the Final SEIS.

Traffic Impacts

As described in Table 3.20-12, traffic impacts resulting from the Modified LPA are generally diffuse throughout the study area and would be experienced similarly by EJ populations and the general population. Under the Modified LPA, key bottlenecks would be reduced along segments of I-5 in both Oregon and Washington, high-capacity transit would be expanded in the region, new shared-use paths would be built, crashes would be reduced by 15% to 30%, and bicycle level of traffic stress (BLTS) would decrease to “low” stress, benefitting EJ populations and the general population alike.

Under the single-level movable-span configuration, the Modified LPA with a single-level movable-span configuration would continue to subject transit and active transportation users to delays during bridge openings, even though there would be fewer openings overall than under the No-Build Alternative. The single-level movable-span configuration would impact EJ populations the same as the general population, so no disproportionately high and adverse effects have been identified.

Under the design option without the C Street ramps, I-5 would be accessed from downtown Vancouver through the Mill Plain interchange rather than C Street. The removal of the C Street ramps could cause additional congestion at nearby collectors and ramps, shifting between 300 and 600 vehicles per hour to the Mill Plain Boulevard ramps during peak periods. However, the removal of the ramps would impact EJ populations the same as the general population, so no disproportionately high and adverse effects have been identified.

Because no disproportionately high and adverse effects have been identified, specific mitigation to offset, reduce, or minimize traffic impacts to EJ populations is not proposed. However, ODOT and WSDOT would monitor traffic operations and, as the need arises, pursue the following mitigation measures to benefit the general population, including EJ populations traveling through the study area.

- Monitor and adjust ramp meter rates to manage travel times, delay, and other operational performance measures consistent with ODOT and WSDOT highway procedures.
- Coordinate with local jurisdictions to adjust local street networks that could include the following actions:
 - Prohibit on-street parking during peak periods to improve vehicle flow and reduce travel delays associated with slowdowns to accommodate vehicles entering and exiting on-street parking spaces.
 - Add turn pockets at needed locations (e.g., a southbound right-turn lane at 15th and Columbia Streets in Vancouver) to improve vehicle flow and reduce travel delays associated with bottlenecks at intersections.
 - Alter traffic signal timing (e.g., for the Mill Plain Boulevard interchange signal) to maximize operational flow and reduce travel delays.

Air Quality

Air pollutant emissions are expected to be substantially lower in the future than under existing conditions. Regionally, future differences between the Modified LPA and the No-Build Alternative are small enough not to be meaningful within the accuracy of the estimation methods. Long-term air quality impacts are not expected to occur as a result of the IBR Program. Therefore, no disproportionately high and adverse air quality impacts would be expected on EJ populations as a result of the Modified LPA, and no specific mitigation is proposed.

Business Displacements and Loss of Service Industry Jobs

In addition to compliance with the Uniform Relocation Assistance and Real Property Policies Act, the IBR Program may provide mitigation for the loss of service industry jobs under a potential future workforce agreement and/or Project Labor Agreement. This agreement would be further defined as project design and planning progress, and would cover such topics as:

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- Adopting goals for involvement of minority, women-owned, emerging, and disadvantaged businesses in Program construction contracting.
- Developing workforce practices to provide experience and business opportunities for disadvantaged workers and companies, such as requiring contractors to have apprentices perform a percentage of construction labor.
- Providing job training and establishing preferences in contracting for local services.
- Implementing a monitoring and evaluation program to track these measures through final project design, construction, and operation to help ensure that the benefits of promoting participation from minority-owned businesses are realized.

Tolling

Program-specific measures to minimize disproportionately high and adverse effects on EJ populations related to tolling are proposed as part of this SEIS. As described in Table 3.20-12 above, tolling new Columbia River bridges would result in higher transportation costs as a proportion of household spending for some EJ populations. Some of the project benefits—such as increased investments in the regional transit, walking, and bicycling network—may not be accessible or practical for EJ populations with fixed schedules and employment, school, and/or childcare commitments. Although the method of payment for a potential tolling program across the new Columbia River bridges has not been determined, a transponder model has the potential to present a burden to low-income and minority populations due to the up-front cost and technical requirements of purchasing and setting up a transponder.

