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# 1 **DRAFT Equity Technical Report**

2 March 2023



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## 1 ACRONYMS AND ABBREVIATIONS

2	BIPOC	Black, Indigenous, and People of Color
3	CRC	Columbia River Crossing
4	C-TRAN	Clark County Public Transit Benefit Area Authority
5	EAG	Equity Advisory Group
6	GIS	geographic information system
7	HCT	high-capacity transit
8	I-5	Interstate 5
9	IBR	Interstate Bridge Replacement
10	LPA	Locally Preferred Alternative
11	NEPA	National Environmental Policy Act
12	ROD	Record of Decision
13	RTC	Regional Transportation Council
14	SDEIS	supplemental draft environmental impact statement
15	SR	State Route
16	TriMet	Tri-County Metropolitan Transportation District
17	WSDOT	Washington State Department of Transportation

# 1. PROJECT OVERVIEW

## 1.1 Introduction

This technical report describes the analysis of the potential equity impacts (i.e., benefits and burdens) pertaining to the Interstate Bridge Replacement (IBR) program’s Modified Locally Preferred Alternative (Modified LPA). The report supplements the IBR program environmental justice analysis by broadening the focus to communities beyond minority and low-income populations, consistent with the IBR definition of equity:

*The IBR program defines equity in terms of both process and outcomes. Together, process equity and outcome equity contribute to addressing the harmful impacts of and removing longstanding injustices experienced by historically underserved communities.*

**Process Equity** means that the program centers and prioritizes access, influence, and decision-making power for equity priority communities throughout the program in establishing objectives, design, implementation, and evaluation of success.

**Outcome Equity** is the result of successful Process Equity and is demonstrated by tangible transportation, community, and economic benefits for equity priority communities.

*Equity priority communities are those who experience and/or have experienced discrimination and exclusion based on identity or status, such as:*

- *Black, Indigenous, and People of Color and members of Indian tribes*
- *People with disabilities*
- *Communities with limited English proficiency*
- *Persons with lower incomes*
- *Houseless individuals and families*
- *Immigrants and refugees*
- *Young people*
- *Older adults*

The objectives of this report are to:

- Define the study area and the methods of data collection and evaluation used for the analysis (Chapter 2).
- Identify equity priority communities and their locations within the study area (Chapter 3).
- Analyze potential benefits and burdens resulting from the construction and operation of the Modified LPA in comparison to the No-Build Alternative (Chapters 4 and 5).
- Summarize the findings of the equity analysis and identify next steps (Chapter 6).





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1 The Modified LPA is a modification of the Locally Preferred Alternative for the Columbia River Crossing  
2 (CRC) project, which completed the National Environmental Policy Act (NEPA) process with a signed  
3 Record of Decision (ROD) in 2011 and two re-evaluations that were completed in 2012 and 2013. The  
4 CRC project was discontinued in 2014. The IBR program’s Supplemental Draft Environmental Impact  
5 Statement (SDEIS) is evaluating the effects of changes in project design since the CRC ROD, as well as  
6 changes in regulations, policy, and physical conditions.

7 *Please refer to the separate IBR Program Description file on the portal for a description of the Modified*  
8 *LPA, Modified LPA construction, and the No-Build Alternative. The IBR program description will be*  
9 *inserted into the final version of this technical report.*

## 1 2. METHODS

2 This chapter describes the methods used to assess the potential equity impacts (benefits and  
3 burdens) resulting from the construction and operation of the Modified LPA. The scope of the analysis  
4 is broader than that of the required environmental justice analysis under NEPA, as IBR has made a  
5 commitment to the community to center equity beyond legal and statutory requirements.

### 6 2.1 Policy Context

7 This work is consistent with federal and local plans, standards, and policy objectives to further equity  
8 in transportation. Key regulations, plans, and policies related to equity are listed below.

#### 9 2.1.1 Federal

- 10 • Presidential Executive Order 13985: Advancing Racial Equity and Support for Underserved  
11 Communities Through the Federal Government.
- 12 • Presidential Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in  
13 Minority Populations and Low-Income Populations.
- 14 • USDOT Order 5610.2c, U.S. Department of Transportation Actions to Address Environmental  
15 Justice in Minority Populations and Low-Income Populations (2021).
- 16 • Order 6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and  
17 Low-Income Populations (2012).
- 18 • Presidential EO 13166 – Improving Access to Services for Persons with Limited English  
19 Proficiency.
- 20 • Title 42 USC Section 4601, Uniform Relocation Assistance and Real Property Acquisition  
21 Policies for Federal and Federally Assisted Programs.
- 22 • USDOT, Department of Transportation: Updated Environmental Justice Order 5610.2a (2012).
- 23 • Title VI of the Civil Rights Act of 1964.
- 24 • Title 49 of the Code of Federal Regulations (CFR) Part 21, Nondiscrimination in Federally  
25 Assisted Programs of the Department of Transportation, Effectuation of Title VI of the Civil  
26 Rights Act of 1964.

#### 27 2.1.2 State

- 28 • ODOT 2021–2023 Strategic Action Plan — Equity Goals (2022).
- 29 • WSDOT Diversity, Equity, & Inclusion Plan – Data Informed Decisions and Community  
30 Engagement strategies (2022).

1 **2.1.3 Local**

- 2 • City Council of the City of Vancouver Statement Regarding Racial Equity and Racial Justice  
3 (2020).
- 4 • City of Vancouver 2011–2030 Comprehensive Plan – Policy IM-13 Diversity (2011).
- 5 • City of Portland 2035 Comprehensive Plan – Goal 2.A, Goal 2.B, Goal 2.C, Goal 9.E, Policy 2.27,  
6 Policy 2.3, Policy 2.4, Policy 8.32, Policy 9.23, Policy 9.24, Policy 9.25, Policy 9.8, Policy 9.9  
7 (2018).

8 **2.2 Defining Equity, Setting Objectives**

9 In tandem with the IBR Equity Advisory Group (EAG), the program has adopted an equity framework<sup>1</sup>  
10 to guide the processes and desired outcomes in terms of furthering equity. At the core of the  
11 framework is a program-specific equity definition and six equity objectives, which together form the  
12 basis for the analysis presented in this report.

13 **2.2.1 IBR Definition of Equity**

14 *The IBR program defines equity in terms of both process and outcomes. Together, process equity and*  
15 *outcome equity contribute to addressing the harmful impacts of and removing longstanding injustices*  
16 *experienced by historically underserved communities.*

17 **Process Equity** means that the program centers and prioritizes access, influence, and decision-making  
18 power for equity priority communities throughout the program in establishing objectives, design,  
19 implementation, and evaluation of success.

20 **Outcome Equity** is the result of successful Process Equity and is demonstrated by tangible  
21 transportation, community, and economic benefits for equity priority communities.

22 *Equity priority communities are those who experience and/or have experienced discrimination and*  
23 *exclusion based on identity or status, such as:*

- 24 • *Black, Indigenous, and People of Color and members of Indian tribes*
- 25 • *People with disabilities*
- 26 • *Communities with limited English proficiency*
- 27 • *Persons with lower incomes*
- 28 • *Houseless individuals and families*
- 29 • *Immigrants and refugees*

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<sup>1</sup> The complete *IBR Program Equity Framework* can be accessed through the program website:  
[https://www.interstatebridge.org/media/lkfj1xuz/ibr\\_equityframework\\_20220511\\_remediated.pdf](https://www.interstatebridge.org/media/lkfj1xuz/ibr_equityframework_20220511_remediated.pdf).

- 1 • *Young people*
- 2 • *Older adults*

### 3 2.2.2 IBR Equity Objectives

4 The IBR program has established six equity objectives:

- 5 1. **Mobility and accessibility:** Improve mobility, accessibility, and connectivity, especially for  
6 lower income travelers, people with disabilities, and historically underserved communities  
7 who experience transportation barriers.
- 8 2. **Physical design:** Integrate equity, area history, and culture into the physical design elements  
9 of the program including bridge aesthetics, artwork, amenities, and impacts to adjacent land  
10 uses.
- 11 3. **Community benefits:** Find opportunities for and implement local community improvements  
12 in addition to required mitigations.
- 13 4. **Workforce equity and economic opportunity:** Ensure that economic opportunities  
14 generated by the program benefit minority and women owned firms, Black, Indigenous, and  
15 People of Color (BIPOC) workers, workers with disabilities, and young people. The program  
16 will engage with both federally recognized Indian tribes which have Tribal Employment Rights  
17 Offices (TERO) and those without.
- 18 5. **Decision-making processes:** Prioritize access, influence, and decision-making power for  
19 Equity Priority Communities throughout the program in establishing objectives, design,  
20 implementation, and evaluation of success.
- 21 6. **Avoid further harm:** Actively seek out options with a harm-reduction priority rather than  
22 simply mitigate disproportionate impacts on historically impacted and underserved  
23 communities and populations.

24 Of these, the most relevant to this report are *Mobility and accessibility*, *Decision-making processes*, and  
25 *Avoid further harm*. The other three objectives pertain more closely to future program delivery efforts.

