

3.5 Neighborhoods and Environmental Justice

Transportation infrastructure can influence neighborhoods and communities. Highways and transit lines connect people with their homes and daily destinations, while local streets and paths provide circulation for motorists, bicyclists, and pedestrians within their neighborhoods. Modifying or building new transportation infrastructure can improve these connections but can also change the character of a community. For example, a new road or transit station may improve commutes for nearby residents or attract investment in the community, but could also displace an important neighborhood resource. Likewise, highway improvements may reduce congestion and improve air quality, but could increase noise for residents adjacent to the highway.

Careful design of new transportation infrastructure can help increase benefits to surrounding communities and reduce unintended negative impacts. It is especially important to study issues that could affect Environmental Justice (EJ) populations in order to avoid disproportionate adverse impacts to low-income and minority populations. Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994) reinforces the considerations embodied in National Environmental Policy Act of 1969 and Title VI by requiring each federal agency to analyze the environmental impacts of federal actions, including impacts on minority populations and low-income populations.

This section evaluates the CRC project's benefits and effects to neighborhoods and populations, including EJ populations. The following discussion is organized by topic and presented with the neighborhoods analysis first, followed by the EJ analysis. A comparison of impacts from the LPA and the DEIS alternatives is summarized in Exhibit 3.5-15. A more detailed description of the impacts of the DEIS alternatives on neighborhoods and environmental justice populations is in the DEIS starting on page 3-149.

The information in this section is based on the CRC Neighborhoods and Population Technical Report and the CRC Environmental Justice Technical Report, included as electronic appendices to this FEIS.

3.5.1 New Information Developed Since the Draft EIS

Since publication of the DEIS, the project team has refined the project area definition based on more detailed designs, and therefore, a better understanding of where direct long-term and temporary impacts would occur. The East Columbia neighborhood in Portland was added to the neighborhoods and EJ analysis for the FEIS because, since publication of the DEIS, the City of Portland expanded this neighborhood boundary westward. This neighborhood now includes the area formerly known as Multnomah County Unclaimed Number One, which is within the project

TERMS & DEFINITIONS

Environmental Justice Populations

“Environmental justice population” refers to any minority or low-income population. Minority populations include individuals listed in the census as considering themselves to be nonwhite, or to be Hispanic or Latino regardless of race. Low-income populations are defined as households with incomes below the federal poverty level.

Demographic data

A portion of the data used in this report is from the 2000 U.S. Census. (Fully updated information from the 2010 U.S. Census will not be available until late 2011 or 2012.) In addition to reviewing the limited data available from the 2010 U.S. Census, the CRC team also used supplemental data, public meetings, and outreach efforts to communities potentially affected by this project. This helped the team gain a better understanding of the character of each neighborhood and which concerns are most important to these communities.

Populations

Within this FEIS, “populations” refers to groups of people of a particular race, ethnicity, income level, etc. The term is used to refer to large groups (such as all those under the federal poverty threshold) or to smaller groups. The analyses reported on herein address large populations and very small populations as they may exist within the study area.

area. Additional analysis was also conducted on the neighborhoods surrounding the Ruby Junction Light Rail Maintenance Facility and the proposed construction casting yards and major staging areas.

Several demographic attributes were explored in the DEIS, including disability rates, the minority and low-income status of the population, and the percentage of the population over age 65. This FEIS differs slightly in that it examines all age ranges of the population, including children, and not just populations age 65 and older.

Since the publication of the DEIS, and prior to the publication of this FEIS, a limited amount of 2010 Census data became available. 2010 Census data was not available at the Block Group level at the time of preparing the FEIS, and therefore a detailed comparison between 2000 and 2010 data was not possible. The only relevant 2010 Census data available at the Tract level was percentage of minority. These data were compared to the 2000 Census data for percentage minority to provide

a rough indication of how the population has changed. However, the census tract boundaries are not contiguous with the neighborhood boundaries. Therefore a direct comparison is not possible.

Since publication of the DEIS, several new surveys and analyses were developed to better understand populations living and working in the study area. These include residential and business surveys, and analyses of travel conditions and travelshed characteristics. Detailed information on the findings of these surveys is provided under Additional Data Gathering in Section 3.5.2, Existing Conditions.

With the selection of the LPA, alternatives with high-capacity transit north of Fourth Plain Boulevard were dropped from further analysis. The LPA would not directly affect the Northwest and Carter Park neighborhoods in Vancouver, as they are not expected to experience direct long-term or temporary impacts due to their distance from the LPA footprint. Therefore, although these two neighborhoods were discussed in the DEIS, they are not discussed in this FEIS. As stated above, new information was included to supplement the analyses of neighborhoods and EJ populations for the FEIS. New information and analyses that are specific to EJ populations are included with the EJ findings under the “Environmental Justice” headings throughout this section.

In addition to new information developed since the DEIS, the FEIS includes refinements in design, impacts and mitigation measures. Where new information or design changes could potentially create new significant environmental impacts not previously evaluated in the DEIS, or could be meaningful to the decision-making process, this information and these changes were applied to all alternatives, as appropriate. However, most of

the new information did not warrant updating analysis of the non-preferred alternatives because it would not meaningfully change the impacts, would not result in new significant impacts, and would not change other factors that led to the choice of the LPA. Therefore, most of the refinements were applied only to the LPA. As allowed under Section 6002 of SAFETEA-LU [23 USC 139(f)(4)(D)], to facilitate development of mitigation measures and compliance with other environmental laws, the project has developed the LPA to a higher level of detail than the other alternatives. This detail has allowed the project to develop more specific mitigation measures and to facilitate compliance with other environmental laws and regulations, such as Section 4(f) of the DOT Act, Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, and Section 404 of the Clean Water Act. FTA and FHWA prepared NEPA re-evaluations and a documented categorical exclusion (DCE) to analyze changes in the project and project impacts that have occurred since the DEIS. Both agencies concluded from these evaluations that these changes and new information would not result in any new significant environmental impacts that were not previously considered in the DEIS. These changes in impacts are described in the re-evaluations and DCE included in Appendix O of this FEIS. Relevant refinements in information, design, impacts and mitigation are described in the following text.

3.5.2 Existing Conditions

The CRC main project area runs along a 5-mile segment of I-5 between the West Minnehaha neighborhood in Vancouver, Washington, and the Kenton and East Columbia neighborhoods in Portland, Oregon. In total, 14 neighborhoods within the CRC project area (Exhibit 3.5-1) and one neighborhood in Gresham would be directly impacted by construction of the LPA. The Rockwood Neighborhood in Gresham would experience impacts from the expansion of the Ruby Junction Maintenance Facility. Furthermore, during construction, temporary easements would be required directly adjacent to infrastructure improvements, and staging area and casting yards could be located upstream and/or downstream of the I-5 bridge structures.

Exhibit 3.5-1

Neighborhoods in the Project Study Area



Dimensions are approximate.

- Main Project Area
- Main Project Area Neighborhoods
- Indirect Effects Study Area Neighborhoods

Existing Conditions for Neighborhoods

The following discussions summarize the existing conditions for neighborhoods in the main project area. *Please note* that for purposes of federal reporting, age, automobile ownership, and disability status data are presented in the neighborhoods discussions, while low-income and minority status and population data are presented in the EJ discussions.

NEIGHBORHOOD DEMOGRAPHICS

The project team, in cooperation with participating agencies, identified a large demographic study area where indirect impacts, such as a change in development pattern or a rise in property values, could occur. This area includes the vicinity from the I-5/I-205 junction to the north and I-84 to the south, and extending 1 mile to the east and the west of the I-5 corridor. Demographic data from the 2000 U.S. Census reported for this area are used to summarize existing conditions of neighborhoods. The 2010 Census and American Community Survey data are used to update the analysis completed in 2008.

Each neighborhood has a unique character formed by the residents, community resources, businesses, and landmarks exclusive to its community. Exhibits 3.5-2 and 3.5-3 display the disability, age, and automobile demographic characteristics of the project area by city/county and by neighborhood, respectively. These data highlight the diversity among these neighborhoods. The following paragraphs are based on data from the 2000 U.S. Census and describe this diversity in terms of several important neighborhood characteristics. Only the full data set provided by the 2000 Census allows calculations by neighborhood. In all places where data is specific to a single neighborhood, those data are from the 2000 Census. Where possible, more recent data are provided to show the change since 2000.

Neighborhood impacts include impacts to social cohesion, neighborhood connectivity, and other issues which are not specific to any particular income, race or other group. It has been FHWA's and FTA's long-standing policy to actively ensure nondiscrimination under Title VI of the Civil Rights Act. Title VI-related impacts include those impacts which are specific to a protected population under the 1964 Civil Rights Act. Under Title VI and related statutes, each federal agency is required to ensure that no person is excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color or national origin. Some of these populations are not covered by EO 12898, which specifically addresses disproportionately high and adverse effects to minorities and low-income populations.

People with disabilities. Overall, the CRC project area has a higher percentage of people with disabilities than the Portland-Vancouver metropolitan area. The disabled population rate varies widely between neighborhoods. The Esther Short neighborhood reports a 45 percent disability rate, likely due to the senior housing located in the area. All other neighborhood disability rates fall between 15 and 30 percent. The

Washington State School for the Blind and School for the Deaf are both located near the project area.

People over age 65 and children. The Columbia Way neighborhood has by far the largest rate of people over 65, with 35 percent. In all other project area neighborhoods, the rate of people over age 65 is between 6 and 18 percent, which is lower than the Portland-Vancouver metropolitan area average. The Hayden Island neighborhood has the lowest percentage of children (age 18 or younger), with 8 percent. The Rose Village neighborhood has the highest percentage of children, with 30 percent.

Car ownership. The project area neighborhoods vary widely in their reliance on auto transportation. Thirty-four percent of households in the Esther Short neighborhood report not owning a car. The Hough and Central Park neighborhoods also show relatively low rates of car ownership – 25 percent of the residents in these neighborhoods do not own a car. The rate of households without a car varies between 3 and 18 percent in all other neighborhoods.

Exhibit 3.5-2

City and County Demographics

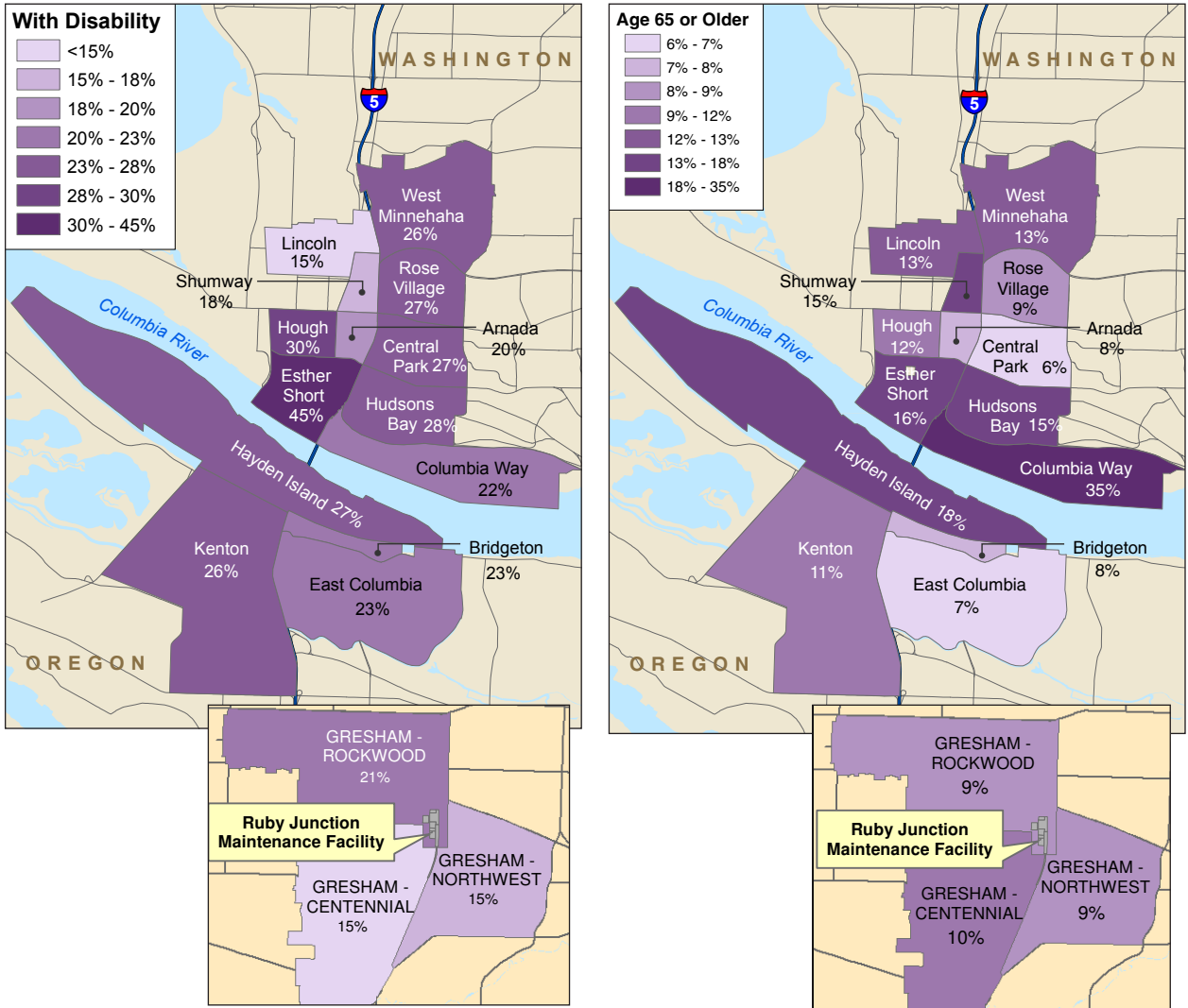
Area	Percent on Disability ^a	Percent 65 Years of Age or Older 2000 Census ^b	Percent 65 Years of Age or Older 2010 Census	Percent of Housing Units with No Vehicle 2000 Census ^c	Percent of Housing Units with No Vehicle 2010 Census
Multnomah County	19	11	11	13	13
Portland	19	12	10	14	14
Clark County	18	10	11	6	4
Vancouver	19	11	12	8	7

a Updated data not yet available from 2005-2009 American Community Survey or 2010 Census.

b Sources: U.S. Census Bureau, 2000. Summary Tape File 3, Tables H85, P56, P88, P42, P8, H16, H7, and H44.

c Sources: Census 2010 Redistricting Data (PL 94-171) Summary File, American Community Survey 2005-2009 Table B25044.

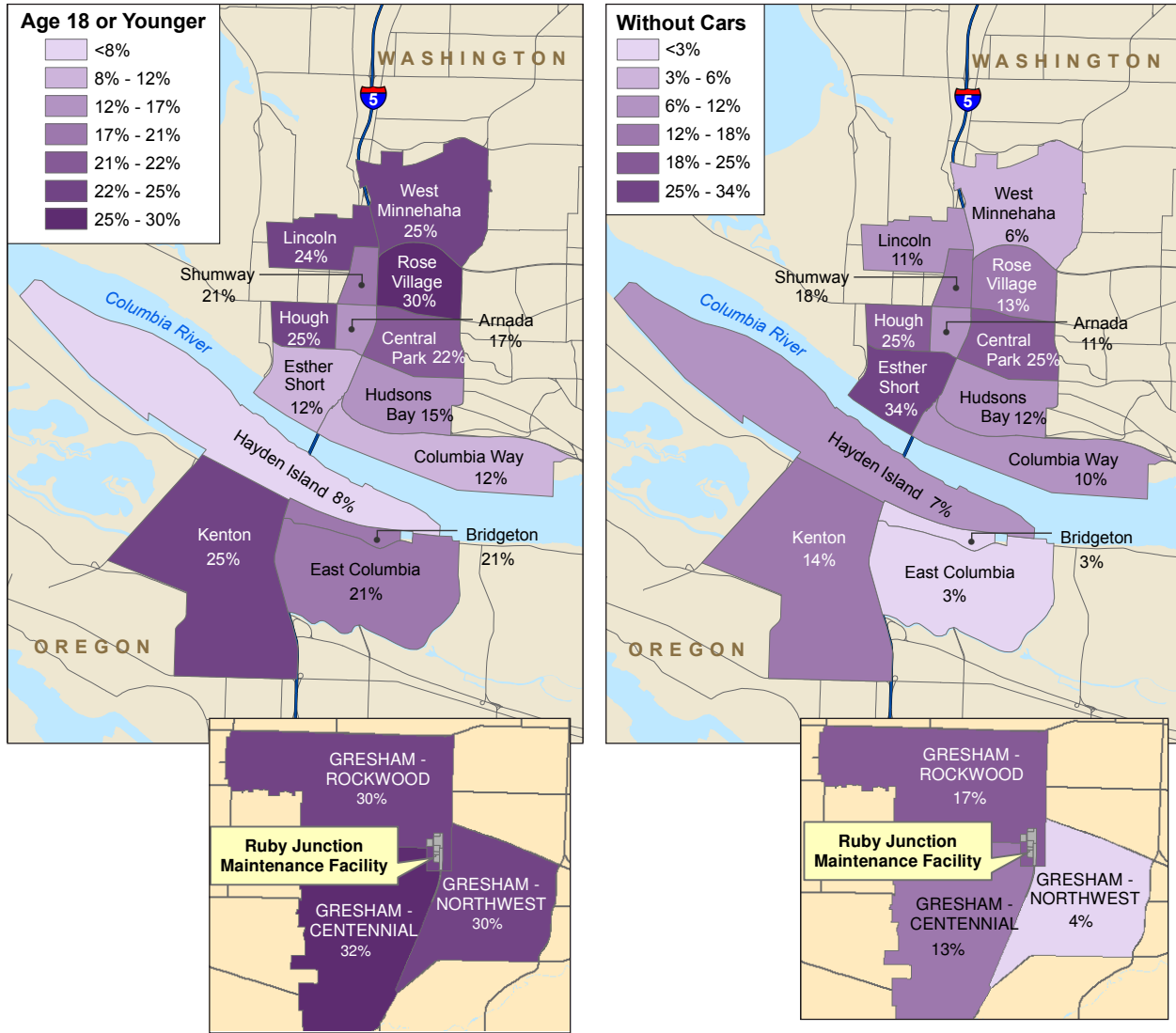
Exhibit 3.5-3
Census Demographics – Neighborhoods (1 of 2)



Source: U.S. Census Bureau, 2000.