Program-specific mitigation measures to address disproportionately high and adverse effects on EJ populations resulting from tolling may include:

- **A Low-Income and/or Equitable Tolling Program:** If the OTC and WSTC choose to implement a low-income toll program on the existing Interstate Bridge (pre-completion tolling) and the replacement Columbia River bridges under the Modified LPA (long-term tolling), it would play a role in mitigating disproportionately high and adverse effects of tolling on EJ populations. Additional mitigation may be needed if I-205 is tolled in the future or if a regional tolling system is implemented. Both transportation commissions are actively studying low-income tolling programs, including how such a program could be implemented in each state. The following key work has been done to date:
 - [Oregon Tolling Program I-205 and I-5 Toll Projects' Equity Framework](#) (2023). The OTC has advanced key elements of a low-income toll program—the first of its kind in the nation—that will serve low-income travelers who cannot change their travel schedules or who travel frequently on interstate facilities. The program will balance impacts to other travelers while still achieving overall program goals to reduce traffic congestion and raise revenue for transportation improvements. Key commitments include at least a 50% discount on tolls for customers in Oregon or Washington whose household income is up to 200% of the federal poverty level and exemptions for federally recognized tribes and tribal government vehicles.
 - [WSDOT Low-Income Toll Program Study for I-405 & SR 167 Express Toll Lanes](#) (2021). WSDOT has developed a range of program options and evaluation metrics to assess toll discount program options to benefit equity populations. Options include percentage-based and fixed-rate discounts per trip, time-based toll credits, free toll trips, and lowering the maximum toll rate. Although this study was for the I-405 and SR 167 Express Toll Lanes in Washington and would not directly apply to the IBR Program, the study and its findings may influence future discussions and coordination between the OTC and WSTC regarding the future of a regional toll program.

- **Equitable Access to Technology and Information:** ODOT, WSDOT, and regional partners will provide Program-specific information, such as how to obtain transponders and/or how to receive transportation assistance, particularly for low-income drivers.
 - Locate venues for acquiring transponders near lower-income neighborhoods. The IBR Program would partner with public agencies and public service providers to identify locations that are convenient for low- or lower-income neighborhoods and that are accessible by multiple modes of travel.
 - Enable populations without credit cards or checking accounts to obtain transponders by paying with cash or electronic bank transfer cards.
 - Share information with and through other public service providers, particularly those that provide direct service to EJ populations.
 - Share information about existing rideshare opportunities such as local carpool and vanpool providers or work with partners to develop new programs.
- **Early, Inclusive, and Equitable Public Engagement:** Public engagement and outreach is proposed as a critical step to ensure that transportation users can make informed travel choices when crossing the Columbia River. Public engagement should conduct specific outreach to potentially impacted EJ populations, connect these populations to assistance resources such as a future low-income and/or equitable tolling program and other travel options, and provide transparent information about the costs and impacts to their trips resulting from a future IBR tolling program.

Temporary Effects

Mitigation for temporary effects on some resources that would affect EJ populations would be provided through standard construction BMPs. BMPs applicable to the potential impacts described in Table 3.20-13 are discussed in Section 3.3, Property Acquisitions and Displacements; Section 3.10, Air Quality; and Section 3.9, Visual Quality. Mitigation for temporary effects on EJ populations is discussed below.

Acquisitions and Displacements

As described in Table 3.20-13, temporary construction easements would be acquired at two properties in downtown Vancouver identified as providing low-income housing: Evergreen Inn and Lewis and Clark Plaza. These properties are located in the Esther Short neighborhood, a high-priority EJ area. No residential or business displacements would occur as a result of these temporary construction easements. Activities at the sites would consist of temporary staging for construction and equipment and other construction support activities. Given their location within an identified EJ area and their provision of affordable housing, temporary construction easements at these two sites would result in a disproportionately high and adverse effect on EJ populations.

Temporary construction easements may also occur on Hayden Island to facilitate construction of both the transit and highway alignments. The census geography comprising Hayden Island is not a meaningfully greater or high-priority EJ area. However, the removal of the ramps would impact EJ populations the same as the general population, so no disproportionately high and adverse effects have been identified.

EJ-specific mitigation measures to offset temporary construction acquisitions and displacement impacts would be the same as those used to address impacts to the general population. These measures include increased coordination between the construction team and businesses, renters, and property owners who would be affected by temporary acquisitions to discuss details of the acquisition, such as the duration of the acquisition and the operating schedule for construction activities. The IBR Program would meet with property owners who would be affected by temporary acquisitions to discuss details of the acquisition, such as the

duration of the acquisition and the operating schedule for construction activities. Proposed mitigation measures are described in more detail in Section 3.3, Property Acquisitions and Displacements.

