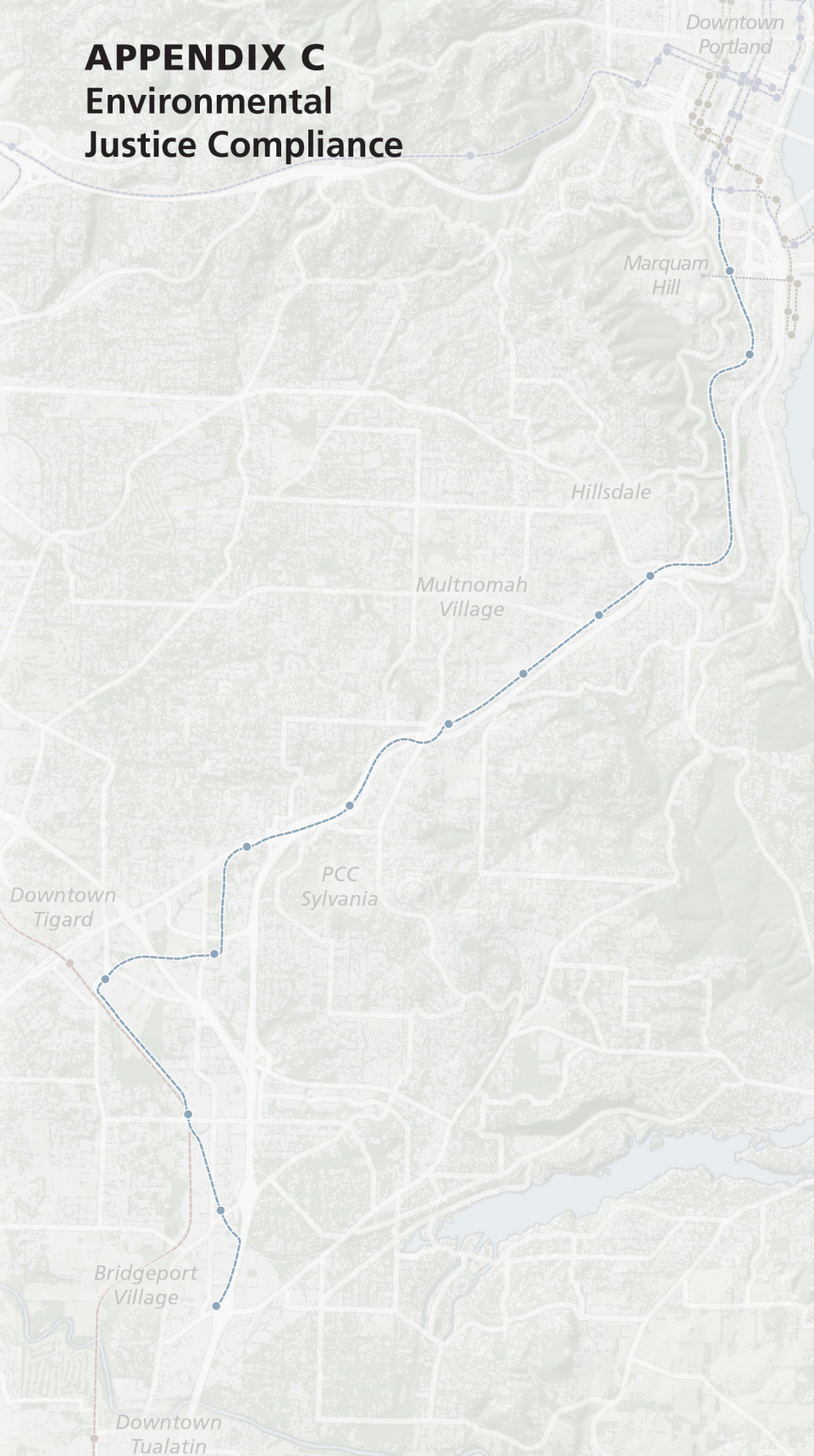


## APPENDIX C Environmental Justice Compliance



## APPENDIX C – ENVIRONMENTAL JUSTICE COMPLIANCE

This appendix describes the analysis and public outreach conducted to identify and engage minority and low-income populations in the planning and development of the Southwest Corridor Light Rail Project (Project), and to assess the Project’s potential impacts and benefits on those populations.