Exhibit 3.5-3

Census Demographics – Neighborhoods (2 of 2)



Source: U.S. Census Bureau, 2000.

NEIGHBORHOOD PLANS

Neighborhoods often define themselves and strengthen their identities through the development of neighborhood plans. These plans are formally adopted by the City-supported neighborhood associations. The Cities of Vancouver and Portland also formally adopt these neighborhood plans, as part of each City's Comprehensive Plan.

All neighborhoods in the study area have an adopted plan, except for Rose Village, Columbia Way, and East Columbia. In early 2009, the City of Portland Bureau of Planning and Sustainability published the Hayden Island Plan. The Hayden Island Plan includes goals, objectives, proposed comprehensive plan and zoning changes, and an implementation strategy.

While some plan goals may be unique to a certain neighborhood, other goals are common to many communities. Following are goals from neighborhood plans in the project area that are relevant to the potential benefits and impacts of the CRC project:

- Minimize the adverse impacts of increased density; support density adjacent to transit.
- Preserve existing housing stock; preserve historic character.
- Reduce transportation-related noises and odor; mitigate I-5 noise.
- Reduce speeding within the neighborhood.
- Enhance and maintain on-street parking, including bike parking.
- Maintain adequate bus service; support development of light rail.
- Improve bicycle and pedestrian facilities and connections.
- Protect the Columbia River from contaminants.

COMMUNITY RESOURCES

An inventory of Washington and Oregon community resources within each neighborhood was collected by the project team (Exhibits 3.5-4, 3.5-5, and 3.5-6). The project team met with members of each community who identified the resources that were important to them and the locations of these resources on a map. Project staff identified community resources within and near the study area that fit the following commonly accepted neighborhood resource categories: parks, schools, locally and nationally recognized historic structures, gathering areas, and public services.

Project staff created two draft maps based on these resources, one for Oregon and one for Washington. In the fall of 2006, the CRC Community and Environmental Justice Group (CEJG) reviewed the draft neighborhood resource maps and identified additional resources. These maps were further reviewed and modified at neighborhood meetings and open houses in 2007 and during the public comment period in the spring of 2008. Please refer to Section 3.5.3, Coordination, below for details on CEJG.

Exhibit 3.5-4

Community Resources, Clark County, Washington

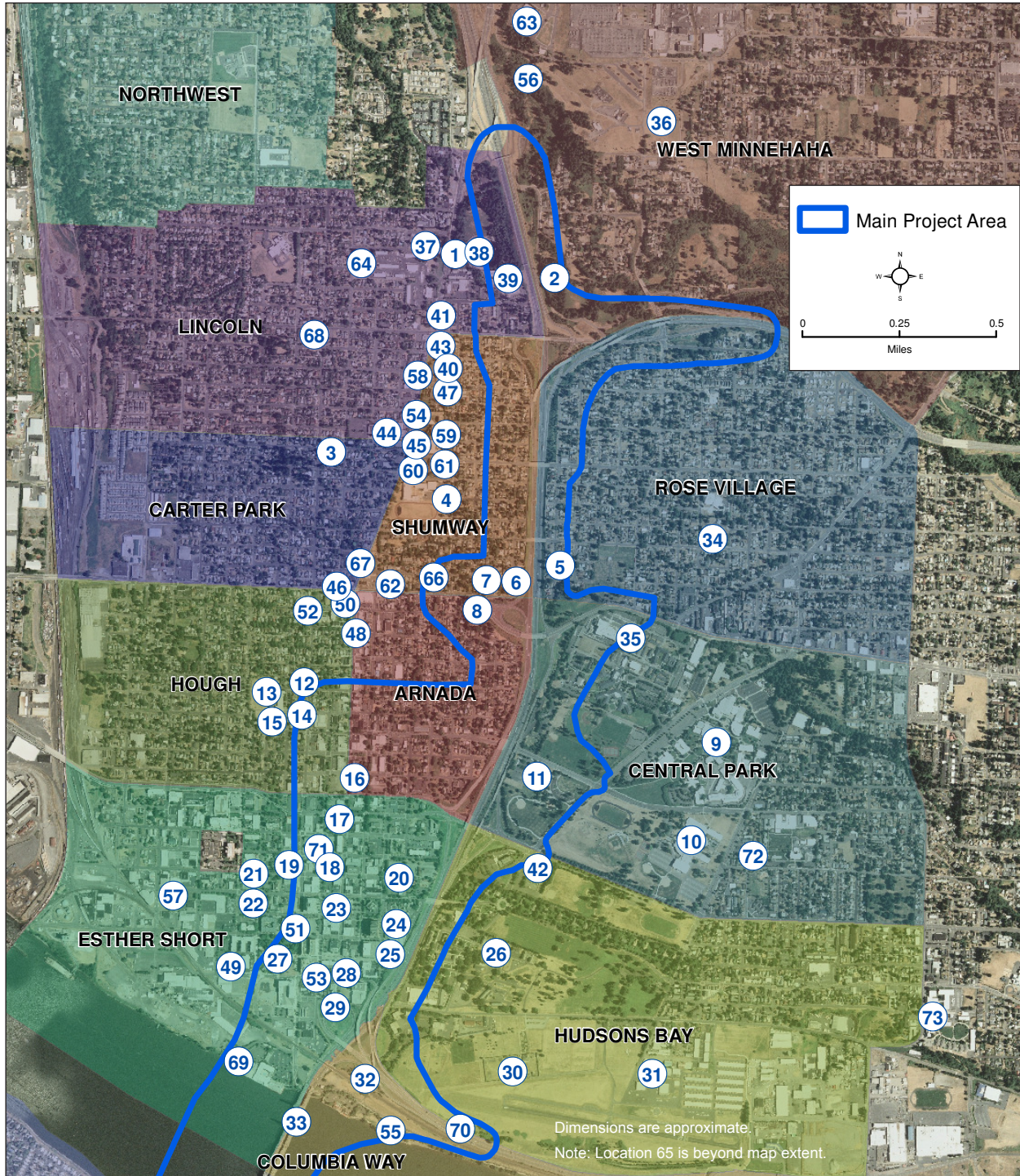


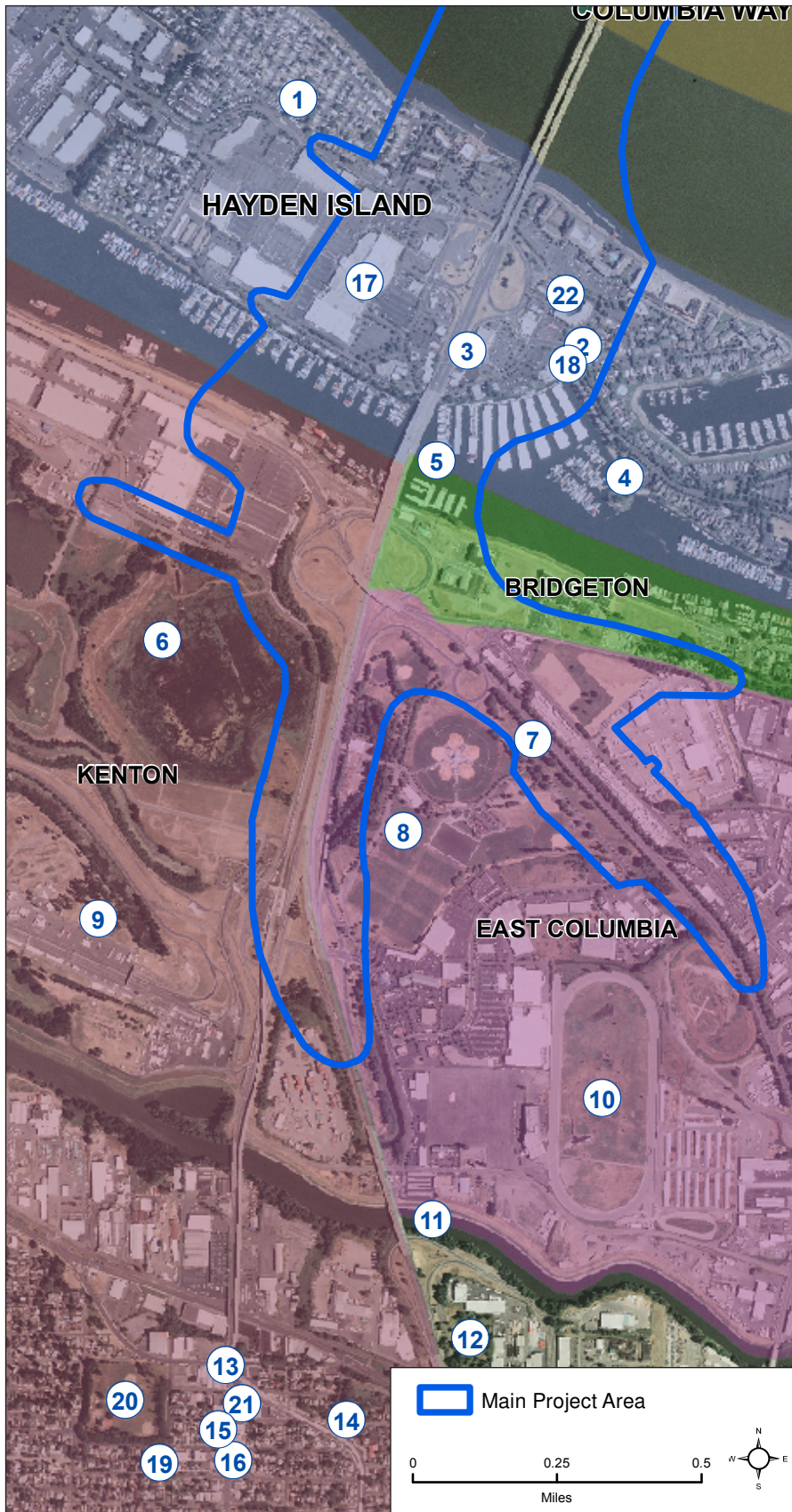
Exhibit 3.5-5

Community Resources, Clark County, Washington

1 Covington House 4201 Main Street <i>historical</i>	4 Shumway Park 3014 F Street <i>park</i>	7 Swan House 714 E. 26th Street <i>historical</i>
2 Leverich Community Park 39th and M Street <i>park</i>	5 Leach Park 28th and K Street <i>park</i>	8 Arnada Neighborhood Park W. 25th and G Street <i>park</i>
3 Carter Park 33rd Street <i>park</i>	6 2613 "H" Street House 2613 H Street <i>historical</i>	9 Clark College 1800 E. McLoughlin Boulevard <i>educational</i>

10 Hudson's Bay High School 1206 E. Reserve Street <i>educational</i>	32 Old Apple Tree Park East of I-5 <i>historical/park</i>	54 Pythian Home 3409 Main Street <i>senior/low-income</i>
11 Marshall and Luepke Centers 1009 E. McLoughlin Boulevard <i>community center</i>	33 I-5 Bridges <i>historical</i>	55 Waterfront Park 115 Columbia Way <i>senior/low-income</i>
12 Hough Elementary School 1900 Daniels Street <i>educational</i>	34 Washington Elementary School 2908 S Street <i>educational</i>	56 Discovery & Ellen Davis Trails Highway 99 and I-5 <i>park</i>
13 Steffan House 2000 Columbia Street <i>historical</i>	35 VA Medical Center 1601 E. Fourth Plain Boulevard <i>healthcare</i>	57 Vancouver Fire Department, #82 900 W. Evergreen Boulevard <i>public service</i>
14 Charles Zimmerman House 1812 Columbia Street <i>historical</i>	36 Dog Park Between 15th and 18th <i>park</i>	58 Vancouver Fire Department, #86 400 E. 37th Street <i>public service</i>
15 Hough Aquatic Center 1801 Esther Street <i>recreational</i>	37 First Presbyterian Church 4300 Main Street <i>religious institution</i>	59 Vancouver Health and Rehabilitation Center 400 E. 33rd Street <i>public service</i>
16 Carnegie Library 1511 Main Street <i>educational</i>	38 Kiggins Sports Fields/Stadium 800 E. 40th Street <i>recreational</i>	60 First United Methodist Church of Vancouver 401 E. 33rd Street <i>religious institution</i>
17 Hidden, Lowell M. House 100 W. 11th Street <i>historical</i>	39 Discovery Middle School 801 E. 40th Street <i>educational</i>	61 Evergreen Habitat for Humanity 521 E. 33rd Street <i>public service</i>
18 Vancouver Telephone Exchange 112 W. 11th Street <i>historical</i>	40 Safeway 3707 Main Street <i>shopping</i>	62 First Church of Christ Scientist 204 E. Fourth Plain Boulevard <i>religious institution</i>
19 Chumasero-Smith House 310 W. 11th Street <i>historical</i>	41 Community Wellness Center 317 E. 39th Street <i>healthcare</i>	63 Bonneville Power, Ross Complex 5411 NE Highway 99 <i>public services</i>
20 House of Providence (Academy) 400 E Evergreen <i>historical</i>	42 Fort Vancouver Regional Library (former) 1007 E. Mill Plain <i>educational</i>	64 City of Vancouver Water Tower 42nd and NW Washington <i>historical</i>
21 Langsdorf House 1010 Esther Street <i>historical</i>	43 Home Ownership Center 3801-A Main Street <i>public service</i>	65 WSDOT Service Center 11018 NE 51st Circle <i>public service</i>
22 Lloyd DuBois House 902 Esther Street <i>historical</i>	44 SW Washington Medical Center 3400 Main Street <i>healthcare</i>	66 Saint Luke's Episcopal Church 426 E. 4th Plain Boulevard <i>religious institution</i>
23 Elks Building 916 Main Street <i>historical</i>	45 Arts & Academics School of Vancouver 3101 Main Street <i>educational</i>	67 First Baptist Church 108 W. 27th Street <i>religious institution</i>
24 Vancouver Community Library <i>educational</i>	46 Vancouver Housing Authority 2500 Main Street <i>public service</i>	68 Trinity Lutheran Church 309 W. 39th Street <i>religious institution</i>
25 Regal Cinema 801 C Street <i>recreational</i>	47 YWCA 3609 Main Street <i>community center</i>	69 Amphitheater at Vancouver Landing 100 Columbia Street <i>park</i>
26 National Historic Reserve East Reserve Street to I-5 <i>historical</i>	48 Uptown Village Main Street <i>shopping</i>	70 Land Bridge <i>park</i>
27 Slocum House/Esther Short Park 605 Esther Street <i>historical/park</i>	49 Farmers Market 555 W. 8th Street <i>shopping</i>	71 St. James Catholic Church 218 W. 12th Street <i>religious institution</i>
28 Heritage Building 601 Main Street <i>historical</i>	50 Starbucks 2420 Main Street <i>community/recreation</i>	72 State School for the Blind 2214 E. 13th Street <i>educational</i>
29 Evergreen Hotel 500 Main Street <i>historical</i>	51 Starbucks 304 W. 8th Street <i>community/recreation</i>	73 State School for the Deaf 611 Grand Boulevard <i>educational</i>
30 Fort Vancouver 612 E. Reserve Street <i>historical</i>	52 Columbia House 33415 NW Lancaster Road <i>community/recreation</i>	
31 Pearson Field 1115 E. 5th Street <i>historical</i>	53 Smith Tower 515 Washington Street <i>senior/low-income</i>	

Exhibit 3.5-6
Community Resources, Multnomah County, Oregon



Dimensions are approximate.

- 1 Private Community Center**
N. Arbor Avenue and Alder Street
recreational
- 2 Former Hayden Island Yacht Club**
120050 N. Jantzen Drive
community center
- 3 Safeway**
11919 N. Jantzen Drive
shopping
- 4 Lotus Isle Park**
N. Tomahawk and Island Drive
park
- 5 North Portland Harbor & Industrial Marinas**
natural resource/housing
- 6 Vanport Wetlands**
natural resource
- 7 Off leash area**

park
- 8 East Delta Park**
N. Martin Luther King Jr. Boulevard and Denver Avenue
park
- 9 Portland International Raceway**
1940 N. Victory Boulevard
recreational
- 10 Portland Meadows**
1001 N. Schmeer Road
recreational
- 11 Columbia Slough**

recreational
- 12 Columbia Cemetery**
1151 N. Columbia Boulevard
historical
- 13 Paul Bunyan Statue**
N. Denver Avenue and Interstate Avenue
historical
- 14 Christmas Lights House (NRHP)**
1441 N. McClellan Street
historical
- 15 Kenton Commercial Historic District**
Denver Avenue
historical/shopping
- 16 Kenton Community Policing Office**
8134 N. Denver Avenue
public service
- 17 Jantzen Beach SuperCenter and Commercial Area**
shopping
- 18 Portland Fire and Rescue, Station #17**
848 N. Tomahawk Drive
public service
- 19 Historic Kenton Firehouse**
8105 N. Brandon Avenue
community center
- 20 Kenton Park**
8417 N. Brandon Avenue
park
- 21 Wells Fargo Bank**
8324 N. Denver Avenue
financial services
- 22 Wells Fargo Bank**
12240 N. Jantzen Drive
financial services

Existing Conditions for Environmental Justice

MINORITY POPULATIONS

According to the 2010 U.S. Census, 21 percent of the population in the study area is minority (Exhibit 3.5-7). Percent minority was calculated by adding all minority populations (including Caucasian populations that identified their ethnicity as Hispanic or Latino) and dividing by total population. Although minorities are located throughout the area, the percentage of minority populations is higher in the Oregon census tracts (27 percent) than in the Washington census tracts (20 percent). Census tracts are small, statistical subdivisions of counties used in collating U.S. Census Bureau data. A breakdown of minority populations by race and ethnicity for the study area is displayed in Exhibit 3.5-8.