Transportation Impacts

As described in Table 3.20-13, construction activity for the highway and interchanges is anticipated to result in traffic delays on I-5 during construction. Depending on schedules and phasing, such delays could have greater impact to Hayden Island residents, as they have no other access to the island. The census geography comprising Hayden Island is not a meaningfully greater or high-priority EJ area. However, low-income and minority people living in the area may be affected and are considered as part of this analysis.

Temporary interruptions to bus and light-rail transit service in the study area could affect EJ populations more than the general population, as low-income populations are more likely to rely on transit to get to work, school, or other essential destinations. Transit interruptions would be likely to result in detours and out-of-direction travel, particularly for cross-river trips. These transit interruptions would result in a disproportionately high and adverse effect on EJ populations.

Short-term closures of cross-river bicycle and pedestrian facilities would also result in an adverse and disproportionate effect on EJ populations that rely on cycling or walking to cross the river. Bicycle and pedestrian facility closures on I-5 currently leave few options for crossing the river on foot or by bike, as the only other option would be to cross using the facilities on I-205. The distance between I-5 and I-205 (approximately 6 miles) is not practical for all pedestrians and bicyclists and may fully prevent cross-river trips during certain periods. Furthermore, low-income populations that rely on walking and cycling as their primary mode of transportation may have fewer resources and access to alternative transportation modes than the general population.

Therefore, interruptions to traffic, bus, light-rail service, and cross-river bicycle and pedestrian facilities would result in a disproportionately high and adverse effect on EJ populations.

Mitigation measures to address temporary transportation impacts to EJ populations would be similar to those used to address impacts to the general population. Disruptions to peak-period and daytime travel on I-5 are proposed to be mitigated through construction best practices, such as scheduling construction activities during nighttime hours and on weekends with approval by ODOT and/or WSDOT. Transit fare subsidies are proposed to offset impacts to transit riders, who may be more likely to belong to EJ populations; these subsidies would apply to all transit riders and not just to EJ populations. An emphasis would be placed on maintaining safe and accessible pathways during construction, especially near public housing, senior housing, and public services. The IBR Program would coordinate with TriMet to maintain paratransit service for qualifying mobility-impaired Hayden Island residents. Increased public outreach and construction-period communication are proposed to adequately inform travelers of delays and provide information about practicable detours throughout the construction period.

Mitigation measures for temporary transportation impacts are discussed in more detail in Section 3.1, Transportation.

Noise

As described in Table 3.20-13, the entire study area would be impacted by increased noise and vibration, though particularly high levels of noise and vibration from pile driving activities are anticipated near the Interstate Bridge span. Areas with higher concentrations of EJ populations could be impacted disproportionately compared to the general population. Temporary noise and vibration impacts have been identified within the East Columbia and Esther Short neighborhoods, which are high-priority and meaningfully greater areas. Therefore, noise and vibration impacts in these areas would result in disproportionately high and adverse effects on EJ populations.

Residents of Hayden Island are also likely to experience noise and vibration impacts due to construction equipment, vibratory compaction equipment, and pile driving during bridge construction. The census geography comprising Hayden Island is not a meaningfully greater or high-priority EJ area. However, low-income and minority people living in the area may be affected and are considered as part of this analysis. Residents living in floating homes may be particularly susceptible to noise and vibration impacts due to their close proximity to both the highway and transit alignments.

EJ-specific mitigation measures to address temporary noise and vibration impacts would be the same as the measures taken to address impacts to the general population. These measures would consist of compliance with existing federal and state noise abatement requirements¹⁰ and monitoring, including the establishment of a complaint hotline to investigate noise complaints during construction, testing of construction equipment to ensure compliance with noise emission standards, and vibration monitoring of all activities that might produce vibration levels at or above 0.5 inches per second where structures are near the construction activity. There is no effective method to completely eliminate vibration effects from construction; however, by restricting and monitoring vibration-producing activities, vibration effects from construction can be kept to a minimum and reduce disproportionately high and adverse effects on EJ populations within the construction zone. Proposed mitigation measures for temporary noise and vibration impacts are described in more detail in Section 3.11, Noise and Vibration.

Air Quality

As described in Table 3.20-13, anticipated temporary air quality impacts within the study area are not expected to result in a disproportionately high and adverse impact to EJ populations because construction-related air quality impacts would be the same for EJ populations as for the general population. However, air quality may be affected on Hayden Island due to emissions from construction equipment. The census geography comprising Hayden Island is not a meaningfully greater or high-priority EJ area. However, low-income and minority people living in the area may be affected and are considered as part of this analysis. Residents living in floating homes and the mobile home park may be particularly susceptible to air quality impacts due to their close proximity to both the highway and transit alignments. Construction impacts to air quality could be minimized through measures discussed in more detail in Section 3.10, Air Quality.