## 26 2.3 Precedent

27 While an equity technical report is not an established element of the NEPA process, there is local  
28 precedent for the practice. The environmental impact statement for the Multnomah County  
29 Earthquake Ready Burnside Bridge Project includes this type of report to assess impacts and benefits  
30 for historically marginalized populations that are not considered environmental justice communities  
31 under Executive Order 12898. Potentially affected populations included in that assessment were:

- 32 • Unhoused populations
- 33 • Adults aged 65 and older
- 34 • Disability population
- 35 • Limited English proficiency population

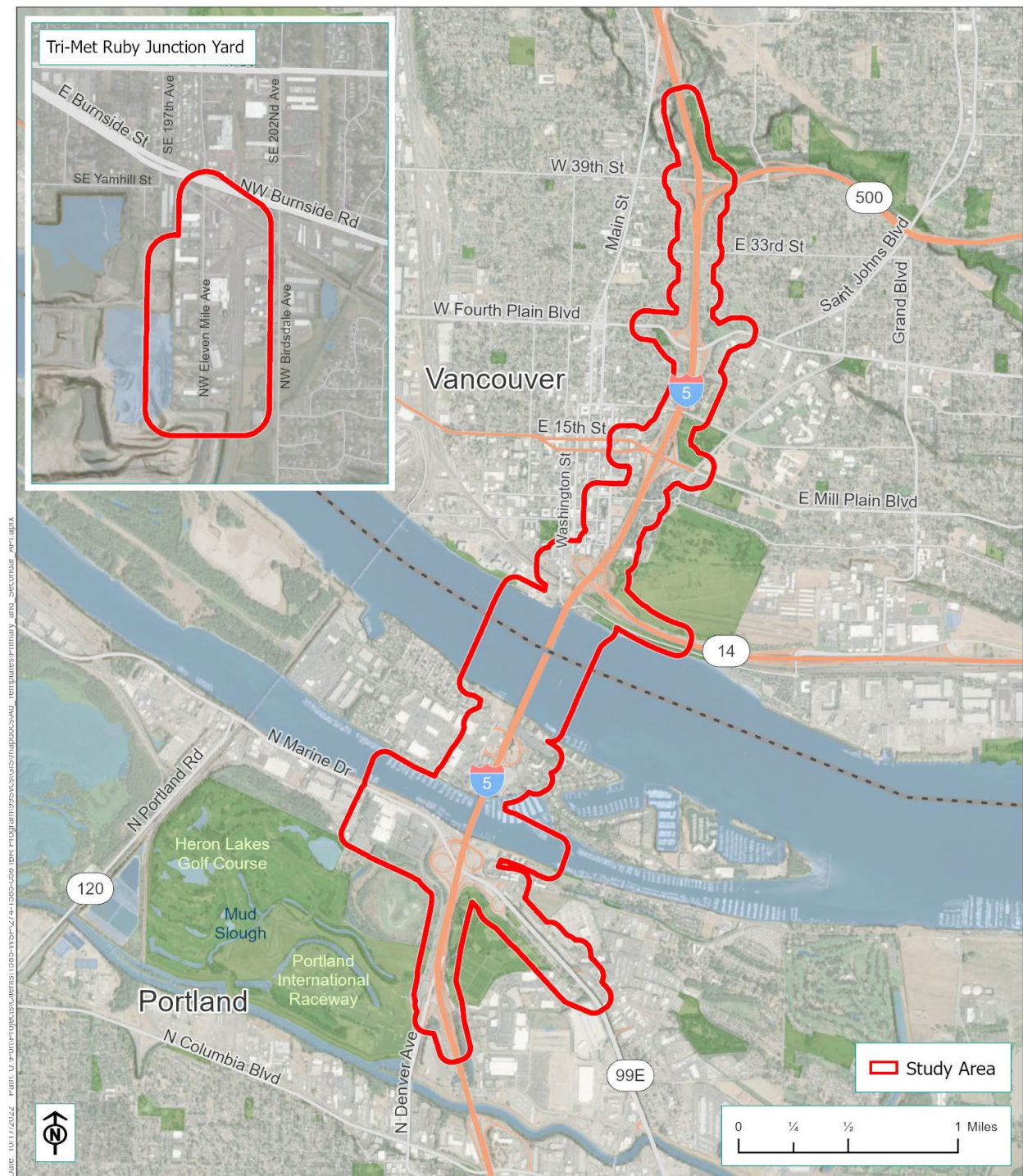
1 The report also examined impacts to social and emergency service providers because of these  
2 populations’ reliance on them for access to housing, nutrition, health care, employment, case  
3 management, and other social services.

## 4 2.4 Study Area

5 This report analyzes benefits and burdens on four geographic levels:

- 6 • The IBR study area, which area runs along a 5-mile segment of Interstate 5 (I-5), approximately  
7 between the State Route (SR) 500 interchange in Washington and the I-5/Columbia Boulevard  
8 interchange in Oregon. North of the Columbia River, the study area expands west into  
9 downtown Vancouver and east near Clark College to include potential high-capacity transit  
10 (HCT) alignments and park-and-ride locations. It also includes the TriMet Ruby Junction rail  
11 yard (see Figure 2-1).
- 12 • HCT station area half-mile “walksheds” (see Figure 4-2).
- 13 • A larger IBR program area that includes neighborhoods adjacent to the IBR study area (see  
14 Figure 4-1). The program area is defined by the Transportation Analysis Zones in the Metro  
15 regional transportation model that intersect with the study area.
- 16 • The broader Portland-Vancouver-Hillsboro metropolitan area, as defined by the U.S. Census  
17 Bureau.

1 Figure 2-1. IBR Program Study Area



2

## 1 2.5 Data Collection Methods

2 This report is based on a variety of both quantitative and qualitative data sources. Demographic data  
3 were used as a starting point to assess the presence of equity priority communities living within the  
4 study area. The analysis also draws from quantitative data and findings from other relevant discipline  
5 reports including physical impacts from bridge construction and long-term operation. Qualitative  
6 data were drawn from sources that included the EAG and community engagement activities. The  
7 following sections summarize the specific data sources that were used to assess benefits and burdens  
8 on equity priority communities.

### 9 2.5.1 Quantitative Data

10 The quantitative analysis relied heavily on geographical information system (GIS) analysis, using  
11 demographic, employment, and transportation network data sources, including:

- 12 • 2020 U.S. Census (U.S. Census Bureau 2020).
- 13 • 2016–2020 American Community Survey (U.S. Census Bureau 2022).
- 14 • 2022 Metro, RTC, C-TRAN, TriMet, and IBR Analysis.
- 15 • Metro Regional Land Information System (Metro n.d.).
- 16 • 2022 Point-in-Time Counts (the counties of Multnomah and Clark [Regional Research Institute  
17 2019; Clark County Council for the Homeless 2022]).

18 Note that using demographic data has inherent limitations in gauging impacts to communities. For  
19 example, communities of color are regularly undercounted by the U.S. Census Bureau; a Bureau  
20 analysis of the 2020 Census found significant undercounts of Black or African American, Hispanic or  
21 Latino, and American Indian or Alaska Native populations.

### 22 2.5.2 Qualitative Data

23 The analysis also incorporates qualitative data derived from the program’s community engagement  
24 activities, which include listening sessions, partnerships with community-based organizations,  
25 surveys, attendance at community events, and others. It is informed through consultation with the  
26 EAG, which provides insight and input on the program’s processes, approaches, and decisions that  
27 may affect historically underserved and underrepresented communities.

## 28 2.6 Technical Analysis Methods

29 Both benefits and burdens for equity priority communities related to the Modified LPA are evaluated.

### 30 2.6.1 Defining Equity Priority Communities

31 The IBR equity definition lists eight equity priority communities. Table 2-1 further defines these  
32 communities according to the data sources used for the analysis. Note that individuals can be  
33 members of multiple equity priority communities and thereby may experience compounded impacts  
34 of historical and current marginalization.

1 Table 2-1. IBR Equity Priority Communities

Community	Full Description	Data Source
Black, Indigenous, and People of Color and members of Indian Tribes	People selecting any race/ethnicity combination besides White/non-Hispanic on the Census. Individuals enrolled in a federally recognized Indian tribe.	2020 U.S. Census Consultation with Tribal government
People with Disabilities	People living with a serious difficulty within four basic areas of functioning: hearing, vision, cognition, and ambulation.	2016–2020 American Community Survey
Communities with Limited English Proficiency	People who indicate that they speak English less than “very well.”	2016–2020 American Community Survey
Persons with Lower Incomes	People or households with income at or below 200% of the federal poverty level.	2016–2020 American Community Survey
Houseless Individuals and Families	People and families lacking, or in need of, a house or dwelling.	Multnomah County and Clark County Point in Time Counts
Immigrants and Refugees	People born outside of the United States (“Foreign Born Population”).	2016–2020 American Community Survey
Young People	People under 25 years of age.	2016–2020 American Community Survey
Older Adults	People 65 years of age or older.	2016–2020 American Community Survey

2 Sources: 2020 U.S. Census (U.S. Census Bureau 2020); 2016–2020 American Community Survey (U.S. Census Bureau 2022);  
 3 Multnomah County Point-in-Time Count (Regional Research Institute 2019)

4 **2.6.2 Benefits Analysis**

5 The Mobility and Accessibility objective in the *IBR Program Equity Framework* states, “improve  
 6 mobility, accessibility, and connectivity, especially for lower income travelers, people with disabilities,  
 7 and historically underserved communities who experience transportation barriers.” This section of  
 8 the report examines the extent to which the Modified LPA furthers this objective across improvements  
 9 by infrastructure type (HCT, active transportation, and highway).

10 **2.6.2.1 High-Capacity Transit**

11 The first component of the HCT analysis combines demographic data (from the U.S. Census Bureau)  
 12 and job location data (from a Metro/IBR model projecting land use and transportation conditions in  
 13 2045) to estimate how the light rail alignment in the Modified LPA would impact transit riders’  
 14 mobility. Access to jobs doubles as a proxy for access to services (e.g., grocery stores, health care, and  
 15 education) because those destinations are also job centers.



1 Drawing from a methodology developed by TransitCenter, an urban mobility research and advocacy  
2 organization, the analysis calculated the number of jobs reachable via HCT within 45 minutes during  
3 peak and midday hours using a weighted average for persons within a certain demographic and  
4 geographic area. Results are provided for each equity priority community for which data are available  
5 and examine changes in access for the average IBR program area resident and the average  
6 Portland-Vancouver metropolitan area resident. These changes are compared with the levels of  
7 change in access estimated for non-equity priority communities.