Exhibit 3.5-7

Minority Populations Within Study Area

Area	Total Population 2000 Census	Total Population 2010 Census	Percent Minority 2000 Census	Percent Minority 2010 Census
Oregon Study Area	4,081	4,849	15	27
Washington Study Area	34,460	35,799	17	20
Study Area Total	38,541	40,648	17	21

Sources: U.S. Census Bureau, 2000, Summary Tape File 3, Table P7. U.S. Census Bureau, 2010, Redistricting Data (PL 94-171) Summary File.

In 2000, the study area neighborhood with the highest percentage of minorities was Rockwood with 40 percent minorities (Exhibit 3.5-10). Neighborhoods such as Arnada, with 4 percent minority residents, and Hayden Island, with 8 percent minority residents, were lower than the average within the project area. These wide variations illustrate the importance of understanding the diversity of minorities among the neighborhoods. Exhibit 3.5-10 shows the total percentage of minorities by combining the rate of racial and Hispanic minorities.

Particularly high concentrations of minority populations (70 percent or over) can be found in 10 block groups in the Boise, King, Humboldt, Piedmont, Eliot, Irvington, and Woodlawn neighborhoods of Portland. Block groups are smaller geographic units which together comprise a census tract. In 2000, Census Tract (CT) 33.01 Block Group (BG) 3 had the highest proportion of minority residents on the Oregon side of the Columbia River, in the Boise neighborhood of Portland. The highest concentration of minorities in Vancouver was in CT 8.04 BG 1 in the NE Hazel Dell neighborhood (41 percent minority). Because of rounding, exhibits in this section show some rates as 0, although there may be minority households in these areas. Please refer to the Environmental Justice Technical Report, included as an electronic appendix to this FEIS, for maps of the study area block groups and a table of the percentage of minority populations by census block group.

A review of the limited, available 2010 Census data shows increases in the percentage of minorities in all Oregon and Washington census tracts in the main project area. In Washington, the minority population increased the most in census tracts 421 and 418. Though these tracts are not contiguous with neighborhood boundaries, the data indicate a 10.5-percentage-point increase in minority persons in the Carter Park neighborhood and the southern portion

of the Lincoln Neighborhood and a 7.5-percentage-point increase in minority persons in the Rose Village neighborhood since 2000.

In Oregon, the minority population in the census tract containing Hayden Island increased 6.5 percentage points since 2000. The minority population in the census tract with the Marine Drive interchange (overlapping with the Kenton and East Columbia neighborhoods) increased 15.2 percentage points from 2000 to 2010. The changes in minority populations from the 2000 to the 2010 census are shown in Exhibits 3.5-11 and 3.5-12.

Exhibit 3.5-8

Race and Ethnicity of Minorities (Percent) Within the Study Area (2010)

Area	Race					Ethnicity		
	White Alone	Black or African American Alone	American Indian and Alaska Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic or Latino
Oregon Study Area	76	8	1	6	1	5	4	9
Washington Study Area	84	3	1	2	1	4	5	10
Study Area Total	83	3	1	3	1	5	4	10
Multnomah County	76	6	1	7	1	5	5	11
City of Portland	76	6	1	7	1	4	5	9
Clark County	85	2	1	4	1	3	4	8
Vancouver	81	3	1	5	1	4	5	10

Source: U.S. Census Bureau, 2010, Redistricting Data (PL 94-171) Summary File.

LOW-INCOME POPULATIONS

Poverty rates for local jurisdictions, ranging from 10 to 16 percent, are shown in Exhibit 3.5-9 and are based on the 2005-2009 American Community Survey (ACS). Poverty rates were calculated by dividing the number of individuals who reported incomes below the poverty threshold within the last 12 months by total population (for whom poverty status was determined). Poverty rates for specific neighborhoods ranged (in 2000) from a low of 9 percent in the Hayden Island, Bridgeton, and East Columbia neighborhoods to a high of 35 percent in the Esther Short neighborhood. However, the poverty rate dropped dramatically in Esther Short since 2000. Other central Vancouver neighborhoods such as Central Park, Rose Village, Hough, and Hudson’s Bay also show higher than average poverty rates of between 19 and 25 percent (Exhibit 3.5-10).

Because the 2010 Census did not include questions regarding income, the ACS has been used to provide more recent income data than the 2000 Census. The 2005-2009 ACS 5-year estimate is the first data release available at the census tract-level since the survey’s inception in 2005. It reports population and housing characteristics based on data collected from 2005 to 2009. ACS data is not based on a population count like the census; rather, it provides estimates based on survey responses and is meant to replace the census long-form questionnaire.

Certain Washington census tracts featured a significant change in persons reporting incomes below the federal poverty thresholds. Those reporting incomes below the poverty threshold in CT 424, roughly the Esther Short neighborhood, dropped 23.8 percentage points since 2000 (Exhibit 3.5-11). In CT 421, it rose 23 percentage points. In Oregon there was much less change, with all study area census tracts showing reduced rates of poverty since 2000. The changes in low-income populations from the 2000 to the 2005-2009 ACS are shown in Exhibits 3.5-11 and 3.5-13.

Exhibit 3.5-9

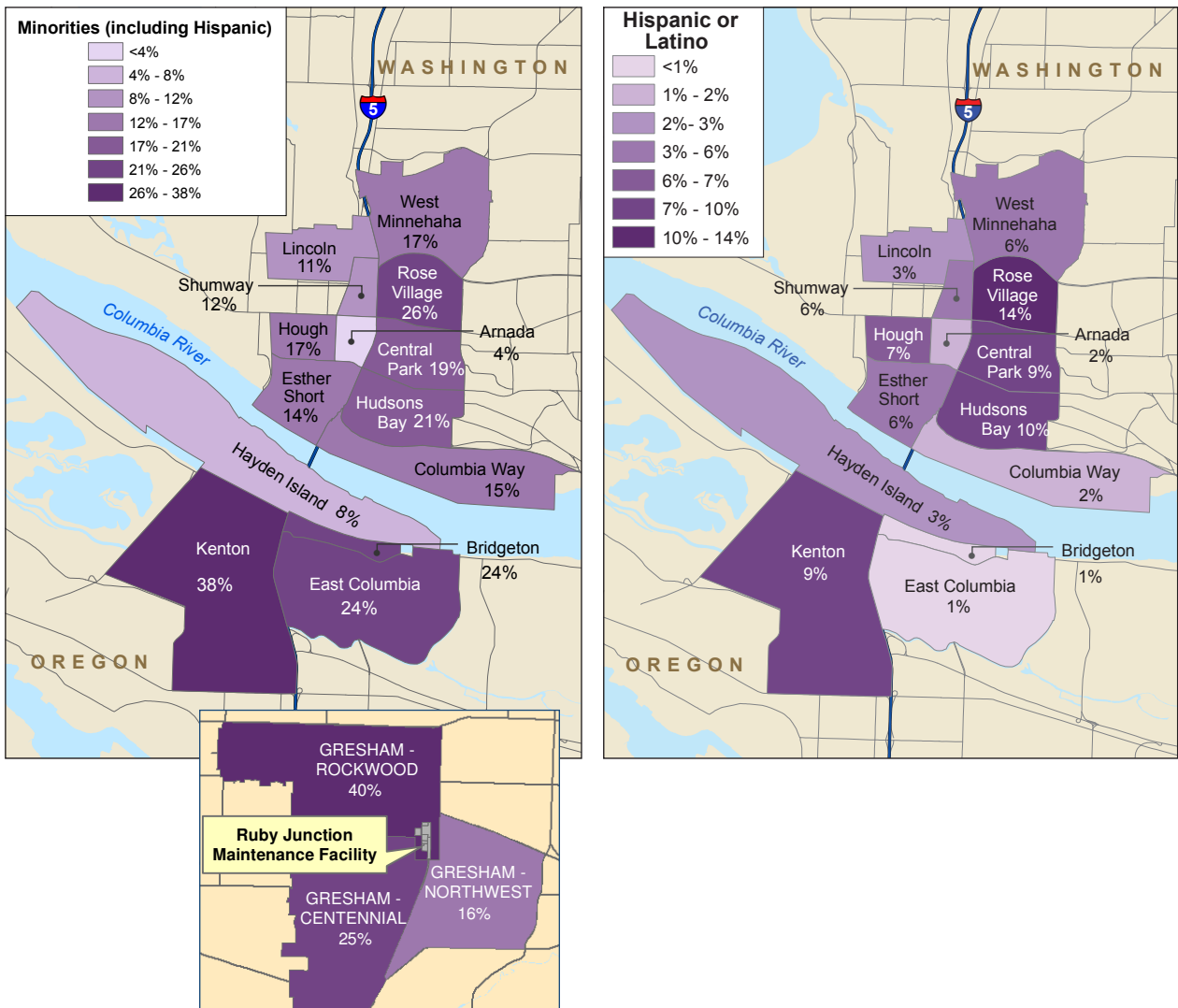
Poverty Rates for Local Jurisdictions

Area	Multnomah County	Portland	Clark County	Vancouver
Percent of Population Below Poverty Level (2000)	12	13	9	12
Percent of Population Below Poverty Level (2009)	16	16	10	15

Sources: U.S. Census Bureau, 2000, Summary Tape File 3, Table P88. ACS 2005-2009, Table B17001.

Exhibit 3.5-10

Census Demographics – Environmental Justice (1 of 2)



Source: U.S. Census Bureau, 2000.

Exhibit 3.5-10

Census Demographics – Environmental Justice (2 of 2)

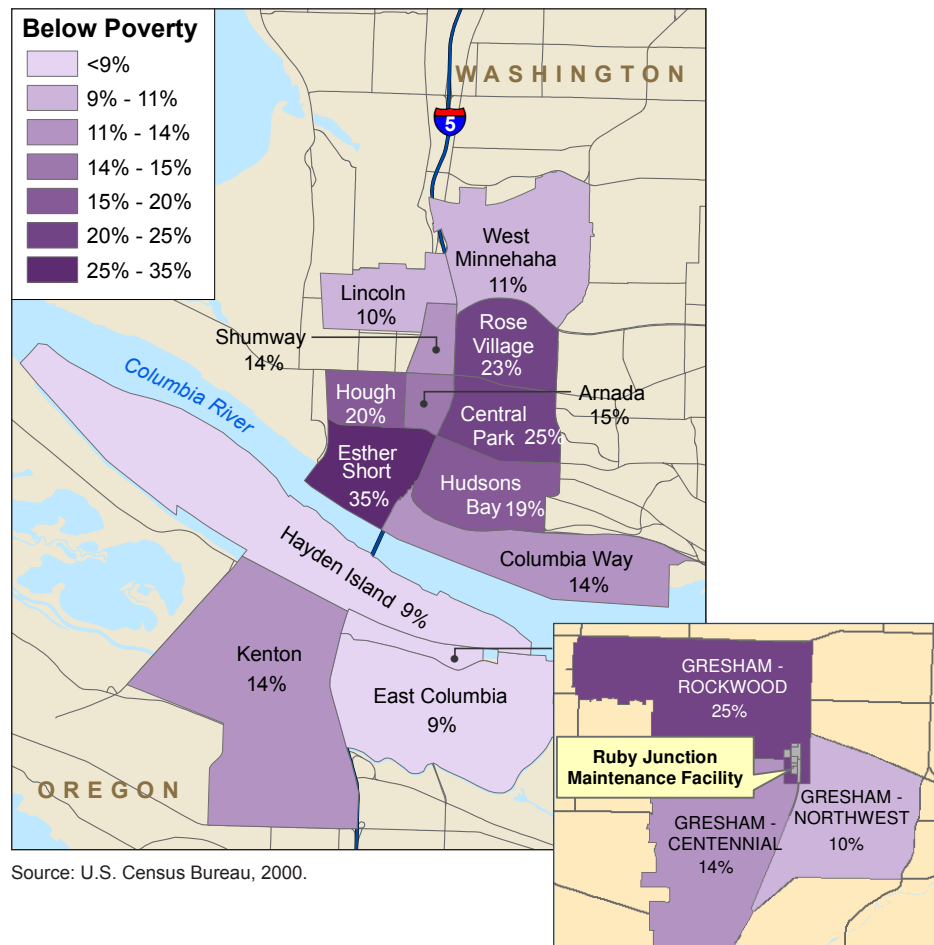


Exhibit 3.5-11

Census Tract-level Comparisons for Minority and Low-income Populations

2000 Census Tract (2010 Tract)	Percent Minority (2000)	Percent Minority (2010)	Percentage Point Change in Percent Minority	Percent Low- income (2000)	Percent Low- income (2009)	Percentage Point Change in Percent Low- income
Census Tract 72.01	8.08	14.54	6.46	8.51	7.86	-0.64
Census Tract 72.02 ^a	22.76	37.92	15.16	9.19	5.32	-3.87
Census Tract 98.01 ^b	48.33	50.33	2.00	29.48	34.07	4.59
Census Tract 410.02 (410.1) ^c	14.25	18.49	4.24	13.22	14.41	1.19
Census Tract 410.02 (410.11) ^c	14.25	16.53	2.28	13.22	14.41	1.19
Census Tract 410.03	12.47	15.90	3.44	8.35	14.20	5.86
Census Tract 417	32.90	33.22	0.32	22.99	27.66	4.67
Census Tract 418	19.97	27.47	7.50	22.35	20.79	-1.56
Census Tract 419	10.71	12.60	1.89	13.30	18.52	5.22
Census Tract 420	10.24	13.10	2.86	9.45	8.32	-1.13
Census Tract 421	12.21	22.69	10.48	9.10	32.08	22.97
Census Tract 423	16.28	19.07	2.79	19.55	22.12	2.57
Census Tract 424	15.19	16.64	1.45	47.59	23.77	-23.82
Census Tract 425	13.53	14.63	1.10	16.19	23.26	7.07
Census Tract 426	17.12	19.90	2.78	20.91	21.07	0.16

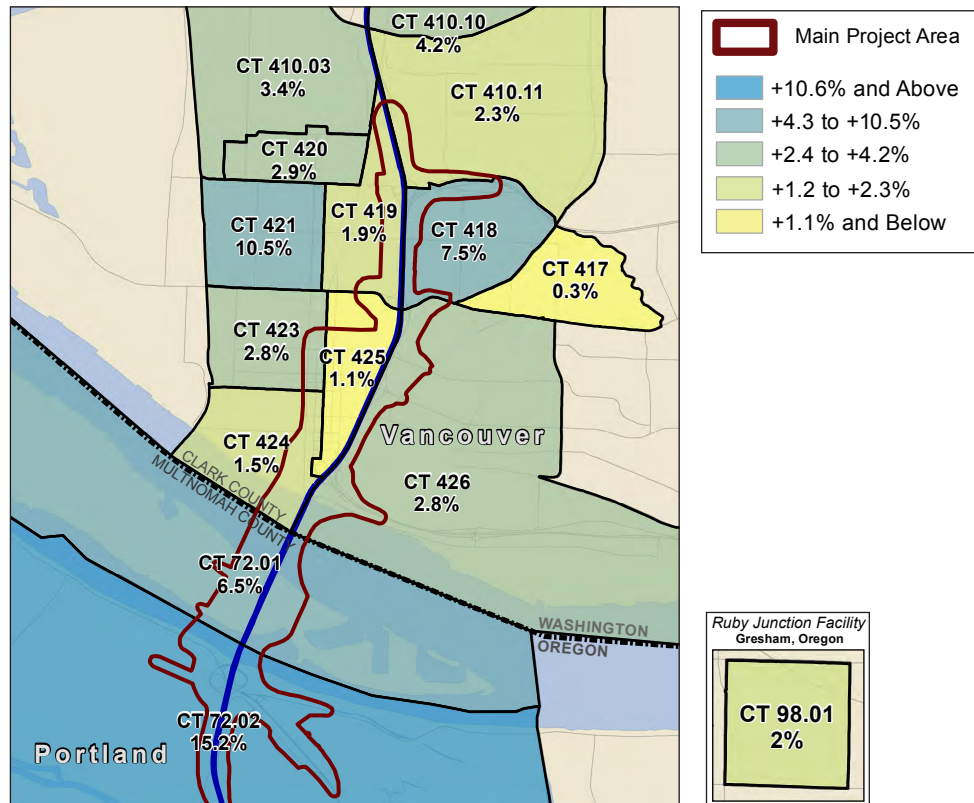
Sources: U.S. Census Bureau, 2000, Summary File 1 Tables P07 and P08, Summary File 3 Table P87. ACS 2005-2009, Table B17001. U.S. Census Bureau, 2010, Summary File 1 Tables P01 and P05.

Notes: Percent minority is calculated by tabulating the population of all minorities and Caucasians who identify their ethnicity as Hispanic and dividing this figure by total population. Percent low-income (below poverty level) is calculated by dividing the population that resides below the poverty level by total population (of individuals for whom poverty status is determined).