This appendix has been updated since the Draft Environmental Impact Statement (EIS) to focus on the definition of the Project in this Final EIS, including the Preferred Alternative, the terminus options and the related transportation improvements. This appendix also includes more recent data sources identifying minority and low-income populations in the study area, as well as data that look at the change in these populations over time. Section C.7 of this appendix has been added since the Draft EIS to summarize comments related to environmental justice that were received during the Draft EIS comment period.

### C.1 Regulatory Framework

The Project’s efforts are in accordance with Presidential Executive Order 12898, Federal Actions to Address Environmental Justice to Minority Populations and Low-Income Populations (February 11, 1994); the U.S. Department of Transportation (USDOT) Order 5610.2, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (April 15, 1997); and the USDOT Order 5610.2(a) (May 2, 2012) updating the USDOT policy to consider environmental justice principles in all programs, policies and activities. The environmental justice policies of the USDOT agencies, including the Federal Transit Administration (FTA), are summarized below. The agencies are to:

1. avoid, minimize and mitigate disproportionately high and adverse effects on minority and low-income populations
2. ensure full and fair opportunities for public involvement by members of minority and low-income populations during the planning and development of a proposal involving federal action (including the identification of potential effects, alternatives and mitigation measures)
3. prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

FTA environmental justice policy guidance (FTA Circular C 4703.1) defines a disproportionately high and adverse effect as one that:

- is predominantly borne by a minority or low-income population, or
- will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

The USDOT Order 5610.2(a) also provides guidance that “[i]n making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancement measures that will be implemented and all offsetting benefits to affected minority and low-income populations may be taken into account, as well as the design, comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas” (USDOT 5610.2(a) Section 8(b)).

The environmental justice engagement and analysis for the Project also considered the following federal regulations, policies and guidance:

- Title VI of the Civil Rights Act of 1964
- Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended
- Presidential Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency
- Title 42 United States Code (USC) Section 4601, Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended
- Title 49 of the Code of Federal Regulations (CFR) Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964
- USDOT FTA, Circular FTA C 4702.1B, Title VI Requirements and Guidelines for Federal Transit Administration Recipients (October 1, 2012)
- Community Impact Assessment: A Quick Reference for Transportation, Publication No. FHWA-PD-96-036 (September 1996)

## **C.2 Defining Environmental Justice Populations**

### **Minority Populations**

Under USDOT Order 5610.2(a), a minority person includes persons who meet the following criteria:

- Black or African American: a person having origins in any of the black racial groups of Africa
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race
- Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia and the Indian subcontinent
- American Indian/Alaskan Native: a person having origins in any of the original people of North and South America (including Central America) and who maintains tribal affiliation or community attachment
- Native Hawaiian or other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa or other Pacific Islands

This analysis also considers minority populations to include persons who respond to the race question on a census questionnaire by selecting two or more races or “some other race.” Such responses would include write-in entries such as multiracial, mixed, interracial or a Hispanic or Latino group (for example, Mexican, Puerto Rican, Cuban or Spanish).

### **Low-Income Populations**

A low-income person is defined by FTA as a person whose annual household income is at or below the U.S. Department of Health and Human Services poverty guidelines. FTA encourages the use of a locally developed threshold, provided that the threshold is at least as inclusive as that federal threshold (FTA Circular C 4703.1). This analysis uses Metro’s regionally adopted definition of low income, which is

200 percent of the federal poverty level. For a family of four in 2018, this regional threshold was \$50,200 (compared to \$25,100 under the federal guidelines).

### C.3 Study Area

The study area for the environmental justice analysis is generally defined as the area within 0.5 mile on either side of the light rail alignment for the Preferred Alternative. The 0.5-mile area on either side creates a 1-mile study area along the corridor and incorporates the census tracts that it intersects, which are referred to as “study area census tracts” throughout this appendix.<sup>1</sup> The related transportation improvements also fall within the presented study area census tracts.