8 The second component of the HCT analysis examines the demographics of each station area  
9 (residents within a half-mile walk of the station, a threshold commonly used as a maximum distance  
10 transit riders will walk to access HCT) and compares the percentage of this population comprised of  
11 equity priority community members to the IBR program area and the Portland-Vancouver  
12 metropolitan area.

13 An important caveat is that this approach combines current census data with projected transit service  
14 and distribution of jobs in 2045. Therefore, while the analysis serves as one indicator of equity, it  
15 should be recognized that changes in both employment and population will occur between now and  
16 2045.

#### 17 2.6.2.2 Active Transportation

18 The Modified LPA includes several improvements serving pedestrians and bicyclists. The equity  
19 analysis conducted is qualitative in nature and relies on the program’s community engagement to  
20 ensure consistency with feedback received.

#### 21 2.6.2.3 Highway/Driving

22 Rising housing costs throughout the Portland metropolitan area, particularly with respect to rent in  
23 neighborhoods near the Portland core, have led to significant migration from Multnomah County to  
24 Clark County for many seeking to reduce housing cost burdens. This has impacted commute times  
25 and transportation costs for those who now must cross the Columbia River into Oregon for work or to  
26 access other essential destinations. As such, improvements in driving conditions may carry  
27 differential impacts between equity priority communities and their counterparts.

28 This analysis estimates these impacts by using conducting a similar analysis to that conducted for  
29 HCT (i.e., weighted average change by demographic).

### 30 2.6.3 Burdens Analysis

31 This report compiles the information gathered and analyzed across multiple technical reports to  
32 examine how equity priority communities would potentially be impacted in the short and long term  
33 by the Modified LPA. Results are presented for five categories:

- 34 1. Property acquisitions
- 35 2. Residential displacements
- 36 3. Commercial displacements
- 37 4. Temporary construction-related impacts

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- 1        5. Long-term air quality impacts
- 2        Results are provided as a matrix that lists equity priority communities and anticipated impacts across
- 3        these five categories.

# 3. QUANTIFYING AND MAPPING EQUITY PRIORITY COMMUNITIES

## 3.1 Share of Population

Table 3-1 shows the percentages that each equity priority community comprises in the program area and the broader Portland metropolitan area. Of note, people with disabilities, persons with lower incomes, and older adults make up a large share of the program area population compared to the metropolitan area as a whole. Percentages of young people and immigrants and refugees are lower in the program area, while percentages of BIPOC and limited English proficiency populations are similar between the two geographies.

Table 3-1. Overview of Equity Priority Community Percentages

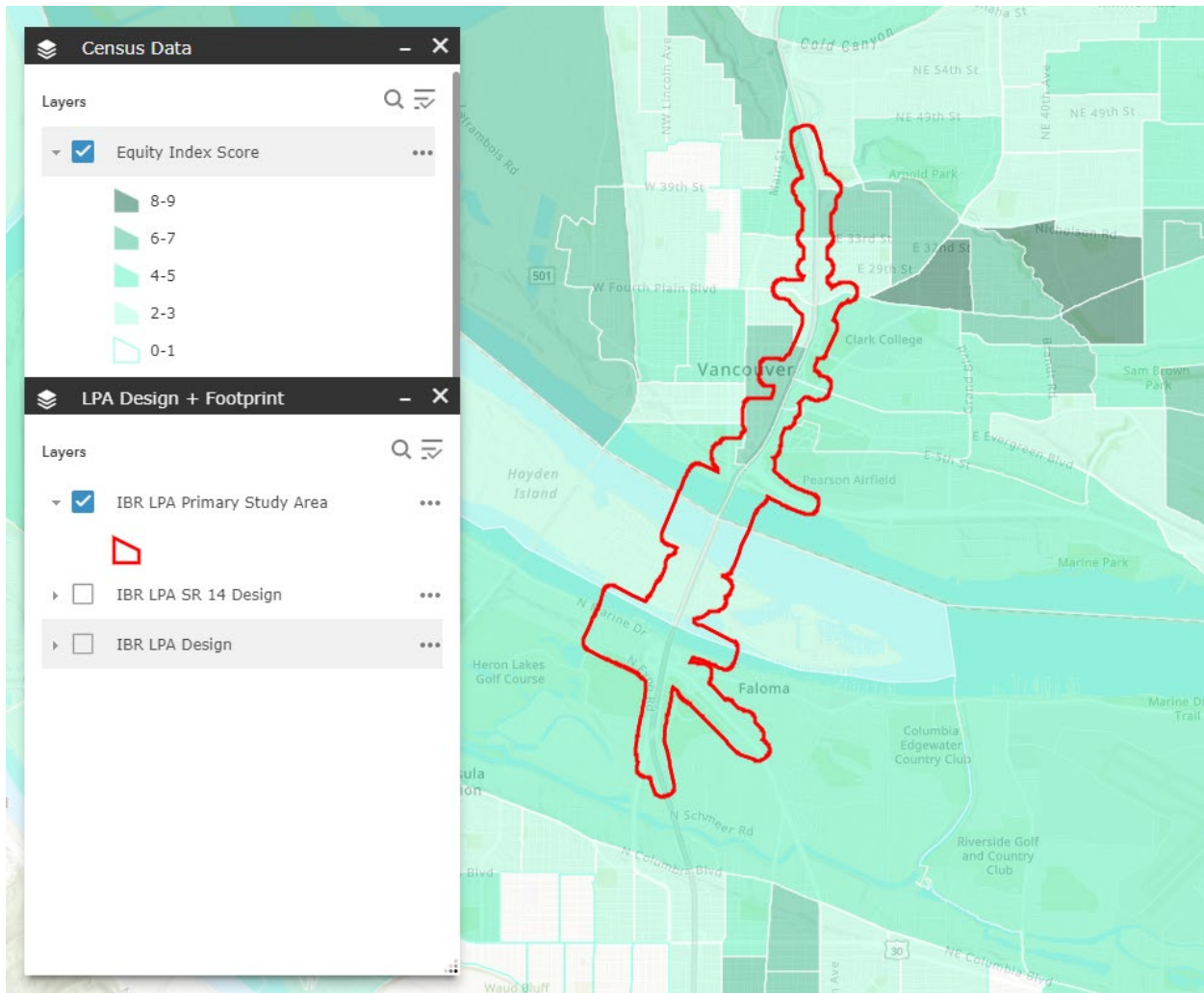
Community	IBR Program Area	Portland Metropolitan Area
Black, Indigenous, and People of Color <sup>1</sup>	30%	31%
People with Disabilities	16%	12%
Communities with Limited English Proficiency	6%	7%
Persons with Lower Incomes	31%	24%
Immigrants and Refugees	9%	13%
Young People (Under 25)	23%	29%
Older Adults (65+)	18%	15%

<sup>1</sup> The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.

## 3.2 Equity Index

Early in the Modified LPA development process, IBR staff developed an equity index to identify areas where equity priority communities live in the program area and broader metropolitan region. The index awards points to geographic areas (block groups or census tracts) where there is an above-average percentage of priority populations in comparison to the region as a whole. For example, 25% of the region’s households are low-income according to the American Community Survey, so if greater than 25% of households in a block group were low-income, it was awarded a point. Figure 3-1 shows a screenshot of this interactive web-based tool, revealing that equity priority communities as a whole are concentrated most heavily in downtown Vancouver and just to the east of the study area. The broader program area (shown in Figure 4-1) includes additional portions of the equity priority communities east of the study area in Vancouver.

1 Figure 3-1. Screenshot of IBR Equity Index



2

## 4. DISTRIBUTION OF PROGRAM BENEFITS

One of the six core objectives in the *IBR Program Equity Framework* is to “improve mobility, accessibility, and connectivity, especially for lower income travelers, people with disabilities, and historically underserved communities who experience transportation barriers.” Equitable progress towards this objective would mean that equity priority communities benefit more than their counterparts. This analysis examines the extent to which the Modified LPA would meet this standard across improvements by infrastructure type (HCT, active transportation, and highway).

### 4.1 High-Capacity Transit

#### 4.1.1 HCT Analysis 1: Transit Access Improvements

The first component of the HCT analysis combines demographic and jobs data to estimate how the light rail alignment in the Modified LPA would impact transit riders’ mobility. The indicator used is access to jobs, which doubles as a proxy for access to services (e.g., grocery stores, health care, and education) because those destinations are often also job centers.

Drawing from a methodology developed by TransitCenter, an urban mobility research and advocacy foundation, the analysis calculates jobs reachable within 45 minutes during AM peak (7 a.m. to 9 a.m.) and midday (12 p.m. to 1 p.m.) hours by using a weighted average for persons within a certain demographic (each equity priority community) based on their residential distribution within each geographic area (the IBR program area, shown in Figure 4-1, and the broader Portland-Vancouver metropolitan area). Results are provided for each equity priority community for which data are available, which does not include houseless individuals and families.

The analysis estimates changes in access via transit for the average IBR program area resident from each equity priority community and the average Portland-Vancouver metropolitan area resident from each equity priority community. It then compares the levels of change to those estimated for non-equity priority community counterparts.