- a There have been minor changes in the boundary of this census tract between 2000 and 2010. It has gained and lost territory to Census Tract 71 and lost territory to Census Tract 43. However, the boundary fluctuations are located directly over the Willamette River and are expected to have negligible impact on data comparisons.
- b Census Tract 98.01 is located in the Rockwood neighborhood in Gresham, Oregon, and is not considered part of the primary area of project influence nor is it included in tabulations of the total study area.
- c Census Tract 410.02 has been bisected into smaller census tracts for 2010 (410.1 and 410.11). Both tracts have been included for the purpose of maintaining consistency between 2000 Census and 2010 Census data. However, Census Tract 410.1 is located outside of the study area. American Community Survey uses 2000 Census geographies.

Exhibit 3.5-12

Percentage Point Changes in Minority Population of the Study Area

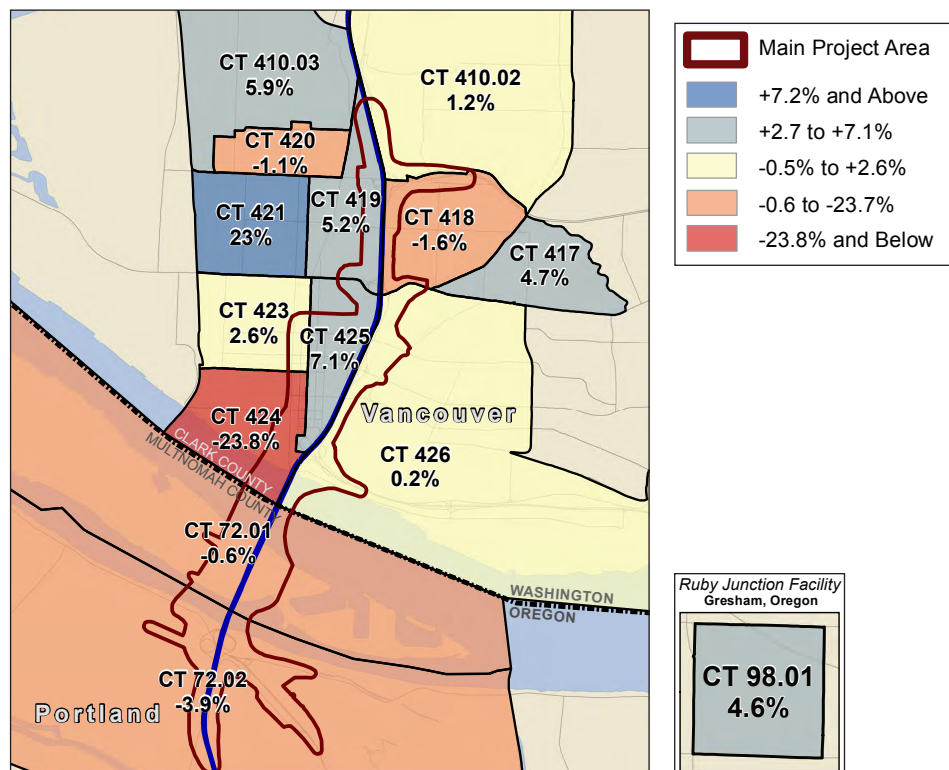


Sources: U.S. Census Bureau, 2000, 2010.

Note: Changes for CT 410.1 and CT 410.11 measured between 2010 counts for each tract and 2000 counts for CT 410.02.

Exhibit 3.5-13

Percentage Point Changes in Low-Income Population of the Study Area



Sources: U.S. Census Bureau, 2000. ACS 2005-2009..

Additional Data Gathering

The CRC team used information collected from various sources and by various methods to supplement the earlier data-gathering efforts for the neighborhoods and environmental justice analyses.

OTHER DEMOGRAPHIC DATA

The additional data sources consulted by the CRC team included the 2004 American Community Survey (U.S. Census Bureau 2007), Section 8 Housing Assistance data (U.S. HUD 2007), and public school free and subsidized lunch program data (U.S. Education Statistics 2007). The team also contacted local social service agencies to identify recent development projects that serve low-income and/or minority populations.

These additional data were used to confirm or revise the understanding of neighborhoods and EJ populations that was based on 2000 U.S. Census data. The additional data (such as the location of subsidized housing sites) were also useful in planning public outreach activities, and are discussed in greater detail under Section 3.5.3, Coordination, below. The demographic surveys completed by the project were instrumental in determining the presence of low-income and minority households.

Information collected through field visits and public outreach events with community and stakeholder groups enabled the project team to further supplement and refine the above data by better understanding who lives in the project area and learning about their hopes for and concerns about the project. Activities included attendance at meetings and events such as AsiaFest, Good in the Hood, Alberta Co-op Farmers Market, Vietnamese New Year celebration, Say Hey! Partners in Diversity, Juneteenth Festival, and a Slavic Coalition meeting.

Prior to issuance of the CRC project Notice of Intent (NOI) to prepare an EIS, the project team identified limited-English proficiency populations by using geographic information systems (GIS) and 2000 U.S. Census data. The data used for limited-English proficiency were derived from responses to the Census question of “language spoken at home.” The smallest geographic unit for which “language spoken at home” data are available is the census block group. Because of data limitations and the importance of identifying those populations most likely to experience direct impacts, “language spoken at home” data were collected for all census block groups lying entirely or partially within the project study area. The data showed that those speaking Spanish, Russian, German, and Vietnamese at home represented at least 1 percent of the population in the study block groups. Because German speakers tended to also have high levels of English language fluency, Spanish, Russian, and Vietnamese were chosen as the focus languages.

Project information has been routinely translated into those focus languages, including project newsletters, some project documents, and portions of the project web site. Russian, Spanish, and Vietnamese interpreters have been provided upon request at numerous public open houses, along with deaf and blind translation services, also upon request. Russian and Spanish are the two most common non-English languages spoken at home in Portland, Vancouver, and Clark County. Vietnamese is the third most spoken non-English language in Portland and Vancouver, but not in Clark County.

DISPLACEMENT SURVEYS

The CRC project team developed and conducted a series of location-specific surveys to further determine the characteristics of populations that could be directly impacted by

the project and whether the project would cause disproportionate impacts on environmental justice populations.

In Oregon, a demographic survey was delivered to all potentially displaced residents at four specific locations: Ruby Junction, Jantzen Beach Moorage Inc. (JBMI), Columbia Crossings moorage, and a single-family home and floating home sites along the south shore of North Portland Harbor. In some cases, such as JBMI, the study area included all of the residents of the floating home community. In Washington, surveys were sent to residents along I-5 between 29th Street and SR 500, in two residential units in a displaced business in downtown Vancouver, and those at the west end of 17th Street. Many of the mailed surveys were followed by in-person visits, while in other cases the project team held group meetings following the mail-out. Approximately 300 surveys were distributed; nearly 100 were completed. Additionally, project staff interviewed dozens of residents in the survey areas. The survey and interview responses for residential displacements reveal that 81.8 percent of survey respondents are white and not of Hispanic or Latino ethnicity. One household, 3.1 percent, is American Indian or Alaskan Native and not of Hispanic or Latino ethnicity. Another one household, 3.1 percent, is some other race and not of Hispanic or Latino Ethnicity. Four additional households (12.5 percent) are Hispanic and of some other race. The percentage of minorities, among the residential displacements (18.8 percent) is lower than the percentage of minority households in the study area (27 percent).

Income data were collected in the residential surveys; respondents had an option to choose income in one of nine categories ranging from less than \$10,000 to \$80,000 or more, with a range of \$10,000 each. Because the income range responses span the poverty thresholds, an exact determination of low-income status using the 2010 Census thresholds is not possible. Based on income and the number of people in their household, only two survey respondents are clearly below the poverty level. Two other households have the potential to be considered low-income, but without knowing their exact income level it cannot be determined if they are below the threshold or not. If all four of these respondents were included as low-income for the purposes of EJ analysis, that would total 13.3 percent of all respondents who indicated income levels. A low-income population of 13.3 percent is very similar to that of Vancouver and Portland, and slightly lower than the percentage for the larger study area.

In order to assess the impacts of commercial displacements more precisely, the businesses which are likely to be displaced were also surveyed during the summer of 2009. Many of the surveyed businesses stated that they employed high numbers of minority employees, with higher minority compositions than the region or local area. Some other businesses did not have many minority employees. Businesses with higher percentages stated that they employed “50 percent minorities,” “very high percentages of minorities,” or similar expressions.

Many of the surveyed businesses stated that they employed high numbers of low-income employees. Some of the businesses, such as Safeway, employ high numbers of part-time employees, many of which may be paid the state’s minimum wage. It is possible that households dependent on these part-time positions with minimum wage compensation may fall under the federal poverty level and would therefore be considered EJ households.

TRAVELSHED CHARACTERISTICS

For the EJ analysis, the CRC project team conducted a study to determine whether the adverse project impacts would be predominately borne by low-income or minority populations. The team studied the travelshed of bridge users (the broad area from which river crossing trips originate), to evaluate whether the project benefits would disproportionately benefit higher income, non-EJ populations. The team started the study in September 2009 by assessing 39 counties in Oregon and Washington. The study looked at the number of trips across the I-5 bridges taken by households and the zip code of each trip's origin. The results of this study were paired with 2000 Census data regarding race/ethnicity and household income to find the basic demographic makeup of the 39 zip codes in the travelshed. The project team reviewed these data and found that proposed improvements would not disproportionately benefit higher income populations.

3.5.3 Coordination

Public involvement is important to provide correct information, build trust, and develop solutions that work. A variety of methods were used to engage neighborhoods and their communities during the development of the CRC project. Information was collected through field visits and public outreach events with community and stakeholder groups. Input was also received from attendance at meetings and events such as AsiaFest, Good in the Hood, Alberta Coop Farmers Market, Vietnamese New Year celebration, Say Hey! Partners in Diversity, Juneteenth Festival, and the Slavic Coalition, as stated earlier.

Exhibit 3.5-14 summarizes the number of meetings held with specific organizations or at specific sites, as well as the number of sites for which project staff developed and distributed outreach materials.

Exhibit 3.5-14

Summary of Outreach Efforts

Event Category ^a	Number of Locations/Meetings	Attendance
Low-income Housing Sites	10	154
Senior Citizens	10	454
Minority Populations	29	1304 ^b
Transit-dependent Populations	6	58
Limited-English Proficiency Groups	15	N/A ^c
Neighborhoods	167	Not fully documented
Other	33	1369

a As of 12-31-2009.

b Not including the numerous attendees at events such as National Night Out (a community event encouraging safe neighborhoods) and similar.

c This outreach consisted largely of distributed, translated outreach materials, although some meetings were also conducted.

Environmental Justice Coordination

Two key principles of Environmental Justice are the fair treatment and meaningful involvement of all people. Fair treatment means that no group of people, including racial, ethnic, and socioeconomic groups, should bear a disproportionate share of negative environmental consequences of the project. Meaningful involvement means that 1) the decision-makers seek out and facilitate the involvement of those potentially affected, 2) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that

will affect their environment or health, 3) the public's contribution can influence the regulatory agency's decision, and 4) the concerns of all participants involved will be considered in the decision-making process.

The following discussions summarize the methods used to ensure that EJ populations were provided fair treatment and an opportunity for meaningful project involvement. The number of outreach activities conducted with EJ populations is shown in Exhibit 3.5-15. A complete list of all related outreach activities and their locations can be found in the CRC Environmental Justice Technical Report, included as an electronic appendix to this FEIS.

LIMITED-ENGLISH PROFICIENCY STRATEGY

An important component of the public involvement strategy for this project is two-way communication with limited-English, low-income, and minority populations. To this end, the public involvement team coordinated with local communities, the established Community and Environmental Justice Group (CEJG; see discussion below), and community-based organizations to develop appropriate strategies for outreach to these communities.

Selected project documents were and continue to be translated into Spanish, Russian, and Vietnamese; posted on the project web site; and distributed in hard copy form at strategic locations in the community. Spanish, Russian, Vietnamese, and sign language interpreters were and continue to be made available at project open houses, upon request. Using the translated materials, project staff have hand-delivered information to businesses along Fourth Plain Boulevard in Vancouver, where many Latino businesses are located, and along Sandy Boulevard in Portland, where many Vietnamese businesses are located. Staff have also used door-to-door distribution to inform many businesses in north Portland that cater to low-income and minorities.

COMMUNITY AND ENVIRONMENTAL JUSTICE GROUP

In addition to direct communication with existing community groups, the project team formed the CEJG in August 2006 to further help achieve the goal of meaningful public involvement in the project development process. The 15 members of the CEJG represented neighborhoods in the project area and included environmental justice populations, two liaisons from the CRC Task Force, and five at-large members. Together, they reflected some of the diverse interests and perspectives of Vancouver and Portland neighborhoods potentially affected by the project.

The CEJG provided assistance to CRC project staff in identifying community concerns in the project development process; providing public outreach; presenting recommendations at key milestones; and raising relevant issues of interest (or concerns for potential impacts) such as air quality, noise, highway interchange alignments, and design features to help inform the project's efforts to avoid, minimize, and/or mitigate potential community impacts.

Results of Outreach and Coordination

This intensive outreach effort has informed and affected the project design and the Environmental Justice analysis. Through individual meetings with specific groups, the project team has gained vital information that has been used in the

design and planning processes. For example, the project team has been working to avoid and minimize specific impacts to:

- The elderly and handicapped individuals who frequent the Clark County Historic Museum and may depend on Americans with Disabilities Act (ADA)-compliant pathways. The selection of 17th Street for the transit alignment has removed the potential for impacts to the pathway.
- The low-income residents of Smith Tower, in Vancouver, who live next to the proposed construction area.
- The representatives of the Jantzen Beach Moorage who have asserted that they have residents who should be considered as part of the EJ population. Two separate surveys were conducted to gather additional demographic data. The survey data confirmed the relatively low minority and low-income composition reported in the U.S. Census for the island as a whole.
- The residents of the manufactured home community on Hayden Island, who have expressed concern regarding construction period impacts, including noise from pile driving and air quality impacts associated with construction equipment. The project has organized many meetings to hear and address these concerns.
- The residents of Vancouver's Rose Village neighborhood, who were particularly concerned about construction equipment emissions and air quality. The project has since committed to low-sulfur diesel and other steps to reduce emissions.
- Community Resource Mapping, which has provided a list of resources to which the designers have paid particular attention in their efforts to avoid and minimize impacts.
- The Community Services Northwest Wellness Center in north Vancouver, which provides mental health services to low-income populations. The LPA would avoid this site, while other alternatives would have displaced the facility.

The CEJG has helped the project to address the right issues with the right groups of people, and has served as a sounding board for various analytical conclusions and for the development of proposed mitigation. The CEJG encouraged the project to provide additional outreach related to specific issues. In response, the project has provided additional presentations and materials related to air quality, environmental justice procedures, floating home relocations, and more.

3.5.4 Effects Guidelines

Effects Guidelines – Environmental Justice

Impacts to EJ populations are assessed based on EO 12898 and subsequent DOT and FHWA guidance that identify disproportionately high and adverse effects as those that:

- Are predominantly borne by minority populations or low-income households, or
- Would be experienced by these populations in a way that is appreciably more severe or greater in magnitude than would be experienced by non-minority or non-low-income populations.

TERMS & DEFINITIONS

Community resources and cohesion

Community resources typically include educational, religious, health care, cultural, and recreational facilities. Community cohesion measures how well residents can connect with one another within their community. These connections can occur at gathering places such as schools, community centers, parks, or transit stations. High home ownership rates and active neighborhood associations also contribute to cohesion.

For this analysis, “predominantly borne by minority populations or low-income households” means that more minority or low-income people are impacted than non-minority or non-low-income people. Environmental justice effects from transportation projects may include displacement of households and businesses, disruptions in community cohesion, restricted commercial access, noise impacts, air quality impacts, or other adverse impacts to low-income and minority populations. Whether any impact is “appreciably more severe or greater in magnitude” for EJ populations is determined by assessing whether EJ populations would be less able to respond or adapt to the impact than non-EJ populations.

The CRC Environmental Justice Technical Report (included as an electronic appendix to this FEIS) describes the Executive Order on Environmental Justice (EO 12898) and guidelines for assessing impacts to low-income and minority populations in detail. Important guidelines for avoiding disproportionately high and adverse effects to EJ populations include:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- Ensure full and fair participation by all potentially affected communities in the decision-making process.
- Prevent the denial of, reduction in, or substantial delay in the receipt of benefits by minority and low-income populations.

In addition to the specific requirements above, the CRC project team followed these guidelines in identifying and analyzing the project’s potential effects on neighborhoods and EJ populations. The following questions were part of the criteria to help identify potential effects:

- Does this project displace residents or community resources?
- Does this project separate neighborhood residents from their community resources or commercial services?
- Does this project increase traffic through a neighborhood, or decrease access to transit, bicycle, or pedestrian opportunities?
- Does this project severely impact community cohesion?
- Is this project consistent with adopted neighborhood plan goals?

3.5.5 Long-term Effects

This section summarizes the long-term effects of the LPA. Many of the effects that are relevant to neighborhoods and EJ populations, including residential displacements, noise impacts, and air quality, are discussed in detail in their respective sections in this chapter. In addition to the project’s analysis of air quality impacts, the project worked to gather data on and assess potential effects to local asthma rates along the corridor. However, data and analytical methods could not be focused more narrowly than the county level, a scale at which project-related impacts could not be discerned. Exhibit 3.5-15 compares the impacts of the LPA to the No-Build Alternative and the other build alternatives discussed in the DEIS.