A 0.5-mile area on either side of the alignment accords with the service availability standard in FTA Circular 4702.1B, which denotes that passengers will generally walk up to 0.5 mile to a light or heavy rail station. This 0.5-mile area also encompasses the study areas used for the environmental analysis evaluated in the EIS, particularly the land use study area, which includes an area of 0.5 mile around each light rail station. Moreover, the FTA Circular 4703.1 indicates it is a reasonable when analyzing the impacts of the entire rail line to use a geographic unit of 0.5 mile on either side of the alignment.

### C.4 Data Sources

To characterize the affected environment and consider impacts, Metro followed the methodology defined in the *Analysis Methods for the Southwest Corridor Light Rail Project Environmental Impact Statement* (Metro, 2017), and used the resulting information developed as part of all environmental topics and reported in the Draft EIS and this Final EIS. Metro also considered reports, documentation and data from local, state and federal agencies. The analysis used the following key data sources:

- U.S. Census Bureau 2008–2013 and 2014–2018 American Community Survey (ACS) data on racial and ethnic identity and income levels for residents within the study area census tracts and the overall region<sup>2</sup>
- local service organizations such as Centro Cultural de Washington County and HAKI Community Organization, used to supplement demographic information with client demographics and to conduct focused outreach for project planning and engagement
- information from prior public and environmental-justice-specific outreach to help verify findings, supplemented by ongoing public outreach for the EIS
- information about existing and planned low-income housing projects that are within the study area, based on records of public housing authorities (Home Forward, Multnomah Housing Authority, Washington County Housing Services and others)

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<sup>1</sup> Census tracts are small, relatively permanent statistical subdivisions of a county and average about 4,000 inhabitants. Census tracts, rather than census blocks or groups, were used for this analysis to provide for the lowest margin of error.

<sup>2</sup> Based on the U.S. Census Bureau data, the Project mapped the most recent American Community Survey (ACS) 5-Year Estimates (2014 to 2018) for study area census tracts, which are entirely or partially in the study area’s 0.5 mile on either side of the light rail alignment. The environmental justice analysis considers the proportions of minority and low-income populations in the study area census tracts compared to the regional rates (based on the Metropolitan Planning Area boundary), as well as the change in these proportions over time. The analysis also considers the density of minority and low-income populations in the study area, because some areas, such as the Tigard Triangle, have a relatively high proportion of minority or low-income populations but have lower overall population densities.



- information about other baseline environmental conditions for transportation, land use, economics, noise and vibration, air quality and greenhouse gases, visual quality, public services, safety and security, and parks and recreation resources

## **C.5 Environmental Justice Populations**

### **Minority Populations**

Minority populations residing within the study area is predominantly Hispanic or Latino, African American, American Indian/Native Alaskan and Native Hawaiian/Pacific Islander. Minority residents represent 22.9 percent of the total population in the study area census tracts, which is lower than the overall regional rate of 29.2 percent, but there are some census tracts along Interstate 5 (I-5) and Highway 217 that have higher percentages than the regional average (see Figure C-1 and Table C-1). Areas with percentages of minority residents or specific minority groups that are similar to or greater than the regional average are:

- near downtown Portland
- west of SW Barbur Boulevard in the Hillsdale and Homestead neighborhoods
- along I-5 and SW Barbur Boulevard (Bridgeport Village, Downtown Tualatin, West Portland Park, Far Southwest, Ashcreek, Crestwood, Multnomah and Markham neighborhoods)
- Tigard, specifically to the north of the Tigard Triangle along Highway 217 in the Washington Square area, and along Pacific Highway (99W)
- near SW Hall Boulevard in Durham

Figures C-2 and C-3 provide additional characteristics of the minority population within study area census tracts. Figure C-2 displays the distribution and density of the minority population, shown as dot clusters, where each dot represents five minority persons. Figure C-3 displays the percentage change of minority concentrations between 2013 and 2018 using the latest available ACS 5-Year Estimates data. As shown in Figure C-3, minority concentrations have increased near downtown Portland, near the South Waterfront along SW Macadam Avenue and south of I-5, and in the Mountain Park area north of Lake Grove. Minority concentrations have remained relatively stable or increased slightly along I-5. Minority concentrations have generally increased along Highway 217, except for the census tracts in and immediately adjacent to the Washington Square area, which experienced a 10 to 15 percent reduction in the minority population during this same period.