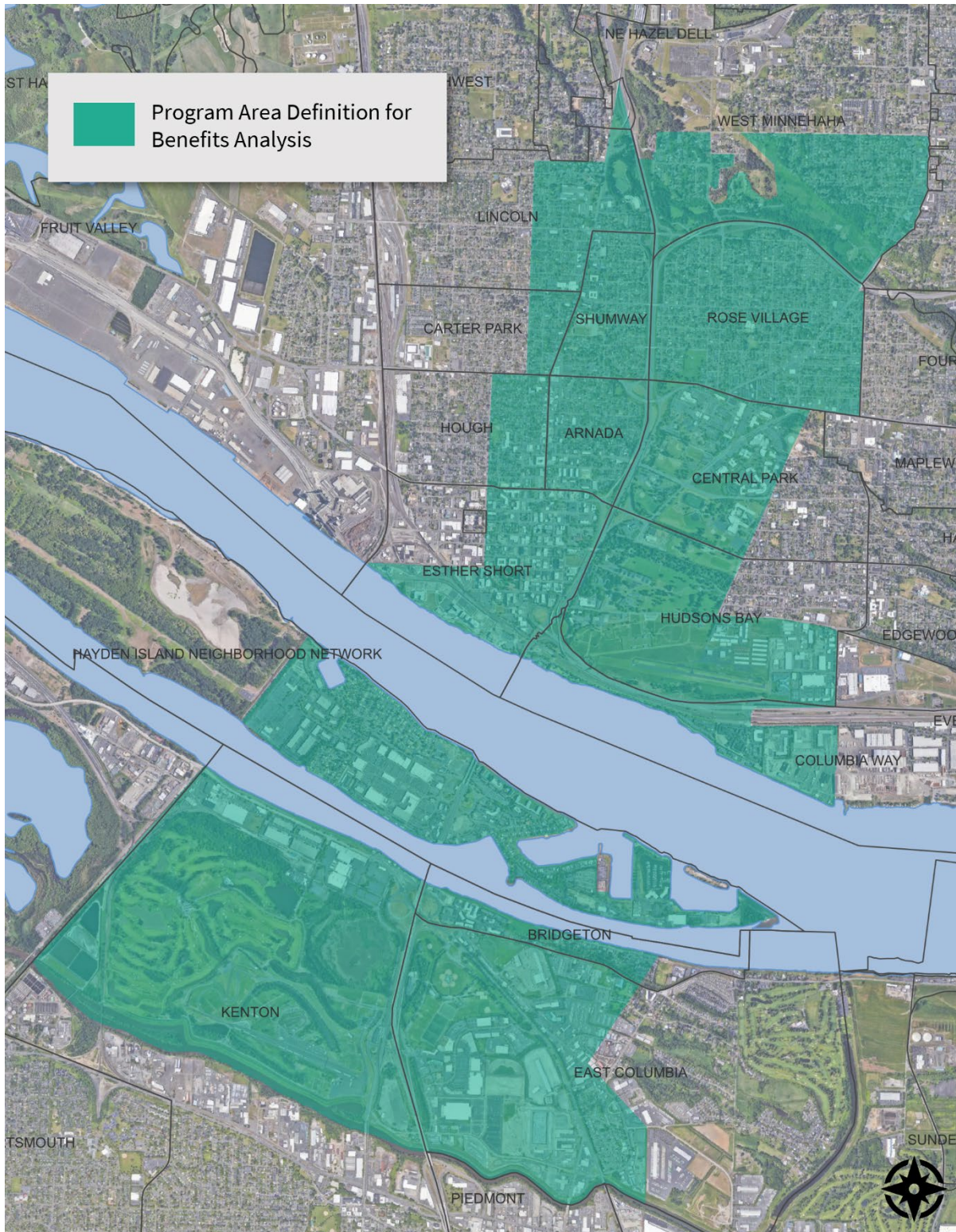
An important caveat is that this approach combines current census data with projected transit service and distribution of jobs in 2045. It therefore serves as one equity indicator, acknowledging that changes in both employment and population will occur between now and 2045.

##### 4.1.1.1 HCT Analysis 1 Findings

Results are summarized in Table 4-1 (for program area residents) and Table 4-2 (for residents of the broader Portland-Vancouver metropolitan area).

The program area analysis estimates that each demographic group would be able to reach an average of 52% to 78% more jobs during the morning peak and an average of 48% to 73% more jobs during the midday (within a 45-minute transit trip). This equates to increases of about 12,600 to 23,000 jobs during the morning peak and 11,700 to 18,000 jobs during the midday.

- 1 Figure 4-1. IBR Program Area as Defined for the Purposes of Benefits Analysis (with
- 2 Neighborhood Boundaries)



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1 **Finding:** *The degree of access improvements differs between equity priority communities and their*  
 2 *counterparts. For program area residents, three demographic groups—people with disabilities, persons*  
 3 *with lower incomes, and older adults—are estimated to see greater increases than their counterparts*  
 4 *during both the peak and midday hours. On the other hand, BIPOC communities, those with limited*  
 5 *English proficiency, immigrants and refugees, and young people are estimated to see less of an increase*  
 6 *in access compared to their demographic counterparts.*

7 Table 4-1. Transit Access Improvements Analysis for Program Area Residents: Percentage Increase in  
 8 Jobs Access over No-Build Alternative – 45-minute Travel Time

Equity Priority Community	Morning Peak		Midday	
	Increase for Average <sup>1</sup> Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/ Latino)	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/ Latino)
Black, Indigenous, and People of Color (BIPOC) <sup>2</sup>	60%	72%	57%	73%
People with Disabilities	78%	64%	71%	58%
Communities with Limited English Proficiency	74%	78%	61%	71%
Persons with Lower Incomes	63%	59%	59%	57%
Immigrants and Refugees	62%	67%	52%	61%
Young People (Under 25)	52%	63%	48%	60%
Older Adults (65+)	67%	56%	66%	52%
Houseless Individuals and Families	<i>Data not available to perform analysis.</i>			

9 1 Average access is calculated based on residential distribution of each demographic group and weighted accordingly.

10 2 The IBR program is also consulting with the tribes but their enrollment numbers are not included in this table.

11 Sources: Metro 2045 Regional Model; 2020 Census (U.S. Census Bureau 2020); 2016-2020 American Community Survey (U.S.  
 12 Census Bureau (2022).

13 At the regional level, average access improvements are minimal (1% to 2% or about 300 to 1,000 jobs).  
 14 This is because the HCT investment included in the Modified LPA would not impact the vast majority  
 15 of 45-minute transit trips across the region.

16 **Finding:** *Estimated access improvements are similar when comparing equity priority communities and*  
 17 *their demographic counterparts at the regional level.*



1 Table 4-2. Transit Access Improvements Analysis for Portland-Vancouver Metropolitan Area Residents:  
 2 Percentage Increase in Jobs Access over No-Build Alternative – 45-minute Travel Time

Equity Priority Community	Morning Peak		Midday	
	Increase for Average <sup>1</sup> Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)
Black, Indigenous, and People of Color (BIPOC) <sup>2</sup>	2%	2%	1%	1%
People with Disabilities	2%	2%	1%	1%
Communities with Limited English Proficiency	2%	1%	1%	1%
Persons with Lower Incomes	2%	2%	1%	1%
Immigrants and Refugees	1%	2%	1%	1%
Young People (Under 25)	2%	2%	1%	1%
Older Adults (65+)	2%	2%	1%	1%
Houseless Individuals and Families	<i>Data not available to perform analysis.</i>			

3 1 Average access is calculated based on residential distribution of each demographic group and weighted accordingly.

4 2 The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.

5 Sources: 2022 Metro, RTC, C-TRAN, TriMet, and IBR Analysis; 2020 Census (U.S. Census Bureau 2020); 2016–2019 American  
 6 Community Survey (U.S. Census Bureau 2022)

### 7 4.1.2 HCT Analysis 2: Station Area Demographics

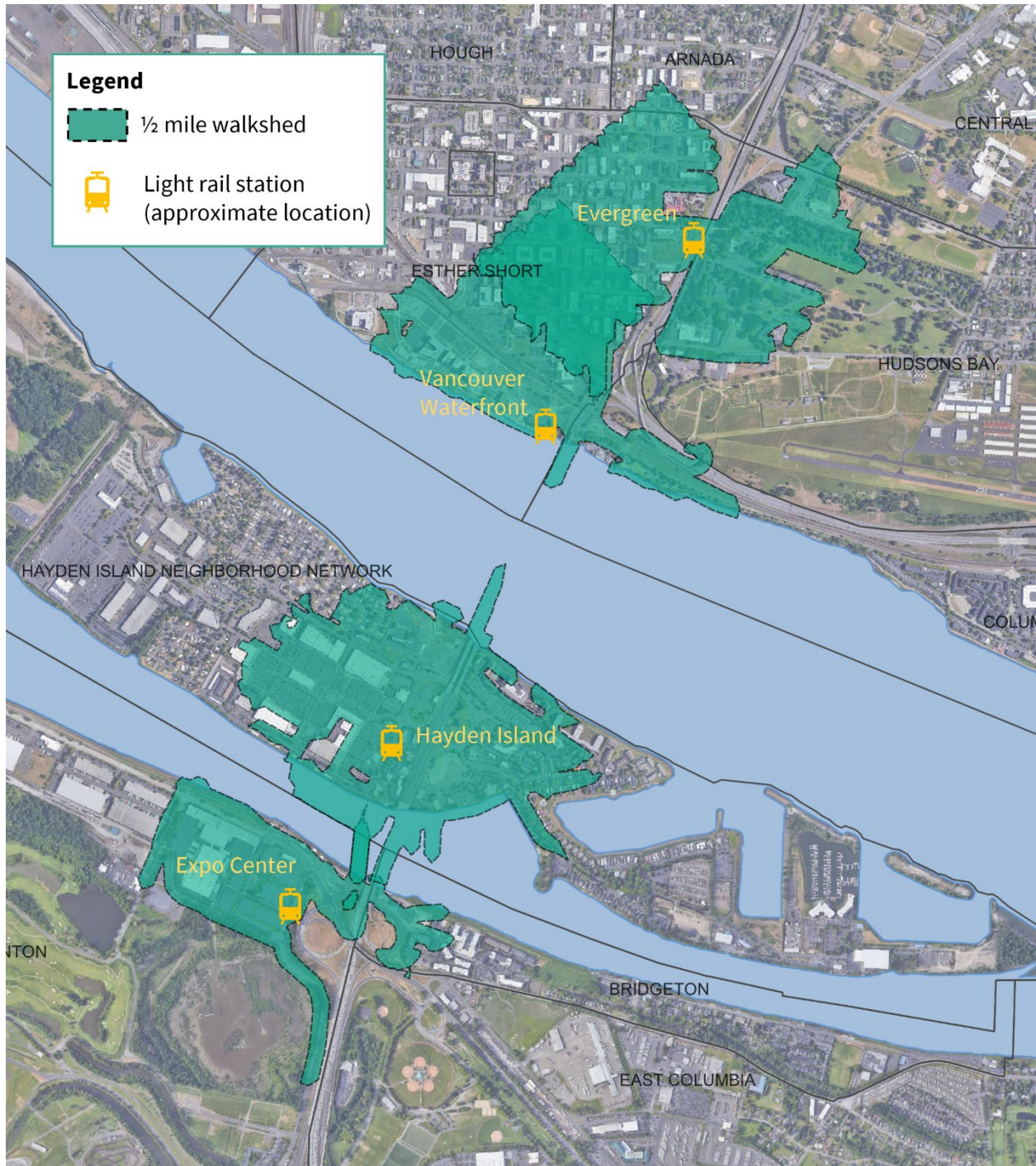
8 The second component of the HCT analysis estimates the demographic makeup of each station area<sup>2</sup>  
 9 (residents within a half-mile walk of the station, or walksheds, graphically depicted in Figure 4-2. It  
 10 compares the percentage of the population comprised of equity priority community members to the  
 11 IBR program area and the Portland-Vancouver metropolitan region. The purpose of these  
 12 comparisons is to assess potential disparities between the makeup of the program area and the areas  
 13 best served by light rail stations in the Modified LPA and to provide an informational comparison to  
 14 the region at large.