Exhibit 3.5-15

Comparison of Direct Effects to Neighborhoods and Environmental Justice Populations

Environmental Metric	Locally Preferred Alternative						
	LPA Option A ^b	LPA Option B ^b	No-Build	Alt 2: Repl Crossing with BRT	Alt 3: Repl Crossing with LRT	Alt 4: Suppl Crossing with BRT	Alt 5: Suppl Crossing with LRT
Residential displacements.	59	Same as Option A	0	45	52	46	53
Business displacements.	69	Same as Option A	0	52	60	53	61
Separation from community resources.	Displacement of Safeway on Hayden Island (and bottle return center).	Same as Option A	None	Potential displacement of Safeway on Hayden Island (and bottle return center).	Potential displacement of Safeway on Hayden Island (and bottle return center).	Displacement of Safeway on Hayden Island (and bottle return center).	Displacement of Safeway on Hayden Island (and bottle return center).
Increased local traffic or decreased access to transit, bike, or pedestrian facilities.	More intersections meet standards than under No-Build. Increased access to transit, bike and pedestrian facilities. Local multimodal bridge and street improvements improve access to Hayden Island.	Same as Option A except that there would be no traffic lanes on the local multimodal bridge to Hayden Island.	Increased local traffic and no improved access to transit, bike or pedestrian facilities.	Some improvements on Hayden Island and Downtown Vancouver.	Improvements on Hayden Island and Downtown Vancouver.	More congestion on Hayden Island and downtown Vancouver.	More congestion on Hayden Island and downtown Vancouver.
Impacts to community cohesion.	Improved cohesion in neighborhoods with light rail stations and transit oriented development.	Same as Option A	None	Offset HCT alignment on Hayden Island could separate floating home community.	Offset HCT alignment on Hayden Island could separate floating home community.	Offset HCT alignment on Hayden Island could separate floating home community.	Offset HCT alignment on Hayden Island could separate floating home community.
Consistency with neighborhood plans.	Highly consistent	Same as Option A	Inconsistent with plans that call for increased access to transit.	Generally consistent, but some plans call for light rail.	Highly consistent.	Generally consistent, but some plans call for light rail.	Highly consistent.

Locally Preferred Alternative						
Environmental Metric	LPA	LPA	Alt 2: Repl	Alt 3: Repl	Alt 4: Suppl	Alt 5: Suppl
	Option A ^b	Option B ^b	Crossing with BRT	Crossing with LRT	Crossing with BRT	Crossing with LRT
Noise impacts.	56 (44) residential noise impacts after mitigation.	56 (44) residential noise impacts after mitigation.	Moderate number of impacts exceeding Federal criteria though reduced after mitigation.	Fewer impacts exceeding criteria, reduced after mitigation.	High number of impacts exceeding criteria, reduced after mitigation.	Few impacts, exceeding criteria, reduced after mitigation.
No-Build			159 residences now exceed noise impact criteria with an additional 15 impacts in the No-Build because no new sound walls would be constructed.			
Air quality ^a	Emissions 25 to 90% lower than existing. No violations.	Same as Option A	Emissions 30 to 90% lower than existing. No violations.	Emissions 30 to 90% lower than existing. No violations.	Emissions 30 to 90% lower than existing. No violations.	Emissions 30 to 90% lower than existing. No violations.
Potentially disproportionate, adverse impacts specific to low-income or minority populations.	Minority and low-income percentage of displaced households is less than or equal to that of study area. No disproportionate, adverse impacts to low-income or minority populations.	Same as Option A	Displaced households not fully assessed for minority and low income proportion.	Displaced households not fully assessed for minority and low income proportion.	Displaced households not fully assessed for minority and low income proportion.	Displaced households not fully assessed for minority and low income proportion.
Tolling	Tolls require higher share of income for low-income populations, but impact is offset by other factors. Impacts from transponders will be mitigated for low-income individuals.	Same as Option A	Tolls require higher share of income for low-income populations, but impact is offset by other factors. Impacts from transponders will be mitigated for low-income individuals.	Tolls require higher share of income for low-income populations, but impact is offset by other factors. Impacts from transponders will be mitigated for low-income individuals.	Tolls require higher share of income for low-income populations, but impact is offset by other factors. Impacts from transponders will be mitigated for low-income individuals.	Tolls require higher share of income for low-income populations, but impact is offset by other factors. Impacts from transponders will be mitigated for low-income individuals.

Notes: Values are calculated using information presented in the DEIS, assuming the "Clark College MOS" and "Stacked-Transit Highway Bridge" for Alternatives 2 and 3.

a Air quality data is for the year 2030.

b Information in parentheses indicates impacts if the LPA Option A or B is constructed with highway phasing.

No-Build Alternative

The No-Build Alternative would not require CRC-related displacements of residents, community resources, or businesses. Long-term indirect impacts for neighborhoods would include increased travel times for residents traveling within the I-5 corridor, due to increased congestion over time. The No-Build Alternative would not bring high-capacity transit to Hayden Island or Vancouver. The potential benefits of decreased congestion and improved reliability and mobility would not be realized. The new sound walls associated with the CRC improvements would not be built, and therefore many residents along I-5 would continue to be impacted by highway noise.

Long-term LPA Effects – Oregon Neighborhoods

HAYDEN ISLAND – LONG-TERM LPA EFFECTS

The largest direct neighborhood impacts from the LPA would occur on Hayden Island, where bridge construction would require the displacement of 32 floating homes in North Portland Harbor. In addition to these displacements, eight shelters for boat storage would be displaced, some of which contain seasonal apartments (Neighborhood displacements are shown graphically in Exhibit 3.5-16.)

Two businesses located on the on-land parcel associated with the JBMI would be displaced, and access at the east end of the property would be eliminated, with the remaining access being at the far west end of the property. The impacts to the JBMI moorage would include reduced access, loss of sections of their private road, and higher maintenance costs as, after construction, fewer home owners will share the costs to operate and maintain the moorage infrastructure.

Floating homes in North Portland Harbor would be impacted by noise from light rail transit. Based on an analysis of unmitigated light rail operations noise, 16 floating homes would be moderately impacted by LPA Option A and 24 floating homes would be moderately impacted by LPA Option B. However, these impacts are all mitigated. See Section 3.11, Noise and Vibration, for more details.

Construction of the LPA would displace the Safeway grocery store and pharmacy, which are the only grocery store and pharmacy on the island and are important community resources and employers. While ODOT can suggest replacement sites for the relocation of Safeway, it is up to the store owners to choose their replacement location, if any. While Safeway may not relocate on the island, it could be replaced by other grocery stores. Officials representing the Jantzen Beach SuperCenter initiated a site plan review with the City of Portland for a relocation and expansion of the Target store on the island. Plans submitted to the City of Portland's Bureau of Development Review indicate that the Target store could include a grocery and a pharmacy.

Both Safeway and New Seasons groceries provide delivery service to the island. Other nearby groceries are listed below. Distances are measured from the existing Safeway store at 11919 N Jantzen Drive. The travel times provided are based on estimates for motor vehicles.

Where would acquisitions occur with the LPA?

Section 3.3, Acquisitions, includes maps showing where property would likely be acquired. More detailed maps and discussions of property acquisitions are included in the CRC Acquisitions Technical Report.

- Cash and Carry (910 N Hayden Meadows Drive, Portland): 4 minutes; 2.0 miles
- Fred Meyer (7404 N Interstate Avenue, Portland): 6 minutes; 3.9 miles
- New Seasons (6404 N Interstate Avenue, Portland): 6 minutes; 3.6 miles
- Fred Meyer (2500 Columbia House Blvd., Vancouver): 9 minutes; 4.0 miles

Access to these grocers, as well as other services and products would be enhanced by the project. Hayden Island residents would have direct access to the regional light rail system, and its connections to park and ride lots and numerous bus stops. Residents would benefit from both improved interstate access and a local bridge to north Portland. And, the infrastructure for pedestrians and cyclists would be safer, more direct, and more pleasant than with the No-Build.

With construction of the LPA, 14 small café/bars, five chain restaurants (six with Option B), and one bank on the island would be displaced. This would require residents to travel more frequently to mainland Oregon or Vancouver to access these services and create a general impact to the livability of all residents on Hayden Island. The loss of these local businesses would also temporarily reduce the number of jobs available to island residents. Though proposed redevelopment may replace these jobs, the replacement jobs may not be available soon after the displacements occur, and some island residents now working on the island may be forced to commute to jobs elsewhere. The discussion of impacts specific to EJ populations can be found later in this section, under Long-term Effects – Environmental Justice Populations.

Hayden Island will also see positive impacts with the construction of the LPA. Positive impacts would include improved access with a new light rail transit station, new bicycle and pedestrian paths and improved local roads and circulation. LPA Option A includes a new multimodal bridge that will provide, residents, shoppers, and commuters with access to and from the Island without needing to travel on I-5.

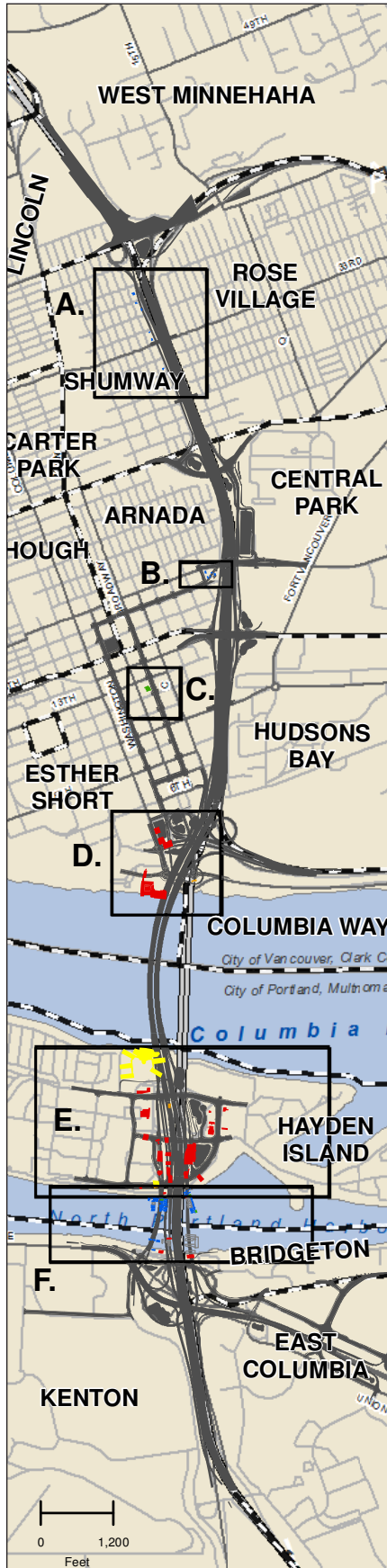
OTHER OREGON NEIGHBORHOODS – LONG-TERM LPA EFFECTS

Other neighborhoods would also be affected by the LPA. In the Kenton neighborhood, long-term impacts would be minimal, focused at the north end of the neighborhood near the Portland Expo Center and North Portland Harbor. The project would displace several structures around the Marine Drive Interchange, including three floating homes and one duplex on land. Four marine businesses and one billboard would also be displaced.

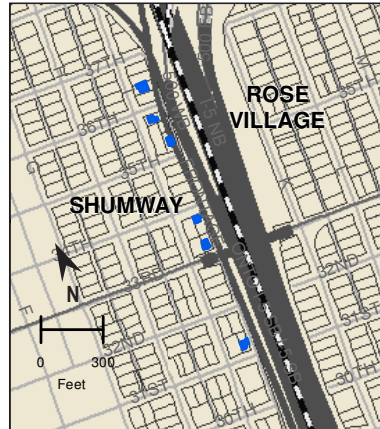
The Marine Drive interchange improvements and associated surface street improvements would improve the functionality of the movements onto and off of I-5. The improvements in the interchange area include a new multi-use bicycle and pedestrian path connecting the Bridgeton neighborhood to the existing Expo Center light rail station. The project would not separate neighborhood residents from community resources or decrease access to transit and bicycle or pedestrian opportunities. The new multi-use path connection would provide access from the Portland Expo Center to the Bridgeton Neighborhood, expanding bicycle and pedestrian opportunities. No impacts to local community cohesion have been identified.

Exhibit 3.5-16

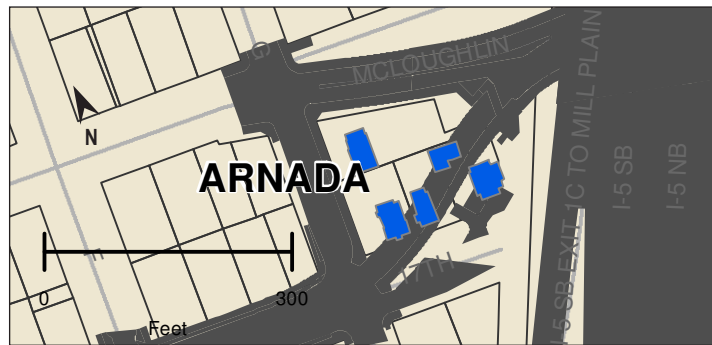
Displacements Within Project Area Neighborhoods (1 of 2)



A. Shumway Neighborhood



B. Arnada Neighborhood



C. Esther Short Neighborhood



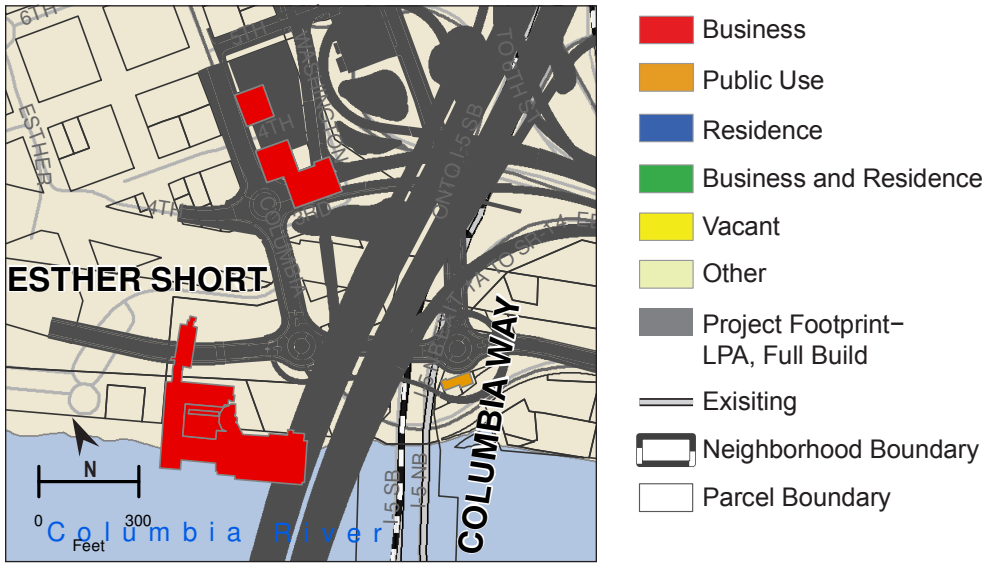
- Business
- Public Use
- Residence
- Business and Residence
- Vacant
- Other
- Project Footprint-LPA, Full Build
- Existing
- Neighborhood Boundary
- Parcel Boundary

Note: LPA full build and LPA with highway phasing result in the same displacements. Dimensions are approximate.

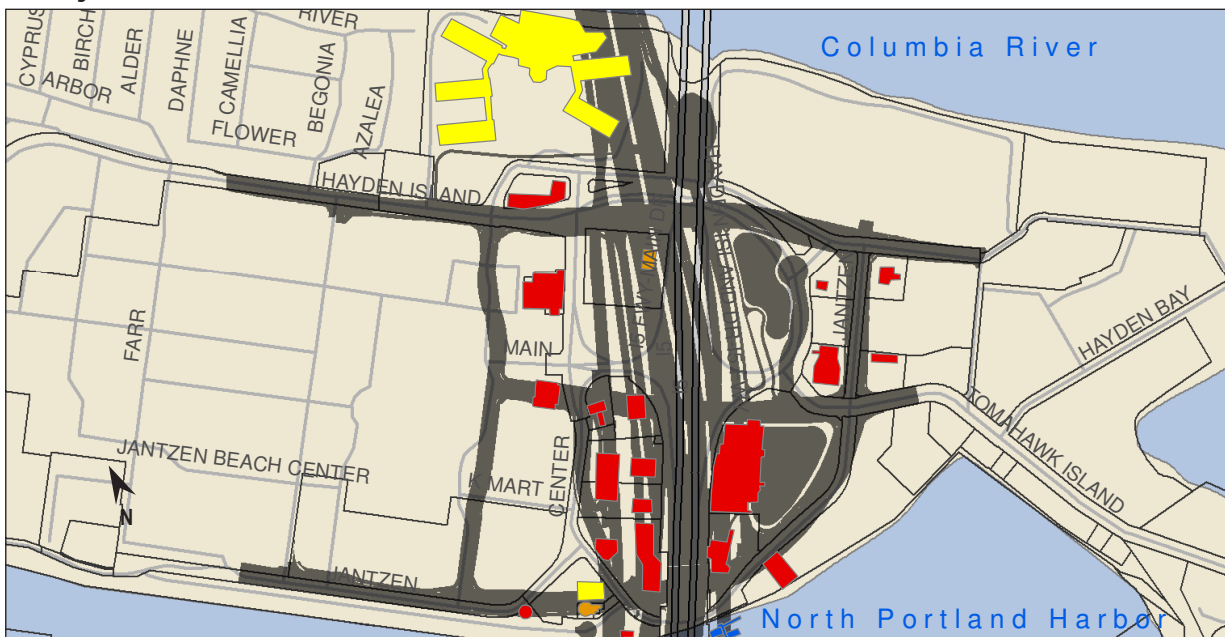
Exhibit 3.5-16

Displacements Within Project Area Neighborhoods (2 of 2)

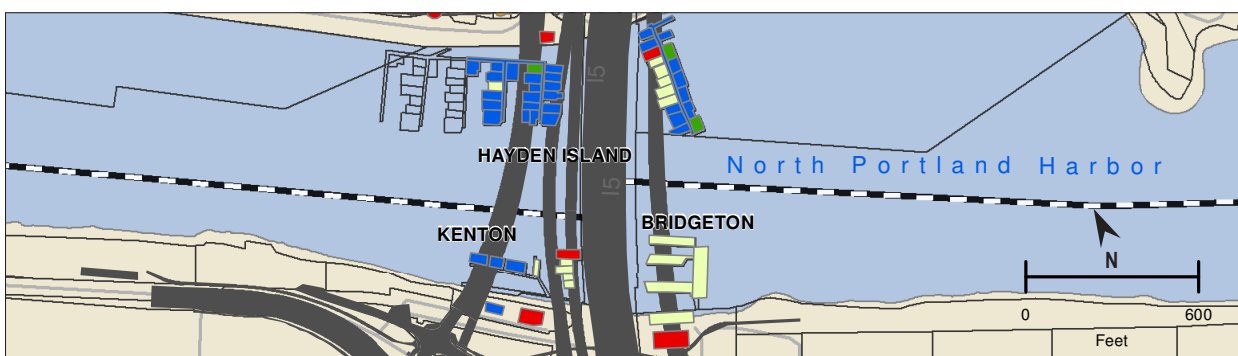
D. Lower Downtown Vancouver



E. Hayden Island



F. North Portland Harbor



Note: LPA full build and LPA with highway phasing result in the same displacements. Dimensions are approximate.