3.20.8 Environmental Justice – Preliminary Determination Summary of Environmental Justice Impacts

EO 12898 directs federal agencies to make achieving EJ part of their respective missions by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. For the IBR EJ analysis, the Modified LPA's impact to EJ populations was compared to the impact to the general population; in instances where disproportionately high and adverse impacts to EJ populations were identified, mitigation measures have been proposed to minimize, reduce, or offset those impacts.

Disproportionately high and adverse effects on EJ populations were evaluated using five questions based on FHWA guidance to support a preliminary determination as to whether the IBR Program would result in disproportionately high and adverse effects on EJ populations (FHWA 2011). These questions, and the Program's responses, are provided below.

¹⁰ Title 23 CFR Part 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise
 ORS 467.010, Chapter 340, Division 35, Noise Control Regulations
 Chapter 173-60 WAC, Maximum Environmental Noise Levels

Question 1: Would the Modified LPA result in disproportionately high and adverse impacts that would be predominantly borne by a minority or low-income population?

Yes.

- The Modified LPA would result in residential and business displacements in high-priority and meaningfully greater EJ areas such as the Esther Short neighborhood in Vancouver and the Rockwood neighborhood in Gresham. In Rockwood, EJ populations comprise more than 50% of the entire population, and displacement impacts would be disproportionately borne by minority and low-income populations.
- If the design option that shifts the I-5 mainline westward were chosen, the Modified LPA would also require full acquisition of the Normandy Apartments. This would result in an additional 33 residential displacements in the Esther Short neighborhood, a high-priority EJ area.
- As discussed in Table 3.20-11, the Modified LPA would result in temporary construction easements at the Evergreen Inn and the Lewis and Clark Plaza in Vancouver. These are two low-income apartment buildings that provide affordable housing within the Esther Short neighborhood. Given that these apartment buildings are located in an identified EJ area and that they specifically provide low-income housing to EJ populations within the study area, temporary construction easement impacts to these buildings would result in a disproportionately high and adverse effect. No residential displacements are anticipated from these temporary construction easements, so these impacts would be temporary in nature.
- The tolling program associated with the Modified LPA has the potential to result in adverse and disproportionate impacts to EJ populations. While tolls would be paid by all drivers using the new bridges, the tolls would represent a greater proportion of household income for low-income individuals than for higher-income individuals, resulting in a higher economic burden in some of the studied census block groups.

Question 2: Would the Modified LPA result in disproportionately high and adverse impacts on a minority or low-income population that would be appreciably more severe or greater in magnitude than the impact that would be suffered by the non-minority or non-low-income population?

Yes.

Residential displacements and implementation of the proposed tolling program have the potential to disproportionately burden EJ populations as compared to the general population, as described in the response to Question 1.

Question 3: Does the Modified LPA affect a resource that is especially important to a minority or low-income population? For instance, does the project affect a resource that serves an especially important social, religious, or cultural function for a minority or low-income population?

To be determined.

Adverse effects on culturally sensitive resources may be especially important to a minority population. In September 2020, FHWA and FTA contacted 21 tribes and Native Hawaiian organizations that were originally consulted regarding the CRC project and reinitiated government-to-government consultation. In February 2022, outreach was extended to an additional 17 tribes. Through that effort, 10 federally recognized tribes expressed an interest in consulting for the IBR program. Archaeological and ethnographic surveys are underway to determine the significance of resources present, make findings on level of effect from the Program, and identify possible strategies to avoid, minimize, or mitigate any adverse effects. If adverse effects on resources that serve especially important social, religious, or cultural functions for tribes are identified prior to completion of the Final SEIS, this analysis will be updated to reflect those effects. Any finding of adverse effect under Section 106 of the National Historic Preservation Act would be mitigated in accordance

with the terms of the Programmatic Agreement being developed for the IBR Program, as described in Section 3.8, Cultural Resources.

Question 4: Does the Modified LPA propose mitigation?

Yes.