---

<sup>2</sup> Station area walksheds do not align exactly with census geographies. Population estimates are calculated by determining the percentage of a census block group or tract’s land area the walkshed covers, then multiplying this percentage by the total census block group or tract total population. This assumes an even distribution of the population throughout each census block group or tract, which is not necessarily the case in reality. Therefore, these estimates have a margin of error.



- 1 Figure 4-2. Modified LPA HCT (Light Rail) Stations and Half-Mile Walksheds (with
- 2 Neighborhood Boundaries)



3

#### 1 4.1.2.1 HCT Analysis 2 Findings

2 Table 4-3 displays the results of the station area demographic analysis across each equity priority  
3 community, with the exception of houseless individuals and families due to a lack of data necessary  
4 for the analysis. Demographic characteristics of station area walksheds are largely comparable to the  
5 program area as a whole, indicating that access improvements are not *inequitable*. Below is a  
6 synopsis of findings by demographic group:

- 7 • **BIPOC population** percentages are similar between the program area as a whole and the  
8 residents of the station area walksheds (30% and 28%, respectively). This is also similar to the  
9 metropolitan area at large.
- 10 • **People with disabilities** comprise a high proportion of the program area population as  
11 compared to the metropolitan area (16% vs. 12%, respectively), and station walksheds have  
12 particularly high concentrations of people with disabilities (an estimated 22% of the  
13 population across all stations).
- 14 • **Limited-English proficiency population** percentages are relatively low across all station  
15 areas (with the exception of the Expo Center station area) compared to the program area as a  
16 whole.
- 17 • **Low-income residents** comprise a high percentage of station walksheds on the Washington  
18 side of the river — higher than the program area as a whole and the metropolitan area at large.
- 19 • **Immigrants and refugees** (“foreign born populations” in the American Community Survey)  
20 comprise an estimated 6% of the population in station area walksheds as compared to 9% of  
21 the program area. Both are lower than the 13% average across the metropolitan area.
- 22 • **Age:** The station area walksheds have relatively high percentages of older adults and low  
23 percentages of young people compared to both the program area as a whole and the  
24 metropolitan area.

#### 25 4.1.3 Community and EAG Input Regarding HCT

26 As described in the fall 2021 IBR Community Engagement Report (IBR 2021), feedback received  
27 through multiple EAG meetings, a series of listening sessions for members of equity priority  
28 communities, and a community survey revealed broad support for HCT generally and light rail  
29 specifically. Many community members expressed a desire to better connect Portland and Vancouver  
30 via public transit as the region grows and the two communities become less bifurcated.

31 The community survey asked respondents about their preferred new station locations using a menu  
32 of options. The most popular selections were the Vancouver waterfront, Clark College, and Hayden  
33 Island; this was consistent across demographic groups. Informed by early equity analysis, the EAG  
34 also advocated for a station at Clark College, recommending the program address any gaps in service  
35 quality that might arise by opting to terminate the line at Evergreen Boulevard.

36 The work to respond to this recommendation and analysis has already begun with a plan developed  
37 by the IBR program and C-TRAN to optimize service across the transit network. Service improvements  
38 will leverage the multiple lines currently serving Clark College (i.e., The Vine BRT as well as local bus

1 Lines 25 and 30) to ensure convenient connections from HCT to the school and surrounding  
2 neighborhoods.

### 3 4.1.4 Other HCT Equity Considerations

4 The mere presence of HCT does not guarantee that equity priority communities will reap its benefits.  
5 Elements that this report cannot assess at this stage, but that are crucial to furthering equitable  
6 mobility and accessibility, include:

- 7 • Station design that ensures accessibility for people with disabilities.
- 8 • System safety and comfort.
- 9 • Service information that is available in multiple languages.
- 10 • Measures to ease transportation cost burdens (e.g., TriMet’s Low-Income Fare program).

11 Addressing these elements would require a joint effort between the IBR program, transit providers,  
12 local jurisdictions, and community partners.

13 The work to respond to this recommendation and analysis has already begun with a plan developed  
14 by the program and C-TRAN to optimize service across the transit network. Service improvements  
15 would leverage the multiple lines currently serving Clark College (i.e., The Vine BRT as well as local bus  
16 Lines 25 and 30) to ensure convenient connections from HCT to the school.



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1 Table 4-3. Equity Priority Communities in HCT Station Area Walksheds, IBR Program Area, and Portland-Vancouver Metropolitan Area  
 2 (Percentage of Total Population)

Community	Expo Center Walkshed	Hayden Island Walkshed	Vancouver Waterfront Walkshed	Evergreen Walkshed	All station walksheds combined	Program Area	Metropolitan Area
Black, Indigenous, and People of Color <sup>1</sup>	35%	27%	24%	23%	28%	30%	31%
People with Disabilities	15%	22%	25%	22%	22%	16%	12%
Communities with Limited English Proficiency	7%	3%	4%	3%	3%	6%	7%
Persons with Lower Incomes	16%	15%	54%	44%	41%	31%	24%
Immigrants and Refugees	1%	4%	6%	5%	6%	9%	13%
Young People (under 25)	10%	9%	14%	17%	14%	23%	29%
Older Adults (65+)	27%	28%	26%	19%	25%	18%	15%
Houseless individuals and families	<i>Data not available to perform analysis (See Section 5.1.1)</i>						

3 1 The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.

4 Sources: 2020 Census (U.S. Census Bureau 2020); 2016–2020 American Community Survey (U.S. Census Bureau 2022)

## 1 4.2 Active Transportation

2 The program area currently lacks adequate bicycle and pedestrian facilities. In response, the  
3 Modified LPA includes significant improvements to local active transportation infrastructure. This  
4 includes facilities to support north-south bicycle and pedestrian travel through the corridor, as well as  
5 east-west connections across I-5. Specific elements include:

- 6 • New shared-use paths on the Columbia River bridges, Marine Drive interchange, Hayden  
7 Island interchange, and the SR 14 interchange.
- 8 • Improved east-west connectivity (bicycle lanes, sidewalks, and signage) at Mill Plain  
9 Boulevard, Fourth Plain Boulevard, 29th Street, and 33rd Street.
- 10 • A community connector (wide pedestrian crossing) at Evergreen Boulevard.

11 Many community members, agency partners, and advisory group members have voiced their support  
12 for high-quality active transportation facilities; their feedback has informed the design and location of  
13 improvements. The EAG specifically asked that the program reconnect neighborhoods divided by I-5  
14 wherever possible. The EAG also urged the program to prioritize accessibility for people with  
15 disabilities, which is a key element of design engineering.

16 The Active Transportation Community Working Group, convened in fall 2021, provided another source  
17 of input. Common themes the program heard from this group included:

- 18 • Wider sidewalks.
- 19 • Physical barriers to support bike safety.
- 20 • Direct and easily navigable routes.
- 21 • Linkages to the regional transportation network.

### 22 4.2.1 Active Transportation Analysis Findings

23 Given their quality, ubiquity, and alignment with community and EAG feedback, planned active  
24 transportation components of the Modified LPA strongly support the equity objective to “improve  
25 mobility, accessibility, and connectivity, especially for lower income travelers, people with disabilities,  
26 and historically underserved communities who experience transportation barriers.” The facilities  
27 would provide new, safe connections where none exist today and would vastly improve the quality of  
28 those that do. However, the level of detail determined at this stage (in terms of accessibility  
29 improvements) does not allow for a full assessment of the improvements.

## 30 4.3 Highway and Driving Improvements

### 31 4.3.1 Driving Access Analysis

32 Similar to HCT Analysis 1, the driving access analysis combines demographic and jobs data to  
33 estimate how the highway improvements in the Modified LPA would impact drivers’ mobility. The

1 indicator used is access to jobs, which doubles as a proxy for access to other types of services (e.g.,  
2 grocery stores, health care, education) because those destinations are also job centers.