Fifteen parcels would be impacted by the expansion of the Ruby Junction Maintenance Facility, located in the Rockwood neighborhood. Within those 15 parcels, nine residences and eight businesses would be displaced; some parcels contain two buildings, a residence and a business. The project would displace these residences and businesses, essentially eliminating the residential occupancy in this corner of the neighborhood. Although displacements in the Rockwood neighborhood for the Ruby Junction expansion must follow the Uniform Relocation Act, the nature of some of the displaced residences and businesses require special consideration. Several of the impacted properties house both an industrial type of business and a residence. This unique setting allows for small industrial business owners to live and work at the same location, which may not be possible after standard relocation to a new neighborhood.

Despite these relocations, the impact will not have an adverse effect on the cohesion of the Rockwood Neighborhood. The neighborhood and these subject properties are divided by industrial properties that are large and have little connectivity. The Ruby Junction Maintenance Facility and impacts to the surrounding EJ populations are discussed in detail under Rockwood Neighborhood Long-term Impact heading of this section.

As reported in Section 3.3.2, there is a sufficient supply of comparable homes for sale and rental properties for all displaced residents to be relocated. In June 2009, the Portland area (including Oregon suburbs but excluding communities in Washington) had an 8.2-month supply of homes for sale and a year-to-date median home sale price of \$250,000. In the Gresham/Troutdale subarea the average sale price is \$174,900.

PORTLAND LOCAL STREETS – LONG-TERM LPA EFFECTS

The local street network on Hayden Island and on the adjacent Oregon mainland would be greatly improved. Substandard intersections would be redesigned to current standards, the Bridgeton Trail would be connected through to the west side of I-5, and with LPA Option A, a new local multimodal bridge would provide direct auto, bike and pedestrian connection to Hayden Island.

With the LPA, Portland's local street operations would improve along the I-5 corridor relative to No-Build conditions. See Section 3.1, Transportation, for more details on local traffic, explanation of performance standards, and graphic representations of system performance. For example, at the I-5 interchange with Marine Drive, 2030 afternoon peak intersection performance would improve from a level-of-service (LOS) F with the No-Build Alternative to LOS B with the LPA. This indicates that the LPA would improve mobility and accessibility to this freight and employment corridor during the morning peak. Similar findings were observed during the afternoon peak.

In most locations, there are reductions in volumes on the local street system. This occurs as motorists switch routes to the previously congested I-5 corridor. During the morning peak, westbound traffic on both sides of the highway would decrease less than 10 percent compared to No-Build conditions. Eastbound traffic on both sides of I-5 would increase up to 10 percent, with the higher growth forecast for the eastside of I-5. During the morning peak,

southbound traffic in Portland would decrease by up to 5 percent over No-Build conditions. Northbound traffic in Portland would remain unchanged or decrease between 10 and 20 percent compared to No-Build conditions.

During the afternoon/evening peak, eastbound and westbound traffic on both sides of the highway would change by less than 10 percent compared to No-Build conditions. Northbound and southbound traffic in Portland would change by less than 10 percent during the afternoon/evening peak hour.

The total number of local intersections and ramps would increase from 25 to 38 primarily as a result of additional intersections associated with the local roads in the Hayden Island and Marine Drive interchange areas. During the 2030 morning peak hour, 37 of these 38 intersections and ramps would be expected to operate within acceptable standards, while one would fail to meet standards. The intersection of Interstate Avenue with Going Street is expected to fail to meet applicable performance standards (due to long delays at the intersection) and to require mitigation. See Section 3.1 for more information on this and other intersections within the project area. During the 2030 afternoon/evening peak hour, all intersections would operate within acceptable standards.

Pedestrian and bicycle travel demands are expected to increase substantially if a new I-5 bridge is constructed with sufficient multimodal facilities. Daily pedestrian travel across the bridge would be expected to increase from 80 pedestrians today to between 600 and 1,000 in 2030. The number of bicyclists predicted to use the crossing would increase from 370 per day today to between 900 and 6,400 riders per day in 2030. The project includes other improvements to the pedestrian and cycling network in Portland, in addition to those associated with the river crossing. Refer to Section 3.1, Transportation, for more details on these improvements.

The combination of improved traffic conditions and improved access would provide a positive impact for Portland neighborhoods in the project area.

OREGON NEIGHBORHOODS – INDIRECT LPA EFFECTS

The Hayden Island neighborhood would experience the most pronounced indirect effects as a result of the LPA because transit-oriented development would change the character of the dispersed, auto-oriented, large-scale retail developments that exist there today. The anticipated redevelopment of the Jantzen Beach shopping center into a transit-oriented neighborhood is perhaps the most significant change expected on the island, and is consistent with the 2009 Hayden Island Plan.

Transit-oriented development (TOD) would increase cohesion on the island in two ways: by providing new opportunities for high-density housing and by providing new opportunities for smaller-scale commercial services. Developing housing options in the center of the island close to transit would allow people to live closer to commercial services and would support walking, biking, or riding light rail to those services. Creating a less auto-oriented environment for residents to travel between home and services would provide more opportunities for residents to interact with one another and to easily access potential new community resources. Similarly, providing smaller-scale commercial services close to housing and transit would encourage residents to

use services provided in their neighborhood, rather than traveling off the island to access those same services.

On the Oregon mainland, indirect effects would include potential job creation resulting from improved freight mobility. These jobs may be created at the Port of Portland, along the Columbia Corridor, and elsewhere in various business sectors, such as manufacturing, wholesale trade, and distribution.

Long-term LPA Effects – Washington Neighborhoods

In the Shumway neighborhood the LPA would require six residential displacements for permanent right-of-way.

The project would also displace five single-family residences in the Arnada neighborhood where the light rail would transition from E 17th Street to McLoughlin Boulevard. The light rail line on E 17th Street would also displace some off-street parking adjacent to retail and service establishments in the southeast corner of the neighborhood.

In March 2011, Clark County had a 8.3-month home supply and a year-to-date median home sale price of \$190,000 (RMLS 2011a, b). In February 2011, industry reports showed a 3.8 percent multi-family residential vacancy rate for rentals in the Portland-Vancouver metropolitan area, with a rental rate averaging \$0.94 per square foot per month (MMHA 2011). This rate equates to \$940 per month for a 1,000-square-foot apartment and \$1,410 per month for a 1,500-square-foot apartment. In addition to the market-rate units available, the Vancouver Housing Authority continues to develop workforce and subsidized units throughout the downtown and elsewhere in Clark County.

Single-family residences on 17th Street between C and G Streets in Vancouver would be impacted by noise from light rail transit. Based on an analysis of unmitigated light rail operations, 15 single-family residences that would be moderately impacted were identified. The analysis included noise from the warning bells at a proposed crossing gate where the alignment transitions to McLoughlin Boulevard before crossing under I-5. Residential sound insulation, which would be used on the impacted single-family residences along E 17th Street, would not reduce the exterior noise levels. These residences have back yards that are well shielded from the train by the structure of the house, so exterior noise levels in the back yards, which most people use as their primary outdoor use, are predicted to have noise levels below the FTA criteria. Only the front yards would continue to exceed the FTA criteria along E 17th Street.

In the Central Park neighborhood, long-term impacts at the Clark College Annex and Recreation Fields include the displacement of the structures and parking within the Annex area and displacement of some trees and landscaping to the south of the recreation fields near the Annex.

Across McLoughlin Boulevard to the south of the Clark College Athletic Annex, the Marshall Community Park and Center and the Luepke Senior Center would experience long-term impacts. Construction of a new retaining wall along the highway would displace parking spaces, horseshoe pits, landscaping, and trees that serve as a visual buffer between the community

center and I-5. In the far northeast corner of the park property, a new turning lane on McLoughlin would require permanent right-of-way acquisition that would displace more landscaping. The addition of a new light rail line and station adjacent to the centers would also represent a substantial access benefit, especially for citizens who are transit dependent or mobility impaired.

The Esther Short, Hough, Arnada, Central Park and Hudson Bay neighborhoods all would experience positive impacts from the access to the regional light rail system. Downtown Vancouver would be connected to the multi-use path that would provide connections to regional pedestrian and bicycle facilities throughout Vancouver. The Evergreen Community Connector would provide new public space, bicycle and pedestrian routes and improve the connection between downtown Vancouver and the Vancouver National Historic Reserve.

Though the LPA reduces overall noise impacts from both existing levels and those under the No-Build Alternative, there are numerous residences where noise levels would meet or exceed established WSDOT noise criteria. Three residential sites which provide low-income or lower-income housing units would experience noise impacts: the Normandy Apartments, Evergreen Inn, and the Fort Apartments. Noise levels improve for some units, under the LPA, though other units are impacted more greatly by the LPA. The noise level increases, as explained below, are slight.

The three-story Normandy Apartments are located at 318 East 7th Street, directly west of I-5. There are approximately 35 studio and one-bedroom apartments that rent for approximately \$500 to \$650 per month. Six units of the Normandy Apartments currently experience noise levels that exceed FHWA's criteria. Proposed noise walls would greatly reduce noise levels for the lower three units (even from existing levels), while the impacts to the upper three units cannot be mitigated. The increase for these three units will only be 2 dBA over existing conditions and 1 dBA over the No-Build Alternative. Generally, increases of three or fewer dBA are not considered audible.

The Evergreen Inn is located at 500 Main Street. This property receives low-income housing tax credits in exchange for providing affordable housing to the area's elderly population. There are 78 total units at Evergreen, 70 of which are low-income units. The LPA slightly elevates highway noise levels for 24 units at this historic property. The increase for these units will be 3 dBA over existing conditions and 2 dBA over the No-Build Alternative. Generally, increases of three or fewer dBA are not considered audible. Though a wall was evaluated, it would not provide any noticeable noise reduction for the elevated apartment homes and therefore is not recommended.

The Fort Apartments are located at 500 E 13th Street, Vancouver, directly west of I-5. There are 49 studio, one-bedroom, and two-bedroom units in the Fort Apartments; rent ranges from \$450 to \$500 per month. The LPA slightly elevates highway noise levels for 12 units at this historic property. The increase for these units will be 2 dBA over existing conditions the No-Build Alternative. Generally, increases of three or fewer dBA are not considered audible.

The western end of Waterfront Park, an identified community resource, is in the southeast corner of the Esther Short neighborhood, just to the west of the existing I-5 bridges. This portion of the park would be permanently acquired for the construction of the new bridges. However, in the Columbia Way neighborhood on the other side of the bridge, Waterfront Park would be improved, because removing the existing bridges that currently cover another portion of the park would create more open space. Users of the Waterfront Renaissance Trail would benefit from a safer and more direct route to and from the northbound I-5 bridge where the bicycle and pedestrian facilities would be provided.

All Vancouver neighborhoods and their residents would benefit from increased access to transit due to the introduction of light rail.

VANCOUVER LOCAL STREETS – LONG-TERM LPA EFFECTS

During the morning peak, southbound traffic in Vancouver would decrease between 10 and 35 percent along most major streets with the exception of the downtown area. Southbound traffic in downtown is expected to increase over the No-Build by approximately 10 percent. The decrease in southbound traffic on local streets would be caused by the improvements to I-5, which would encourage arterial traffic to return to I-5.

During the morning peak, eastbound and westbound traffic west of I-5 would increase between 10 and 20 percent over No-Build conditions. With the LPA, eastbound and westbound traffic east of I-5 would increase by up to 5 percent over No-Build conditions. Under the LPA with highway phasing, eastbound traffic east of I-5 would increase by approximately 30 percent, and westbound traffic east of I-5 would remain relatively unchanged. The difference in eastbound traffic between the LPA and LPA with highway phasing would be due to the addition of the direct connect ramp from southbound I-5 to eastbound SR 500. Without the direct connect ramp, eastbound traffic would remain on 39th Street to access SR 500.

Northbound traffic south of Fourth Plain Boulevard would increase between 5 and 20 percent. Northbound traffic in the area of the 39th Street interchange area would increase by approximately 80 percent compared to No-Build. This increase is the result of the closure of the entrance to northbound I-5 at 39th Street. Instead motorists will enter at Main Street to the north.

During the afternoon/evening peak, traffic volumes along key east-west local streets west of I-5 would remain unchanged or increase by approximately 20 percent over No-Build conditions. This may increase the cut-through traffic in these neighborhoods. Under the LPA, westbound traffic just east of I-5 would increase by approximately 15 percent, and eastbound traffic just east of I-5 would decrease by approximately 25 percent compared to No-Build conditions. Under LPA with highway phasing, eastbound traffic would decrease by approximately 10 percent. The difference in eastbound traffic would be due to the addition of the direct connect ramp from southbound I-5 to eastbound SR 500.

During the afternoon/evening peak hour, southbound traffic in Vancouver, depending on location, would remain unchanged or could increase up to 20

percent. Under the LPA, the southbound off-ramp to 39th Street would be removed and replaced with the new southbound SR 500 off-ramp, which would cause traffic to shift from southbound I-5 to southbound Main Street to access the neighborhood.

Northbound traffic in Vancouver would decrease between 5 and 30 percent over No-Build conditions, with the highest decrease north of the Fourth Plain interchange area.

With 2030 No-Build conditions, local street congestion is most intense near the I-5 ramps and is influenced by the travel direction and length of time that I-5 is congested each day. When I-5 is congested, major arterials that provide east/west connectivity are also congested. Of the 89 intersections evaluated for the No-Build condition, seven would not meet acceptable operational standards during the morning peak and 24 would have unacceptable impacts associated with traffic queuing (back-ups). During the afternoon/evening peak period seven intersections would not meet acceptable operational standards, while 25 would have unacceptable impacts associated with traffic queuing.

With the LPA, the number of intersections analyzed increases from 89 to 92. During the 2030 morning peak, 91 of these 92 intersections would operate acceptably with improved, similar, or slightly degraded conditions. One intersection, 29th Street at Main/Broadway Street, would degrade from No-Build conditions and would operate unacceptably. With the LPA with highway phasing, 90 intersections would operate acceptably with improved, similar, or slightly degraded conditions. Two intersections would degrade from No-Build conditions and would operate unacceptably – the intersection identified under the LPA plus the intersection of 39th Street at H Street.

During the 2030 afternoon/evening peak with the LPA, 89 of the 92 intersections would operate acceptably with improved, similar, or slightly degraded conditions. Three of the local intersections would degrade from No-Build conditions and would operate unacceptably. These include the intersections of Mill Plain Boulevard at C Street, 15th Street at C Street, and 39th Street at the I-5 southbound ramps. With the LPA with highway phasing (Options A and B), 86 of the intersections would operate acceptably with improved, similar, or slightly degraded conditions. Six intersections would degrade from No-Build conditions and would operate unacceptably – the three intersections identified under the LPA plus the intersections of 33rd Street at Main Street, 39th Street at H Street, and 40th Street at Main Street. Overall, both the LPA and LPA with highway phasing would improve local street operations in Vancouver in comparison with 2030 No-Build conditions.

Overall, both the LPA and LPA with highway phasing would improve local street operations in Vancouver in comparison with 2030 No-Build conditions. Improvements are due to reconfiguration of some local streets to better match highway interchanges, new street extensions, improved connectivity, added travel lanes and extended turn pockets at key intersections. The project also includes improvements to the pedestrian and cycling network, as discussed in Section 3.1.

WASHINGTON NEIGHBORHOODS – INDIRECT LPA EFFECTS

In the Vancouver neighborhoods of Esther Short, Arnada, Hough, and potentially Central Park, transit-oriented development would add to neighborhood cohesion in similar ways as it would on Hayden Island. New housing and commercial services along the transit alignment, particularly around transit stations, would give residents more opportunities to walk, bike, or take transit to services close to their homes, thereby providing more chances for residents to interact with one another and utilize community resources.