Proposed mitigation is discussed in Section 3.20.8, Potential Avoidance, Minimization, and Mitigation Measures. Some of these mitigation strategies, such as those related to acquisition and displacement, noise and vibration, and transportation impacts are statutory requirements, BMPs, and obligations; others are Program-specific mitigation strategies to address disproportionately high and adverse effects on low-income and minority populations. Mitigation measures related to the future IBR tolling program, if advanced, will be important given the disproportionately high and adverse effect that tolling is anticipated to have on EJ populations, especially those for households living at or below the federal poverty level. A low-income toll program or equitable tolling policy would be an important mitigation strategy to offset disproportionately high and adverse effects on EJ populations resulting from future tolling on the new Columbia River bridges. Strategies to further reduce disproportionately high and adverse effects resulting from the potential use of tolling transponders could include public information campaigns to help EJ populations navigate and participate in the tolling system, the use of electronic benefits transfer cards, and financial assistance programs.

It is important to note that, although the IBR Program is committed to mitigation to address disproportionately high and adverse effects on EJ populations resulting from future tolling, tolling is still in a preliminary phase of planning and study. Once the structure of tolling has been determined, additional analysis, interagency coordination, and public involvement will be needed to define specific mitigation actions related to IBR Program tolling.

Question 5: Would EJ populations experience project benefits under the Modified LPA?

Yes.

- EJ populations would share benefits with the general population resulting from the construction of modern, seismically resilient, and multimodal bridges across the Columbia River.
- Under the Modified LPA, EJ populations would benefit from new and reliable high-capacity transit across the Columbia River. The decrease in transit travel time and increase in transit reliability would be a benefit for all populations but may benefit EJ populations differently to the extent that they ride transit at a higher rate than those with greater access to transportation options and/or higher incomes.¹¹
- Under the Modified LPA, EJ populations would benefit from improved travel times and increased safety on I-5, as would the general population.
- Under the Modified LPA, EJ populations would benefit from improved bicycle and pedestrian travel across the Columbia River and from bicycle and pedestrian improvements to the local street system within the study area. Improved bicycle and pedestrian travel will benefit all populations but may benefit EJ populations differently to the extent that they rely on walking or bicycling as a primary mode of transportation at a higher rate than those with greater access to multiple transportation options and/or higher incomes.

¹¹ While it is important to note that many low-income populations would benefit greatly from a faster, more reliable trip, EJ principles hold that to offset a disproportionate adverse effect on low-income populations, the benefit also needs to disproportionately affect low-income populations. In this case, the benefits of a faster, more reliable trip apply to all populations and not just low-income populations.

Preliminary Determination

The FHWA Guidance on Environmental Justice and NEPA (FHWA 2011) provides the following direction for determining disproportionately high and adverse effects on EJ populations:

As per FHWA Order 6640.23A, a disproportionately high and adverse effect on a minority or low-income population means the adverse effect is predominantly borne by such population or is appreciably more severe or greater in magnitude on the minority or low-income population than the adverse effect suffered by the non-minority or non-low-income population.

1) EJ considerations should be summarized in the appropriate section of the NEPA document; such as the social-economic section of the environmental consequences chapter. References to other sections in the NEPA document can be cited, as appropriate. The beneficial and adverse effects on the overall population and on minority and low-income populations, in particular, need to be addressed under the applicable topics such as: air, noise, water pollution, hazardous waste, aesthetic values, community cohesion, economic vitality, employment effects, displacement of persons or businesses, farms, accessibility, traffic congestion, relocation impacts, safety, and construction/temporary impacts, etc.

2) Compare the impacts on the minority and/or low-income populations with respect to the impacts on the overall population within the project area. Fair distribution of the beneficial and adverse effects of the proposed action is the desired outcome. If the effects remain adverse after mitigation is considered, then a determination must be made whether those effects are disproportionately high and adverse with respect to minority and/or low-income populations. If the effects on minority and/or low-income populations are disproportionately high and adverse even with mitigation and benefits to those populations taken into account, the NEPA document must evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect(s).

3) Under NEPA, consideration must be given to mitigation (as defined in 40 CFR 1508.20) for all adverse effects regardless of the type of population affected. Discuss what measures are being considered for alternatives to avoid or mitigate the adverse effects. Follow the protocol of avoidance first, then minimization, and finally measures to offset or rectify the adverse effects. Using opportunities to enhance and increase sustainability in communities and neighborhoods is desirable. Any activity that demonstrates sensitivity to special needs should be highlighted, such as accommodations for transit dependency and/or addressing the need for translators.