3 Drawing from a methodology developed by TransitCenter (TransitCenter n.d.), the analysis calculates  
4 jobs reachable within 45 minutes during AM peak (7 a.m. to 9 a.m.) and midday (12 p.m. to 1 p.m.)  
5 hours using a weighted average for persons within a certain demographic (each equity priority  
6 community) based on their residential distribution within each geographic area (the IBR program area  
7 and the broader Portland-Vancouver metropolitan area). Results are provided for each equity priority  
8 community for which data are available, which does not include houseless individuals and families.

9 The analysis estimates changes in driving access for the average IBR program area resident and the  
10 average Portland-Vancouver metropolitan area resident and compares the levels of change to those  
11 estimated for non-equity priority community counterparts.

12 An important caveat is that this approach combines current census data with projected distribution of  
13 jobs in 2045. It therefore serves as one equity indicator, acknowledging that changes in both  
14 employment and population will occur between now and 2045.

#### 15 4.3.1.1 Driving Access Analysis Findings

16 Results are summarized in Table 4-4 (for program area residents) and Table 4-5 (for residents of the  
17 broader Portland-Vancouver metropolitan area).

18 The program area analysis estimates that each demographic group would be able to reach an average  
19 of 18% to 20% more jobs during the morning peak and an average of about 3% more jobs during the  
20 midday (within a 45-minute drive). This equates to increases of about 170,000 to 187,000 jobs during  
21 the morning peak and 35,000 to 42,000 jobs during the midday.

22 **Finding:** *Estimated access improvements are similar between program area residents from equity*  
23 *priority communities and their demographic counterparts.*

24 At the regional level, average access improvements are 3% to 4% (30,000 to 38,000 jobs) during the  
25 morning peak and about 1% (12,000 to 14,000 jobs) during the midday.

26 **Finding:** *Estimated access improvements are similar when comparing equity priority communities and*  
27 *their demographic counterparts at the regional level.*

1 Table 4-4. Driving Access Improvements Analysis for Program Area Residents: Percentage Increase in  
 2 Jobs Access over No-Build Alternative – 45-minute Travel Time

Equity Priority Community	Morning Peak		Midday	
	Increase for Average <sup>1</sup> Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)
Black, Indigenous, and People of Color (BIPOC) <sup>2</sup>	19%	19%	3%	3%
People with Disabilities	19%	19%	3%	3%
Communities with Limited English Proficiency	19%	19%	3%	3%
Persons with Lower Incomes	19%	18%	3%	3%
Immigrants and Refugees	19%	19%	3%	3%
Young People (Under 25)	20%	19%	3%	3%
Older Adults (65+)	18%	19%	3%	3%
Houseless individuals and families	<i>Data not available to perform analysis</i>			

3 1 Average access is calculated based on residential distribution of each demographic group and weighted accordingly.  
 4 2 The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.  
 5 Sources: 2022 Metro, RTC, C-TRAN, TriMet, and IBR Analysis; 2020 Census (U.S. Census Bureau 2020); 2016-2020 American  
 6 Community Survey (U.S. Census Bureau n.d.).

7 Table 4-5. Driving Access Improvements Analysis for Portland-Vancouver Metropolitan Area Residents:  
 8 Percentage Increase in Jobs Access over No-Build Alternative – 45-minute Travel Time

Equity Priority Community	Morning Peak		Midday	
	Increase for Average <sup>1</sup> Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)
Black, Indigenous, and People of Color (BIPOC) <sup>2</sup>	4%	3%	1%	1%
People with Disabilities	4%	3%	1%	1%
Communities with Limited English Proficiency	3%	4%	1%	1%
Persons with Lower Incomes	3%	3%	1%	1%



Equity Priority Community	Morning Peak		Midday	
	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)	Increase for Average Member of Community (e.g., BIPOC)	Increase for Average Counterpart (e.g., White Non-Hispanic/Latino)
Immigrants and Refugees	3%	4%	1%	1%
Young People (Under 25)	4%	3%	1%	1%
Older Adults (65+)	4%	3%	1%	1%
Houseless individuals and families	<i>Data not available to perform analysis</i>			

1 1 Average access is calculated based on residential distribution of each demographic group and weighted accordingly.  
 2 2 The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.  
 3 Sources: Metro 2045 Regional Model; 2020 Census (U.S. Census Bureau 2020); 2016-2019 American Community Survey  
 4 (U.S. Census Bureau n.d.)

### 4.3.2 Community and EAG Input Regarding Highway and Driving Improvements

7 Opinions are mixed regarding the highway infrastructure elements of the Modified LPA. While many  
 8 engaged have urged the program to include additional lanes to solve congestion, others oppose  
 9 freeway expansion due to climate and livability concerns. Advocacy groups have raised concerns  
 10 about the induced demand they say will result from inclusion of any auxiliary lanes in the  
 11 Modified LPA.

12 The EAG did not express either support or opposition to the inclusion of one auxiliary lane in the  
 13 Modified LPA. Rather, the group expressed an interest in further understanding potential property and  
 14 environmental impacts associated with different design options. They also recommended the  
 15 program consider the disproportionate impact that congestion can have on people working long  
 16 hours or multiple shifts, workers who often must adhere to strict shift schedules, and parents—  
 17 particularly single parents.

### 4.3.3 Other Highway and Driving Equity Considerations

19 Numerous studies have found that BIPOC individuals, in particular African Americans, experience  
 20 disproportionately high rates of traffic-related injuries and fatalities (see American Journal of  
 21 Preventive Medicine 2022; REACH 2021; Governors Highway Safety Association 2021). While the extent  
 22 of this issue is not known with respect to the IBR program area specifically, the implications are the  
 23 same: as the program moves forward, design decisions should be made through a lens of improving  
 24 safety for BIPOC users of the transportation system.



## 1 5. DISTRIBUTION OF PROGRAM BURDENS

2 This chapter applies the Equity Framework to several other technical reports that describe in detail  
3 the temporary and long-term adverse impacts related to the construction and operation of the  
4 Modified LPA. These reports include:

- 5 • Acquisitions
- 6 • Air Quality
- 7 • Environmental Justice
- 8 • Neighborhoods and Populations

9 Construction is expected to last up to approximately 10 years; the precise phasing is not yet  
10 determined.

### 11 5.1 Short- and Long-Term Impacts

12 Table 5-1 lists where the percentage of equity priority communities is above average compared to the  
13 population of the Portland-Vancouver metropolitan area, as well as the property,  
14 construction-related, and air quality impacts identified across five geographic subareas: Oregon  
15 Mainland, Hayden Island, Downtown Vancouver, Upper Vancouver, and Ruby Junction.

16 All subareas have high concentrations of multiple equity priority communities. Further analysis and  
17 outreach is needed to determine the degree of these impacts and who specifically will bear related  
18 burdens, particularly with regard to houseless populations. IBR program staff will continue to conduct  
19 equity analysis, engage the community, and consult with the EAG to identify and address potential  
20 impacts.

1 Table 5-1. Overview of Impacts to Equity Priority Communities in the IBR Program Area

Subarea	Equity Priority Communities with Above Average Representation <sup>1</sup>	Property Acquisitions and Displacements	Construction-Related Impacts	Long-Term Air Quality
Oregon Mainland	<ul style="list-style-type: none"> <li>• BIPOC</li> <li>• Low-Income</li> <li>• People with Disabilities</li> <li>• Older Adults</li> </ul>	<ul style="list-style-type: none"> <li>• 4 single-family homes displaced (3 floating homes, 1 on land).</li> <li>• 6 retail/service businesses displaced.</li> <li>• 19 partial parcel acquisitions.</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary noise and air quality impacts and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5.</li> <li>• Temporary effects on visual quality and aesthetics.</li> <li>• Traffic detours and road closures.</li> <li>• Traffic spillovers in the Bridgeton, East Columbia, and Kenton neighborhoods.</li> </ul>	<p>Not expected to be adversely impacted as a result of the project.</p>
Hayden Island	<ul style="list-style-type: none"> <li>• People with Disabilities</li> <li>• Older Adults</li> </ul>	<ul style="list-style-type: none"> <li>• 32 single-family homes displaced (all floating homes).</li> <li>• 14 retail/service businesses displaced.</li> <li>• 20 partial parcel acquisitions.</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary noise and air quality impacts and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5.</li> <li>• Residents living in floating homes and the mobile home park may be particularly susceptible to air quality impacts due to their proximity to both the highway and transit alignments.</li> <li>• Temporary effects on visual quality and aesthetics.</li> <li>• Traffic detours and road closures.</li> </ul>	

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Subarea	Equity Priority Communities with Above Average Representation <sup>1</sup>	Property Acquisitions and Displacements	Construction-Related Impacts	Long-Term Air Quality
Downtown Vancouver	<ul style="list-style-type: none"> <li>• Low-Income</li> <li>• People with Disabilities</li> <li>• Older Adults</li> </ul>	<ul style="list-style-type: none"> <li>• 13 office/professional/healthcare businesses displaced.</li> <li>• 25 partial parcel acquisitions.</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary noise and air quality impacts and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5.</li> <li>• Temporary effects on visual quality and aesthetics</li> <li>• Traffic detours and road closures.</li> <li>• Temporary closures of east-west bicycle and pedestrian connections at SR 14, Evergreen Boulevard, and Mill Plain Boulevard.</li> </ul>	
Upper Vancouver	<ul style="list-style-type: none"> <li>• BIPOC</li> <li>• Limited English proficiency</li> <li>• Low-Income</li> <li>• Older Adults</li> <li>• Young People</li> </ul>	<ul style="list-style-type: none"> <li>• 7 single-family homes displaced.</li> <li>• 61 partial parcel acquisitions.</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary noise and air quality impacts and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5.</li> <li>• Temporary effects on visual quality and aesthetics.</li> <li>• Traffic detours and road closures.</li> <li>• Temporary closures of east-west bicycle and pedestrian connections at McLoughlin Boulevard, Fourth Plain Boulevard, 29th Street and 33rd Street.</li> <li>• Traffic spillovers in the Minnehaha, Rose Village, Central Park, Hudson’s Bay, and Columbia Way neighborhoods.</li> </ul>	

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Subarea	Equity Priority Communities with Above Average Representation <sup>1</sup>	Property Acquisitions and Displacements	Construction-Related Impacts	Long-Term Air Quality
Ruby Junction	<ul style="list-style-type: none"> <li>• BIPOC</li> <li>• Immigrants and Refugees</li> <li>• Low-Income</li> <li>• Young People</li> </ul>	<ul style="list-style-type: none"> <li>• 6 retail/service businesses displaced.</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary noise and air quality impacts and increases in truck traffic during construction, particularly in the areas immediately adjacent to I-5.</li> <li>• Temporary effects on visual quality and aesthetics.</li> <li>• Traffic detours and road closures.</li> </ul>	

1 1 Equity priority communities are listed where their percentage of the population is above average for the Portland-Vancouver metropolitan area in at least one census tract in that geographic area. The IBR program is also consulting with the tribes, but their enrollment numbers are not included in this table.