Long-term Effects – Environmental Justice Populations

NO-BUILD ALTERNATIVE

As stated above, the No-Build Alternative would not bring high-capacity transit to Hayden Island or Vancouver. Nationally, low-income populations use transit at a higher rate than other populations (FHWA 2001). TriMet and C-TRAN regional rider surveys provide similar findings. In 2005, 69 percent of all weekday Interstate MAX line rides were made by individuals in households earning less than \$50,000 per year (TriMet 2009). In 2005, the Median Household Income in the Portland-Vancouver Metropolitan Statistic Area (MSA) was just under \$50,000. Most C-TRAN riders (57 percent) reported earning under \$30,000, 30 percent declined to state their income, 12 percent earned \$30,000-\$75,000, and the smallest percentage (1 percent) earned more than \$75,000 (C-TRAN 2003). Both the TriMet and C-TRAN rider surveys were conducted across their service areas and not specifically within the CRC project area. With the No-Build Alternative, therefore, these lower income groups would be unable to benefit from high-capacity transit in the project area. There would be no toll, so potential adverse impacts on EJ populations from the expense of tolls would be avoided; however, the potential benefits associated with improved highway and transit infrastructure would not be realized. Furthermore, EJ residents would continue to be impacted by highway noise. The No-Build Alternative would not require CRC-related displacements of EJ population residents or EJ businesses.

HAYDEN ISLAND – LONG-TERM LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

Although 32 displacements represent a substantial impact to the neighborhood and its residents on Hayden Island, this does not appear to constitute a disproportionate impact to EJ populations. According to the census and recently completed surveys of the displaced households, Hayden Island does not have a high rate of EJ residents compared to surrounding Portland neighborhoods or to most other neighborhoods in the project area. The 2009 demographic surveys conducted at the neighborhood's request indicate that the floating home community has notably lower rates of EJ residents (based on those that responded) than surrounding neighborhoods; therefore, the CRC project is less likely to impact EJ residents in this community than in other communities in the project area.

Displacement of the Safeway grocery store and pharmacy may increase the travel time and travel costs of residents, including low-income and minority residents and residents who do not own cars. However, this impact would be largely offset by the presence of nearby grocery stores, the availability of delivery services, and the strong likelihood that a new grocer will soon open on

the island—as proposed in the SuperCenter redevelopment plans submitted to the City of Portland. In addition, this impact would be offset by the addition of light rail to Oregon and Vancouver. As stated above, data suggest that low-income populations use transit more frequently than other income groups. TriMet and C-TRAN rider surveys provide similar findings. The project would improve on-island traffic circulation and reduce the hours of congestion in this area along I-5. Additionally, the current substandard and difficult to navigate bicycle and pedestrian connection to the existing I-5 bridges would be improved, and a light rail transit station would be constructed to serve the island. As low-income individuals are more reliant on alternative modes of transportation, these improvements would provide potentially greater benefit to EJ populations. The existing paratransit services on the island, which provide door-to-door transit for disabled residents, would continue with the LPA and work in coordination with the light rail and bus routes.

As mentioned earlier, the displacement of the Safeway store, restaurants, and bank would affect all residents, and would not disproportionately affect EJ populations. The project team interviewed management staff from most of the displaced businesses on the island and have not identified any services specific to EJ communities. However, the displaced businesses do provide inexpensive dining, groceries, and a pharmacy.

SERVICE INDUSTRY JOBS – LONG-TERM LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

The property acquisitions on Hayden Island, and to a lesser extent in Vancouver, have the potential to affect wage-earning opportunities for those seeking service industry employment. An estimated 39 businesses would be displaced on Hayden Island, many of which are eateries, with 643 employees affected. Business displacements would include a variety of commercial, service, and retail establishments, including numerous restaurants, bars, an office supply store, a cellular services store, and the Safeway store.

All displaced businesses would be provided financial and administrative assistance to relocate rather than close. However, some of these displaced businesses may choose not to relocate locally. Some of the employees may be unable to retain their jobs. On the whole, food preparation and service-related employers often offer low-wage positions such as dishwashers, cooks, hosts, and counter attendants. According to the Oregon Employment Department, the average salaries of most food preparation and service workers within Multnomah and Washington Counties fall within the range of \$18,000 to \$23,000 per year (full-time equivalent). Wages within this range would lift all individuals and most small families above the federal poverty guidelines.

It is not possible to determine which businesses would not relocate locally, or to determine the income and minority status of employees who would be displaced from these businesses. In addition, the employee composition will change prior to the initiation of property acquisition and business relocations. However, the project team has surveyed these businesses in an attempt to gather such data. Many of the surveyed businesses stated that they employed high numbers of minority employees, with potentially higher minority compositions than the region or local area. Many of the surveyed businesses also stated that they employed high numbers of low-income employees.

However, low-income was not defined, during these interviews, to be exclusively those under the poverty level.

Impacts associated with the loss of these jobs may be offset by a combination of factors including the approximately 20,000 jobs (*20,000 job-years*) associated with constructing the LPA, some of which will be created to provide basic services (such as those displaced) to construction teams. Additionally, the Hayden Island Plan allows for and encourages future transit oriented development near the light rail station. The surrounding redevelopment will likely include retail and food service establishments providing similar jobs to those displaced by the LPA.

HAYDEN ISLAND SAFEWAY BOTTLE RETURN CENTER – LONG-TERM LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

In addition to the displacement or relocation of many entry-level or relatively unskilled labor positions, the displacement of the Safeway store would also displace an active bottle return center. The store managers report over \$10,000 each week paid out through the returns.

This bottle return center provides an opportunity for individuals to generate income, which may supplement other employment or may constitute some individuals' sole means of making a living. Many of these individuals could be unemployed, underemployed, transient, and potentially homeless.

The return center at Safeway provides a service to economically disadvantaged citizens of the immediate neighborhoods. However, the return center limits each patron to only \$7.20 in returns per day. The displacement of the center potentially constitutes an adverse and disproportionate effect to low-income EJ communities. There are other locations where bottles can be returned on the island and in north Portland. Many of these smaller establishments (such as convenience marts) also enforce limits on the number of bottle returns per visit. However, as long as these businesses continue to operate and proper access to them is maintained, displacement of the return center at Safeway would not result in a high degree of impact.

ROCKWOOD NEIGHBORHOOD – LONG-TERM LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

The Ruby Junction Light Rail Maintenance Facility is located in the southeast corner of the Rockwood Neighborhood in Gresham, Oregon. Census data from 2000 (Block Group 1, CT 98.01) for the area surrounding the Ruby Junction site indicates that 55 percent of the residents are minority and 35 percent have incomes below the poverty line. Census Tract 98.01 (which is not as specific to the impact area as the block group) suggests similar levels of minority and low-income households. Since 2010, the percentage of both has risen. When compared to the CRC main project area, these data indicate that the expansion of the Ruby Junction facility could result in a disproportionate impact to low-income or minority populations.

As a result, the project team surveyed the residents and business owners that would be displaced or partially displaced by the expansion at Ruby Junction to determine whether those impacted by the project match the demographic characteristics of population in the area. The survey shows that the nine

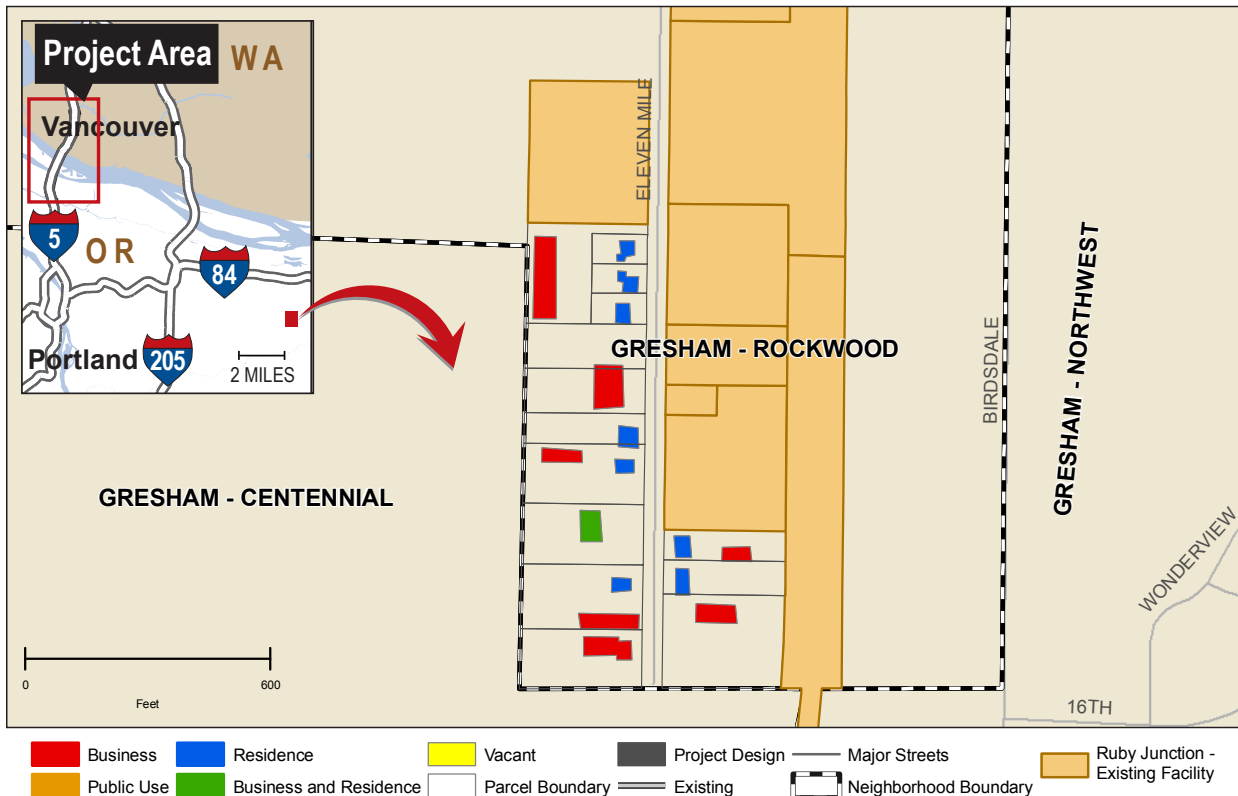
occupied residences that would be displaced differ somewhat from the characteristics of the surrounding Census Block Group as a whole. Four displaced households are minority (44 percent), with three of the four households being Hispanic. Five residences indicated Caucasian race and one indicated some other race alone. Additionally, two of the nine residences (or 22 percent) potentially earn incomes below the poverty level, based on the number of occupants in the household and the total annual income reported. These surveys indicate that fewer EJ populations would be impacted than would be expected from Census data. However, the minority composition of those who would be displaced is higher than the minority composition of the county and higher than the project area. The project would provide relocation assistance to these households. In many cases, the relocation package would include housing subsidies or other assistance. These efforts would greatly minimize the impact. These displacements do not represent a disproportionate impact when compared to the census data for the surrounding area. Also, when considered together with other project acquisitions, the displacement of these households does not result in an overall disproportionality among the project’s residential displacements.

For information regarding the availability of replacement housing near the Rockwood Neighborhood, please see Section 3.3 and the Acquisitions Technical Report, included as an electronic appendix to this FEIS.

Exhibit 3.5-17 shows displacements within the Rockwood neighborhood.

Exhibit 3.5-17

Displacements Within the Rockwood Neighborhood



Note: LPA full build and LPA with highway phasing result in the same displacements. Dimensions are approximate.

OREGON – INDIRECT EFFECTS OF LPA ON ENVIRONMENTAL JUSTICE POPULATIONS

Investment and redevelopment on Hayden Island could result in a rise in property values, increased rents, and demographic changes frequently characterized as “gentrification.” This could result in potential indirect effects to EJ populations. If low-income renters were forced to move because rents increased on Hayden Island, this could result in adverse effects.

The City of Portland has adopted goals and policies that are supportive of affordable housing and a mix of housing types. The Housing Authority of Portland works to maintain affordable units in the city through voucher programs and the development of new affordable housing units. Such policies and actions should act to diminish the potential for adverse indirect effects to low-income renters. As a result, EJ populations are not anticipated to experience disproportionately high and adverse effects from the project’s induced effects.

WASHINGTON – LONG-TERM LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

In the Esther Short, Shumway, and Arnada neighborhoods, the project team surveyed the households that would be displaced from permanent right-of-way acquisition and by the light rail alignment. The Shumway neighborhood has similar race and ethnicity demographics as the county and city, with a slightly higher percentage of the population below the poverty level. A demographic survey of the homes to be displaced indicated that the residents do not qualify as EJ populations.

In the Arnada neighborhood, surveys were completed for four of the five households that would be displaced, and not all of the questions were answered on every survey. One household reported an income level below the federal poverty level. None of the households reported minority status. These displacements, when assessed apart from the project’s other displacements and based on available data, would not include disproportionate numbers of minority or low-income households. Given these characteristics, the residential displacements and partial acquisitions that would occur in Washington do not represent disproportionate adverse impacts to EJ populations.

WASHINGTON – INDIRECT LPA EFFECTS ON ENVIRONMENTAL JUSTICE POPULATIONS

Similar to the potential on Hayden Island, investment and redevelopment in downtown Vancouver could result in a rise in property values, increased rents, and demographic changes frequently characterized as “gentrification.” This could result in potential indirect effects to EJ populations. If low-income renters were forced to move because rents increased in downtown, this could result in adverse effects.

The City of Vancouver and the Vancouver Housing Authority work to maintain affordable units in the city through voucher programs and the development of new affordable housing units.

Environmental Justice Effects of Tolling

Payment of the new highway toll would require a higher proportion of income for lower income drivers than for higher income drivers. However, when considered in combination with the other elements of the project, the impact would not be high and adverse. Benefits of the project include shorter highway travel times, less congestion, extended light rail transit service, more reliable commute trips, reduced crashes, no bridge lift interruptions, increased access to employment, housing, education and services, and improved biking and walking facilities. There would also be toll-free options for crossing the river, including transit, carpooling, biking or walking, and crossing on I-205. The toll rate is also reduced during the off-peak travel times.

The project team reviewed the available research to inform the environmental justice impact evaluation. Several academic studies have been conducted on equity and tolling. WSDOT also conducted research on tolling equity for various projects. This research included reviews of case studies of tolled facilities throughout the United States that employ a variety of tolling schemes. The LPA will be used by residents of both Oregon and Washington. Commuter patterns and tax structures between the states differ, making evaluation of equity issues challenging. Some of the common findings of previous studies on equity issues in tolling are highlighted below.

The University of Washington and the Washington State Transportation Center published in 2009 a research paper entitled “The Impacts Of Tolling On Low-Income Persons In The Puget Sound Region.” The paper starts with the assertion that “Tolls may be progressive, regressive, or neutral, depending on the social and geographic characteristics of the town or region and the structure of the tolling regime. The distributional effects must be evaluated on a site and project specific basis.”

Tolling schemes to provide needed improvements to infrastructure would supplant existing revenue generation methods, which are also largely regressive. The UW research agreed that the existing system of road financing is regressive. The report cited a research paper by Genevieve Giuliano which found five of the six taxes supporting the existing highway system are themselves regressive (Giuliano 1994).

In “International Experiences with Congestion Pricing” (May 1993), Anthony May considers the equity component of congestion pricing. He cites older studies which argue that congestion pricing is a regressive measure that has greater impacts on lower-income drivers, but indicates this population is more likely to travel by bus or foot. May concludes that the most inequitable effects are dependent on the pricing scheme implemented and would likely impact a small percentage of lower-income drivers. He suggests that the only way to address the issue of equity is to invest some of the toll revenue in public transport rather than solely to improve the road infrastructure. The LPA includes substantial improvements to transit as well as bicycle and pedestrian facilities.

It should be noted that the income from most jobs which require a five day week and typical business hours would lift a single person, or a small family, above the poverty level. In other words, few drivers who are commuting daily during peak hours are below the poverty level, and thereby addressed by Executive

Order 12898 on Environmental Justice. For example, an employee working even minimum wage (\$8.55 in Washington State), full-time, has an annual income of \$17,784. This income would raise an individual above the poverty line, even if that individual was the only wage earner and had a dependent child; with two children the poverty level is slightly higher, at \$18,310.⁶

As stated above, tolling schemes would supplant existing revenue generation methods, which are also largely regressive (Giuliano 1994). However, revenue generation mechanisms, such as sales tax and gasoline tax, which have become commonplace, are less subject to popular criticism than a newly proposed toll. For large public projects, such as CRC, public opinion is important. The Washington State Comprehensive Tolling Study, Background Paper #4 states, “Public Opposition has been the overriding factor in tolling projects that have failed to come to implementation, rather than a technical evaluation of equity” (WSTC 2006). In a study prepared for the Washington State Transportation Commission, public opinion was found to be generally supportive of tolls, even when asked about equity issues. Respondents asked about fairness to lower income groups indicated that tolls were more fair than increased gas taxes (Lawrence 2006).

Existing electronic toll collection systems with transponders present various hurdles for low-income users. One must normally either pay a deposit or link the account to a credit card or bank account (Parknay 2004). Some low-income populations may not be able to purchase a transponder (Parknay 2004). Not being able to purchase a transponder due to large set-up fees or lack of a credit card and/or bank account would be an adverse impact on those low-income populations affected. In addition, tolls would be higher without a transponder, further increasing the burden. A similar barrier may exist when new tolls are instituted in areas where some groups and individuals lack the English language skills to understand the complex tolling system. These impacts would be mitigated through outreach in multiple languages, education campaigns and close coordination with social service and other agencies.

3.5.6 Temporary Effects

On-site Construction

Neighborhoods in the project area would experience temporary effects from construction of the CRC project. These effects would generally increase with proximity to construction, and could include:

- Noise and vibration from construction
- Dust and emissions from construction
- Traffic delays, detours, and traffic spillover into neighborhoods
- Property easements for temporary construction staging areas
- Sidewalk disruptions and closures (which could impede access and mobility for disabled persons)

Neighborhoods near the site of major bridge construction activity, such as Hayden Island and Esther Short, would experience some of these effects intermittently over several years. Roadway and transit construction effects in other areas would cause traffic disruption and noise intermittently for several months.