4) If the effects remain adverse after mitigation is considered, then a determination must be made whether those effects are disproportionately high and adverse with respect to minority and/or low-income populations. If the effects on minority and/or low-income populations are disproportionately high and adverse even with mitigation and benefits to those populations taken into account, the next section must be followed.

5) If there are no disproportionately high and adverse effects on minority and/or low-income populations once mitigation and benefits are considered, that determination should be stated in the document and the EJ evaluation is complete. (An example of a statement of a determination of no disproportionately high and adverse effects: “Based on the above discussion and analysis, the XYZ alternative(s) will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of E.O. 12898 and FHWA Order 6640.23A. No further EJ analysis is required.”.)

A preliminary determination has been made based on the current assessment of environmental impacts, benefits, and mitigation strategies under the Modified LPA as described in this section. A final determination will be made in the Final SEIS subject to future refinements to the Modified LPA design options, input obtained through public involvement, and refined mitigation measures.

The preliminary determination finds that minority or low-income populations have been identified that would experience disproportionately high and adverse effects from the Modified LPA, even after mitigation. Therefore, in accordance with the provisions of EO 12898 and FHWA Order 6640.23A, further EJ analysis is required, as well as additional public engagement to refine potential impacts and gather public input on mitigation measures, in order to evaluate whether there is a further practicable mitigation measure or practicable alternative that would avoid or reduce the disproportionately high and adverse effect. This determination is based on the following:

- As of this writing, a number of design options under the Modified LPA are still being actively studied. The selection of preferred design options may impact the extent and magnitude of impacts, benefits, and mitigation strategies related to low-income and minority populations.
- As noted in Question 4 above, tolling on the Interstate Bridge is currently in a preliminary planning stage, and more analysis is required to understand the extent of impacts to EJ populations under the Modified LPA. Therefore, mitigation to avoid, minimize, reduce, or offset disproportionately high and adverse effects on low-income and minority populations has not been fully developed. More analysis and public involvement is required to gain a more complete understanding of impacts to low-income and minority populations from potential future tolls. Updated findings related to tolling will be documented in the Final SEIS.
- Some transportation impacts, such as temporary diversion impacts during the construction period or longer-term diversion impacts resulting from the proposed future tolling on the Interstate Bridge and new Columbia River bridges, require further analysis to understand EJ-specific impacts. As of this writing, the AM and PM peak-hour screenline analysis indicates that diversion impacts under the Modified LPA would range between +4% to +11%, representing a relatively minor change compared to the No-Build Alternative. Furthermore, the analysis has not found that EJ high-priority or meaningfully greater areas would experience diversion impacts disproportionately or in a greater magnitude than the general population. However, this analysis will be updated as part of the Final SEIS process to continue to identify potential disproportionately high and adverse effects on EJ populations.
- The IBR Program will hold a public comment period after the Draft SEIS and associated IBR technical reports are published. This will be the first time the general public will have the opportunity to review the identified impacts, benefits, and proposed mitigation actions for EJ populations. This period will also include a robust process to engage EJ populations specifically, which will provide critical feedback on the Draft SEIS and Environmental Justice Technical Report. The IBR Equity Advisory Committee, Community Advisory Committee, and Community Benefits Advisory Group will also provide feedback on the Draft SEIS and the draft reports. All public and advisory committee feedback will be incorporated to develop the Final SEIS.

FHWA guidance provides steps on how to proceed when disproportionately high and adverse effects have been identified after project benefits and mitigation have been taken into account (FHWA 2011). Following the additional analysis and community input described in the bullets above, the Final SEIS must evaluate whether there are further practicable mitigation measures or practicable alternatives that would avoid or reduce the disproportionately high effect(s). FHWA and FTA will approve the proposed action only if it determines that no such practicable measures exist, and FHWA and FTA's determination must be stated in the document. The Final SEIS must also describe how the impacted populations were involved in the decision-making process.

Interstate Bridge Replacement Program

The document also needs to identify what practicable mitigation commitments have been made at the time of Final SEIS completion.

In addition, if the affected population is a minority population protected under Title VI, FHWA will not approve the proposed action unless FHWA and FTA determine that:

1. There is a substantial need for the project, based on the overall public interest; and
2. Alternatives that would have less adverse effects on protected populations have either:
 - a. Adverse social, economic, environmental, or human health impacts that are more severe; or
 - b. Would involve increased costs of an extraordinary magnitude.

Where appropriate, the Final SEIS document must include both of these evaluations and contain the FHWA and FTA determination on the explicit issues required within these evaluations.