2

3 Sources: 2020 Census (U.S. Census Bureau 2020), 2016–2020 American Community Survey (U.S. Census Bureau 2022)

4 BIPOC = Black, Indigenous, and People of Color

1 **5.1.1 Houseless Populations**

2 Construction of the Modified LPA is likely to impact houseless individuals and families living in the  
 3 program area. Those living within existing or to-be-acquired right-of-way will be displaced and those  
 4 living nearby may experience construction externalities, such as noise, vibration, and pollution.

5 While Multnomah and Clackamas counties have Point-in-Time Count data that provides a census of  
 6 the houseless population every 2 years, the geographic areas for which these data are available are  
 7 too large to determine a count for the program area (Clark County’s figures are only available at the  
 8 county level and Multnomah County’s street count areas are shown in Figure 5-1). Table 5-2 shows  
 9 houseless population counts for these areas. Note that figures do not necessarily reflect the number  
 10 of people who are likely to be impacted by the program.

11 Given these data limitations, determining the degree of impact to this community will require  
 12 extensive in-person outreach in partnership with organizations providing related services. The IBR  
 13 program plans to conduct this level of outreach, although the timing for it has not yet been  
 14 determined.

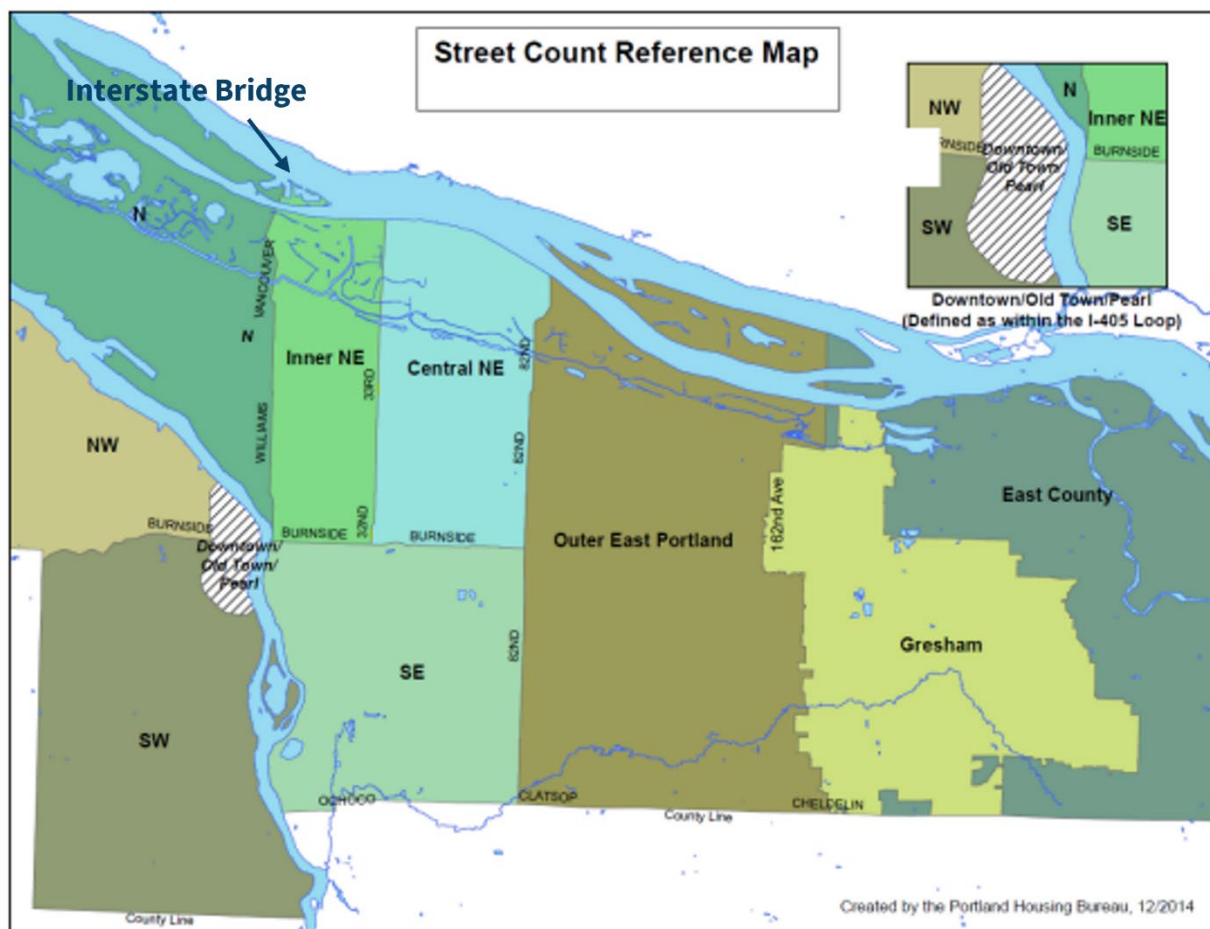
15 **Table 5-2. Houseless Populations for Areas Containing the IBR Program Area**

Geographic Area	Population
Inner Northeast Portland	123 households
North Portland	226 households
Clark County	625 persons

16 Sources: Point-in-Time Counts for Multnomah County  
 17 (Multnomah County Joint Office of Homeless Services 2022)  
 18 and Clark County (Clark County Council for the Homeless  
 19 2022)

20

1 Figure 5-1. Multnomah County Point-in-Time Geographic Areas

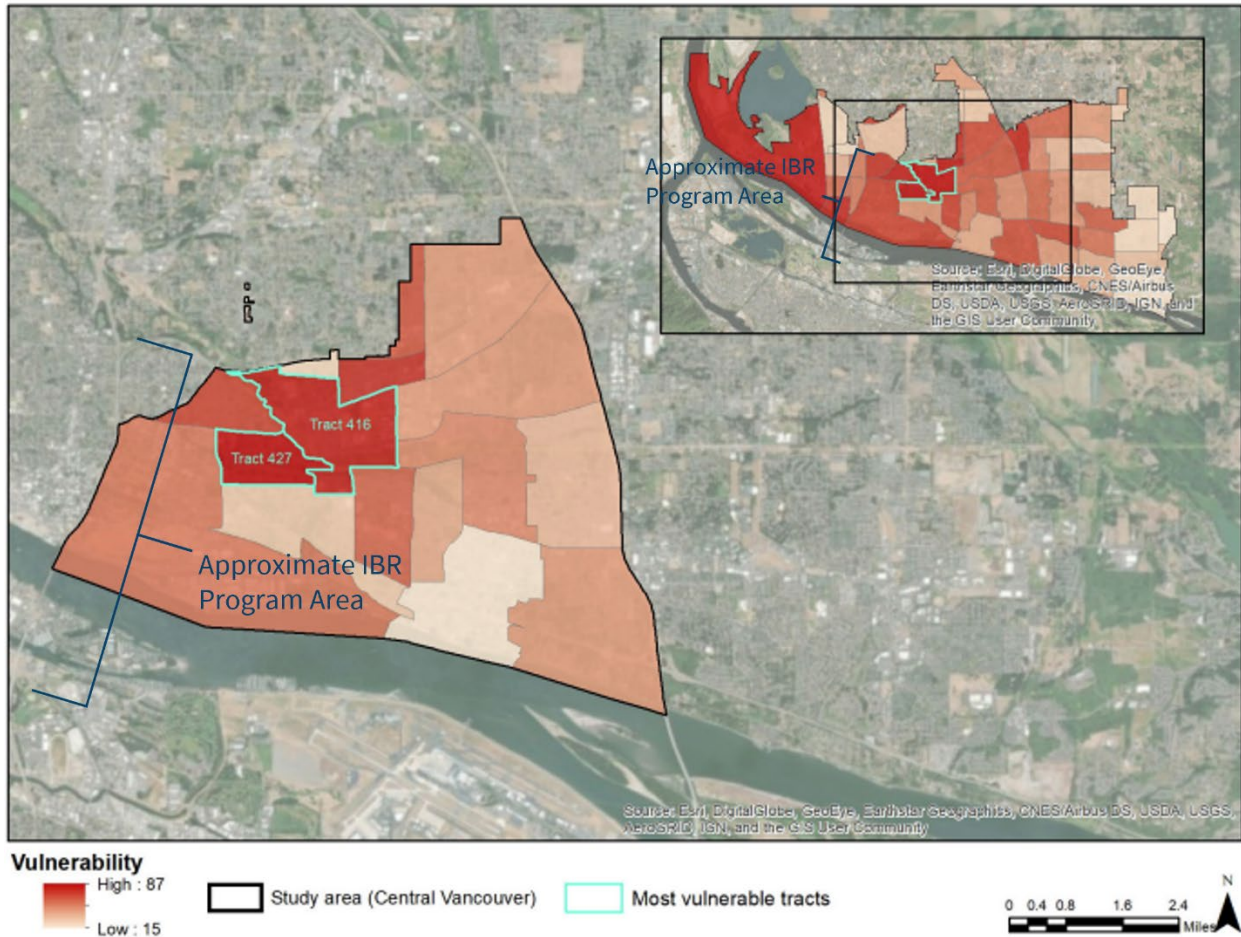


2  
3 Source: Portland Housing Bureau 2014.