⁶ According to 2009 Federal Poverty Guidelines.

Section 3.3, Acquisitions, details the numerous temporary easements that will be required to reconstruct sidewalks, build retaining walls, etc. None of these temporary easements would adversely affect neighborhood cohesion or livability, though individual residents will be impacted.

Off-site Staging Areas and Casting Yards

The following sites are proposed as staging areas or casting yards:

- Port of Vancouver Parcel 1A site
- Red Lion at the Quay Hotel site
- Vacant Thunderbird Hotel site on Hayden Island
- Port of Vancouver Alcoa/Evergreen West site
- Sundial site between Fairview and Troutdale

Most neighborhoods would not experience impacts from the project's use of these staging and casting yards. The Esther Short and Hayden Island neighborhoods would experience some temporary impacts due to the Red Lion and Thunderbird Hotels' proximity to these more densely populated areas. The Esther Short and Hayden Island neighborhoods may experience temporary noise impacts from the movement of construction equipment and construction materials to and from the site. These neighborhoods may also experience a temporary increase in truck traffic traveling to and from these sites.

Temporary Effects on Environmental Justice

Construction impacts that would impact EJ populations in the project area include congestion, reduced mobility, reduced transit service, air emissions, and increased noise. Temporary congestion during construction may also have an impact on EJ populations and the organizations that serve them. EJ populations rely more on transit, which could be affected by construction-related congestion.

3.5.7 Mitigation or Compensation for Neighborhoods

Several options have been considered to mitigate the project's adverse effects for neighborhoods and EJ populations. The following discusses those measures which are included with the LPA.

Mitigation for Displacements

As the project moves into final design, the project team will continue to work to minimize displacement and relocation impacts to residences, businesses, and public facilities. Most aspects of mitigation for property acquisition, when displacement cannot be avoided, are addressed by federal and state regulations that require property to be purchased at fair market value and all residential displacements to be provided with replacement housing and relocation assistance (see Section 3.3, Property Acquisitions and Displacements, for details). Federal regulations and state statutes, such as the Uniform Relocation Act, determine the standards and procedures for providing such replacement housing, based on the characteristics of individual households. Relocation benefit packages usually 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. As with residential displacements, relocation packages are determined on an individual basis based on ownership or tenant status. Eligibility and terms of relocation assistance would be determined during future project planning. Displacement of residents and community resources would be mitigated by exploring relocation options within their neighborhoods to reduce impacts to residents and avoid the loss of these resources to their communities. The project will work closely with households that have limited English proficiency or any unique circumstances that could lead to disproportionate adverse effects from relocations.

Impacts to the floating home community on Hayden Island would be mitigated by relocating displaced homes and/or residents. Ideally, relocations would be near their original location, although this may not be possible in every case. Very few floating home slips in the metropolitan area are vacant, and there is no certainty of a future increase in the number of marinas. Even if there were sufficient spaces available, there could still be difficulties with relocation because the displaced floating homes may not physically fit in the available slips or may not meet architectural design standards at other marinas. Relocation assistance programs for floating home residents would include provisions for addressing inconsistencies with new slip sizes and standards. See Section 3.3, Property Acquisitions and Displacements, of this FEIS for more details on relocation assistance.

Mitigation for Loss of Community Resources and Neighborhood Cohesion

During construction, the DOTs would work with TriMet to maintain the existing bus service that regularly connects Hayden Island with nearby grocery and other retail services. This would include additional routing on the island to provide greater transit access during construction. DOTs would also work with TriMet to maintain paratransit service for qualifying, mobility-impaired Hayden Island residents.

In the Central Park neighborhood, long-term impacts to the Clark College Athletic Annex, which consists of meeting rooms, storage, and surface parking for the recreation fields, would be mitigated as follows:

- Establishing a shared parking arrangement for use of the parking spaces in the new park and ride facility to compensate for lost parking, including the replacement of any disabled parking.
- Constructing a pedestrian connection between the park and ride and the recreation fields.
- Planting tall landscaping to visually screen views of the parking structure from the fields.

The long-term impacts to the Marshall Community Park and Center and Luepke Senior center would be mitigated by aligning the access to the community center on either side of the light rail station with signalized intersections to facilitate safe traffic, bicycle, and pedestrian (including for disabled pedestrians) movements to and from the community center. Parking mitigation would include redesign of the existing lot to maximize the number

of spaces, replacement of any disabled parking and shared use of the park and ride facility across McLoughlin Boulevard.

In the Columbia Way neighborhood, mitigation for Waterfront Park would include the addition of open space under the new bridge, along with the extension of the waterfront trail to provide better connections from both the east and west sides of the bridge.

See Section 3.7, Parks and Recreation, for more information on mitigation for Leverich Park in the West Minnehaha neighborhood and for the Discovery Middle School/Kiggins Bowl in the Lincoln neighborhood.

Mitigation for Noise Impacts

With noise mitigation, in the form of sound walls for highway noise, Residential Sound Insulation for light rail transit noise, and direction shrouds for light rail transit crossing warning bells, few properties would continue to be affected by increased noise levels (Section 3.11).

Mitigation for Temporary Effects

Measures for minimizing and/or mitigating temporary effects on neighborhoods would include:

- Providing effective detours that minimize out-of-direction travel and delays for travelers, including pedestrian, bicyclists and persons with disabilities.
- Maintaining transit service where possible throughout the construction phase.
- Using best management practices (BMPs) to reduce noise, dust, and vehicle emissions during construction (Section 3.10, Air Quality).
- Using existing or newly acquired right-of-way for construction staging to minimize additional temporary property acquisitions.
- Communicating information and obtaining feedback about construction activities, impacts, and mitigation throughout neighborhoods.

3.5.8 Mitigation or Compensation for Environmental Justice

Mitigation for Loss of Service Industry Jobs

Mitigation for loss of service industry jobs would consist of programs developed prior to construction to promote the use of local workers by utilizing apprenticeships and job training programs. Federal funding does not allow for preferential treatment of local firms in contracting. However, the project will provide outreach to local contractors and job training programs. A monitoring and evaluation program would be necessary to track these measures through final design, construction, and operation for the facilities to ensure the benefits of promoting participation from minority-owned businesses are realized.

The project would provide written and posted guidance before the closure of the Safeway return center, including directions to other locations on the island that accept returns, and directions to larger, off-island bottle return centers.

Mitigation for Tolling

Several strategies would mitigate the potential impacts of tolling on low-income populations. Impacts would be greatly offset by the increased transit service and reliability, and the substantial improvements made in the bike and pedestrian network. Educational materials would be made available that explain how tolling and transponders work. All such communications would be made available in selected non-English languages, as appropriate. C-TRAN offers programs that assist low-income populations and people with disabilities to obtain a reduced transit fare. TriMet offers similar programs that assist senior and disabled populations using transit.

For the CRC project, mitigation for low-income and minority populations that need to purchase transponders would include:

- Providing information about transponders in multiple languages.
- Locating venues for acquiring transponders near to minority and lower income neighborhoods. The project would partner with public agencies and public service providers to identify locations which are convenient to low or lower income neighborhoods and are accessible by multiple modes of travel. Public buildings near the I-5 corridor (such as the City of Vancouver offices) would provide transponders.
- Enabling people without credit cards or checking accounts to obtain transponders by paying with cash or with Electronic Benefit Transfer (EBT) cards, which are issued for federal program benefits. WSDOT has coordinated closely with other agencies in Washington State, and the EBT, Quest cards can be used for transponder acquisitions. ODOT will work to enable the Oregon Trail Cards to be used for transponder acquisition in Oregon.
- Sharing information with and through other public service providers.
- Training social service workers with information about the tolling system to aid social service workers in sharing accurate information with clients.

Mitigation for Temporary Effects

The same measures for minimizing impacts of temporary effects to neighborhoods would be used to minimize impacts to EJ populations and the businesses that service them. These measures would also include communicating information and obtaining feedback about construction activities, impacts, and mitigation at low-income housing sites and through social service providers. The project will also focus outreach to populations with limited English proficiency and to those with health conditions or other special circumstances that may increase their susceptibility to construction-related impacts.

3.5.9 Environmental Justice – Final Determination

Summary of Environmental Justice Impacts

The preceding sections have documented impacts to neighborhoods and EJ populations and have summarized the outreach related to these impacts. As described in this section, and summarized below, the project will not have a high, adverse, and disproportionate effect on EJ populations.

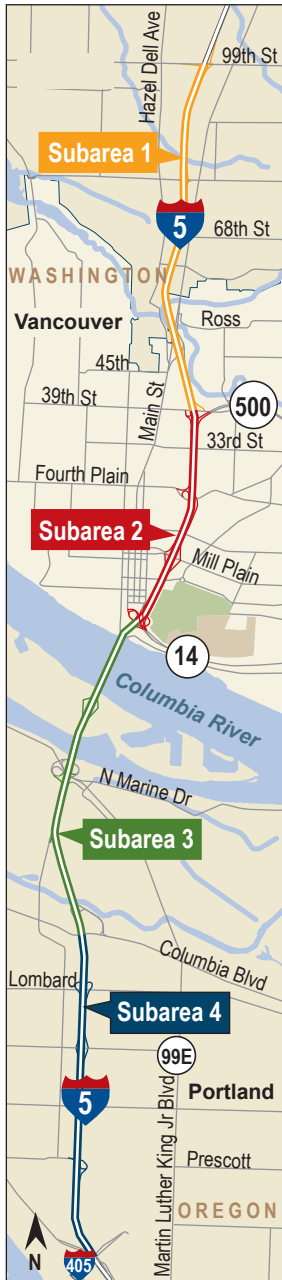
- Residential Displacements – For the entirety of the residential displacements, data do not indicate disproportionate/discriminatory impacts to EJ populations:
 - Thirty-two floating homes in North Portland Harbor – Data do not indicate disproportionate impacts to EJ populations.
 - Three floating homes off of the Oregon mainland and two residences on land – Data do not indicate disproportionate impacts to EJ populations.
 - Nine residences adjacent to Ruby Junction Maintenance Facility – Data indicate these households are 44 percent minority and 22 percent low-income, which is slightly lower than the percentage minority and the percentage low-income in the surrounding census tract. Therefore, data do not suggest disproportionate impacts for that area. Relocation packages would include housing subsidies or other assistance.
 - Six residential displacements in the Shumway neighborhood – Data do not suggest disproportionate impacts to EJ populations.
 - Two displacements in the Esther Short neighborhood – Census data indicate that this neighborhood has higher rates of low-income households than in the other study area neighborhoods. These two households did not return the demographic surveys, so a more specific conclusion cannot be made at this time.
 - Five single-family residences in the Arnada neighborhood – Data do not indicate disproportionate impacts to EJ populations.
- Non-residential Displacements:
 - Safeway grocery store and pharmacy on Hayden Island – Data do not indicate disproportionate impacts to EJ populations. However, people with disabilities or mobility limitations who live near the Safeway would be impacted as they would need to travel further for these services. Preliminary development plans submitted to the City of Portland indicate that another grocer may open as part of the SuperCenter redevelopment. And, regardless of proportionality, the loss of the Safeway would constitute an adverse impact at a neighborhood level. TriMet provides paratransit services, called the LIFT program, which is a shared-ride public transportation service for people who are unable to use regular buses or trains due to a disability or disabling health condition. The displaced bottle return center may impact individuals below the poverty level who use this resource to earn money, though alternate return locations exist on the island. The project would greatly improve mobility from the island for all modes of travel. The project will post directions to other bottle return centers on the island.
 - Displacement of service industry jobs – Data indicate that these jobs may be held disproportionately by minorities. Though full-time employment raises most households above the poverty level, there may be part-time employees or employees who are heads of large households with incomes below the poverty level. It is also expected that many of these displaced employers will relocate rather than close, so there would be opportunities for current employers to retain jobs. These impacts may also be offset by the creation of construction jobs and the jobs created to provide meals and other services to construction contractors.

- Other Impacts:
 - Noise impacts at sites with subsidized and market-rate housing
 - The LPA reduces the number of noise impacts throughout the project area. However, the following properties will have noise levels that meet or exceed the impact thresholds. At the Normandy Apartments, noise levels for six units will exceed the FHWA noise standard, The increase in noise is slight for three upper-story units and the noise levels are reduced at the other three units. At the Fort Apartments, 12 units currently exceed noise levels and would continue to exceed FHWA noise standards with the LPA. Noise levels at the Evergreen Retirement Inn would also exceed FHWA noise thresholds, but the increase is barely perceptible. Noise levels would exceed the standard at different locations and for households with varied demographics; and data do not indicate disproportionate impacts to EJ populations.
 - Traffic – There would be numerous improvements to traffic operations, I-5 throughput, peak period congestion, travel times, and transit service. Data do not indicate disproportionate impacts to EJ populations.
 - Air quality – Air quality would substantially improve compared to existing conditions, and would generally improve slightly more with the LPA than with the No-Build. Data do not indicate disproportionate impacts to EJ populations. Mobile source air toxics (MSATs) are discussed in detail in Section 3.10, Air Quality. As shown in that section, large declines in MSAT emissions are forecast over time for all build alternatives and for the No-Build Alternative. These declines will be primarily driven by advances in cleaner fuels and emission control technologies for vehicles, advances that are independent of the CRC project. Differences in 2030 MSAT emissions among the project’s build alternatives are extremely low—1 percent or less.

For three of the four project subareas, all criteria pollutant and MSAT emissions would be lower under the LPA than the No-Build Alternative (Exhibit 3.5-18). Although Subarea 2 shows substantial emissions reductions in the future relative to existing conditions, the LPA would result in less reduction than the No-Build Alternative for some pollutants. Specifically, the LPA would result in higher carbon monoxide and nitrogen oxide emissions in Subarea 2 than the No-Build Alternative, although the difference is small (less than 5 percent). For VOCs, particulate matter, and MSATs in Subarea 2, LPA emissions tend to be slightly lower than or comparable to those under the No-Build Alternative.

- Payment of tolls – A toll, much like other common revenue-generating measures, including the federal and state gas taxes, is regressive, costing low-income commuters the same rates as commuters with moderate or high incomes. However, the toll would not constitute a disproportionately high and adverse impact to EJ populations. The project includes the extension of light rail transit and other transportation improvements that would substantially offset this impact.

Exhibit 3.5-18
Subareas for Air Quality



Not to scale.

- Acquiring tolling transponders – Without mitigation, the acquisition of transponders would be disproportionately challenging for low-income commuters and those with limited English proficiency. The project would mitigate this impact with outreach campaigns and with programs allowing the use of EBT cards for purchases.

The project would not have disproportionately high and adverse impacts on EJ populations. Six questions based on guidance from FHWA were addressed and analyzed to help determine impacts.

Question 1: Would the project, using any of the alternatives, result in disproportionately high and adverse impacts?

The I-5 CRC project would result in a variety of environmental impacts throughout the project area, both positive and negative. This FEIS has documented direct impacts such as property acquisitions as well as secondary impacts such as those related to noise, air quality changes, tolling, etc. For negative impacts, implementation of proposed mitigation measures would eliminate or substantially reduce the negative impacts.

EJ populations within the study area will benefit from greatly enhanced transit service as well as significant improvements to the bike/pedestrian system and mobility and safety on the highway. The project also results in lower noise levels and improved air quality within the study area. Although impacts to EJ populations would occur, most of them would be avoided, minimized, or mitigated. Some of the initial impacts identified in the DEIS have already been avoided or greatly minimized. Where impacts cannot be avoided, specific mitigation would be implemented based on the needs of the affected individuals or community. Please see the answers for Questions 3 and 4 for additional details.

Question 2: Does the project 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?

No. In the DEIS, there was considerable discussion of a potential displacement of the Wellness Center in Vancouver. This resource is especially important to low-income persons with needs for mental health services. Since the selection of the LPA, and the refinement of its design, the Wellness Center would not be displaced by the project.

Overall, low-income housing sites and developments would experience generally improved travel conditions, noise, and air quality with the LPA. No low-income housing sites would be displaced.

Question 3: Would the project result in disproportionately high and adverse impacts that would be predominately borne by a minority or low-income population?

If the project's electronic toll collection method required users to pay large set-up fees or own a credit card or bank account, some low-income populations may not be able to purchase a transponder. Not being able to purchase a transponder would potentially be a disproportionately adverse impact on those low-income populations. The impacts would be mitigated with a program established specifically to provide assistance, enable use of EBT cards, and communicate regarding tolling system usage to Limited English Proficiency (LEP) populations.

The displacement of the Safeway store would also displace a very active bottle return center. This recycling center provides an opportunity for community members to generate a small amount of income, which may supplement other employment or may constitute some individuals' sole means of income. But, there are other locations where bottles can be returned on the island and in North Portland.

Question 4: Would the project 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?

No, there would not be disproportionately high and adverse impacts on an EJ population that would be appreciably more severe or greater in magnitude than would be suffered by the non-EJ population. Though the toll would constitute a proportionately higher percentage of a low-income household's income, it has not been found that it would be "appreciably more severe." The cost of the toll would be offset by other factors, as discussed in this section, and would replace other, similarly regressive revenue generation methods.

Question 5: Does the project propose mitigation?

Yes. As discussed above.

Question 6: Are there project benefits that would accrue to EJ populations?

Yes, benefits that would accrue to EJ populations include new and reliable high-capacity transit service, improved travel times on I-5, improved vehicle, bicycle and pedestrian travel, and improvements in air quality and noise levels (in most locations). The decrease in transit travel time and increase in transit reliability would be a key benefit for all the traveling public, but particularly for low-income people who ride transit proportionally more than those with higher incomes.

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