4 **5.1.2 Long-Term Displacement Potential**

5 In addition to displacement due to property acquisitions, there is a risk of residential displacement in  
6 the longer term as program investments improve neighborhood amenities and livability. An analysis  
7 conducted in 2019 for the City of Vancouver as part of an anti-displacement plan identified downtown  
8 Vancouver, the Meadow Homes neighborhood, and the Maplewood neighborhood as particularly  
9 vulnerable to neighborhood change and residential displacement (see Figure 6) (Reside Vancouver  
10 2019). Downtown Vancouver is home to high concentrations of BIPOC residents, low-income  
11 households, people with disabilities, and seniors. While Meadow Homes and Maplewood are not in  
12 the IBR program area, they are a short distance east, are also home to a large concentration of equity  
13 priority communities, and may be affected by program improvements.

- 1 Figure 5-2. Reside Vancouver Anti-Displacement Plan Vulnerability Assessment Map Showing
- 2 IBR Program Area



Map: Vulnerability Assessment - Spatial Representation of Central Vancouver  
Source: American Community Survey, 5-year estimates, 2017

Inset: City of Vancouver

3

## 4 5.2 Tolling

5 The Modified LPA tolling program would place a burden on low-income travelers, who are  
6 disproportionately BIPOC. The Environmental Justice Technical Report provides a summary of issues  
7 and research related to tolling equity, including potential mitigation measures. In addition to those  
8 mentioned in that report, ODOT and WSDOT are evaluating the implementation of a low-income toll  
9 program wherein qualified drivers would receive some level of financial relief. The details of this  
10 program—such as income thresholds, subsidy form, and amounts—would be determined in the  
11 future.

## 1 6. SYNOPSIS AND NEXT STEPS

2 The Modified LPA would benefit equity priority communities in terms of increased mobility and  
3 accessibility, particularly due to the HCT and active transportation elements. However, the  
4 distribution of benefits is not necessarily equitable: the HCT analysis identified some disparities in  
5 terms of increased access between equity priority communities living in the program area and their  
6 counterparts. Planned C-TRAN service improvements can help reduce these disparities by creating  
7 convenient bus connections from the Evergreen HCT terminus to Clark College and surrounding  
8 racially diverse neighborhoods.

9 Study area communities would experience some adverse impacts related to property acquisitions and  
10 construction. The IBR program team is conducting additional research to determine the extent and  
11 degree of these impacts in relation to equity priority communities; this research will inform potential  
12 strategies to avoid, minimize, and/or mitigate those impacts. In addition to technical analysis, this  
13 research will include continued engagement with the program’s advisory groups, partner agencies,  
14 and the community.

15 Additionally, the program is in the early stages of developing a Community Benefits Agreement. While  
16 the specific components of the Community Benefits Agreement are not determined at this time, its  
17 development will be collaborative and guided by the *IBR Program Equity Framework*. The agreement  
18 is likely to include a variety of investments and strategies to ensure workforce and contracting equity,  
19 enhance the local community, and offset burdens associated with the construction and operation of  
20 the Modified LPA.



## 7. REFERENCES

- 1  
2 American Journal of Preventive Medicine. 2022. Disparities in Activity and Traffic Fatalities by  
3 Race/Ethnicity. Available at <[https://www.ajpmonline.org/article/S0749-3797\(22\)00155-](https://www.ajpmonline.org/article/S0749-3797(22)00155-6/fulltext)  
4 [6/fulltext](https://www.ajpmonline.org/article/S0749-3797(22)00155-6/fulltext)>. Accessed March 23, 2023.
- 5 City of Portland. Adopted December 2018. City of Portland 2035 Comprehensive Plan. Available at  
6 <[https://www.portland.gov/bps/planning/comp-plan/2035-comprehensive-plan-and-](https://www.portland.gov/bps/planning/comp-plan/2035-comprehensive-plan-and-supporting-documents)  
7 [supporting-documents](https://www.portland.gov/bps/planning/comp-plan/2035-comprehensive-plan-and-supporting-documents)>. Accessed March 25, 2023.
- 8 Clark County Council for the Homeless. 2022. 2022 Clark County Point In Time Count. Available at  
9 <<https://clark.wa.gov/sites/default/files/2022-07/2022%20PIT%20Count%20PowerPoint.pdf>>.  
10 Accessed November 16, 2022.
- 11 Governors Highway Safety Association. 2021. An Analysis of Traffic Fatalities by Race and Ethnicity.  
12 Available at <[https://www.ghsa.org/sites/default/files/2021-](https://www.ghsa.org/sites/default/files/2021-06/An%20Analysis%20of%20Traffic%20Fatalities%20by%20Race%20and%20Ethnicity.pdf)  
13 [06/An%20Analysis%20of%20Traffic%20Fatalities%20by%20Race%20and%20Ethnicity.pdf](https://www.ghsa.org/sites/default/files/2021-06/An%20Analysis%20of%20Traffic%20Fatalities%20by%20Race%20and%20Ethnicity.pdf)>.  
14 Accessed March 25, 2023.
- 15 IBR (Interstate Bridge Replacement Program). 2021. Community Engagement Report. Available at  
16 <[https://www.interstatebridge.org/media/ce50lqsq/designoptions\\_communityengagementre](https://www.interstatebridge.org/media/ce50lqsq/designoptions_communityengagementreport-final_remediated.pdf)  
17 [port-final\\_remediated.pdf](https://www.interstatebridge.org/media/ce50lqsq/designoptions_communityengagementreport-final_remediated.pdf)>. Accessed January 20, 2023.
- 18 Metro. Not Dated. RLIS Live. Available at <[https://www.oregonmetro.gov/tools-partners/data-](https://www.oregonmetro.gov/tools-partners/data-resource-center/rlis-live)  
19 [resource-center/rlis-live](https://www.oregonmetro.gov/tools-partners/data-resource-center/rlis-live)>. Accessed November 16, 2022.
- 20 Multnomah County Joint Office of Homeless Services. 2022. 2019 Point-in-Time: Count of People  
21 Experiencing HUD Homelessness in Portland/Gresham/Multnomah County, Oregon on  
22 January 26, 2022. Available at <[https://multco-web7-psh-files-usw2.s3-us-west-](https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/2022%20Point%20In%20Time%20Report%20-%20Full.pdf)  
23 [2.amazonaws.com/s3fs-public/2022%20Point%20In%20Time%20Report%20-%20Full.pdf](https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/2022%20Point%20In%20Time%20Report%20-%20Full.pdf)>.  
24 Accessed March 17, 2023.
- 25 ODOT. 2022. Strategic Action Plan. Available at <[https://www.oregon.gov/odot/SAPDocs/Strategic-](https://www.oregon.gov/odot/SAPDocs/Strategic-Action-Plan.pdf)  
26 [Action-Plan.pdf](https://www.oregon.gov/odot/SAPDocs/Strategic-Action-Plan.pdf)>. Accessed March 25, 2023.
- 27 REACH. 2021. Multnomah County REACH Transportation Crash and Safety Report. Available at  
28 <[https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-](https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/20210224_Final-REACH-Transportation-Safety.pdf)  
29 [public/20210224\\_Final-REACH-Transportation-Safety.pdf](https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/20210224_Final-REACH-Transportation-Safety.pdf)> March 23, 2023.
- 30 TransitCenter. Not Dated. TransitCenter Equity Dashboard. Available at  
31 <<https://dashboard.transitcenter.org/>>. Accessed November 16, 2022.
- 32 U.S. Census Bureau. 2020. 2020 Census. Available at <[https://www.census.gov/programs-](https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020-census-main.html)  
33 [surveys/decennial-census/decade/2020/2020-census-main.html](https://www.census.gov/programs-surveys/decennial-census/decade/2020/2020-census-main.html)>. Accessed November 16,  
34 2022.

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- 1 U.S. Census Bureau. 2022. American Community Survey. Available at  
2 <<https://www.census.gov/programs-surveys/acs>>. Accessed November 16, 2022.
- 3 U.S. Census Bureau. 2022. “Census Bureau Releases Estimates of Undercount and Overcount in the  
4 2020 Census.” Available at < [https://www.census.gov/newsroom/press-releases/2022/2020-](https://www.census.gov/newsroom/press-releases/2022/2020-census-estimates-of-undercount-and-overcount.html)  
5 [census-estimates-of-undercount-and-overcount.html](https://www.census.gov/newsroom/press-releases/2022/2020-census-estimates-of-undercount-and-overcount.html)>. Accessed March 25, 2023.
- 6 Vancouver, City of. 2011. Vancouver Comprehensive Plan. Available at  
7 <[https://www.cityofvancouver.us/sites/default/files/fileattachments/community\\_and\\_econo](https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/874/vancouvercomprehensiveplan2011-2030.pdf)  
8 [mic\\_development/page/874/vancouvercomprehensiveplan2011-2030.pdf](https://www.cityofvancouver.us/sites/default/files/fileattachments/community_and_economic_development/page/874/vancouvercomprehensiveplan2011-2030.pdf)>. Accessed  
9 March 25, 2023.
- 10 WSDOT. 2022. Diversity, Equity, & Inclusion Plan. Available at  
11 <<https://wsdot.wa.gov/sites/default/files/2022-09/Diversity-Equity-Inclusion-Plan-2022.pdf>>.  
12 Accessed March 25, 2023.