**Table C-1. Minority Population by U.S. Census Tract**

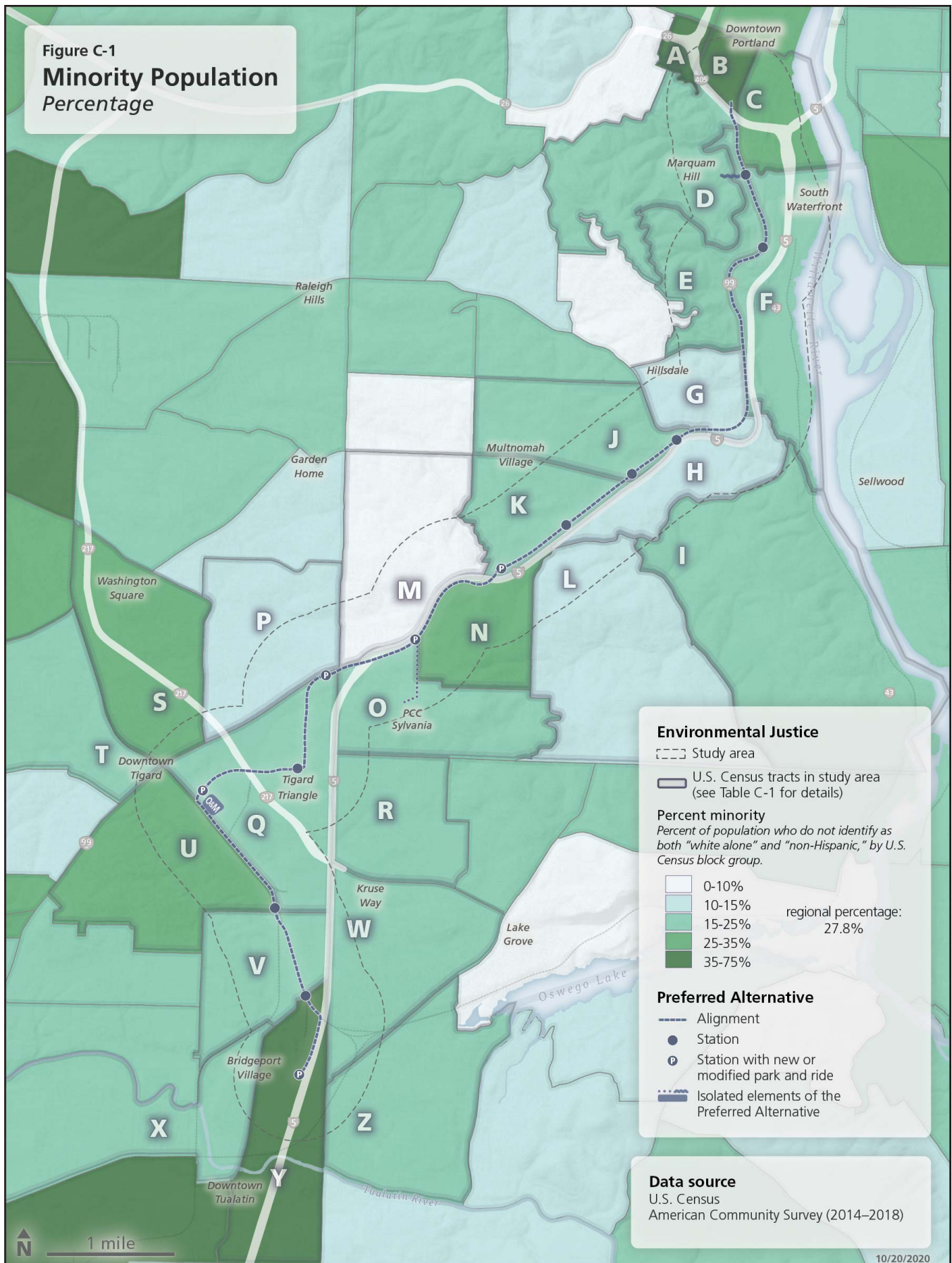
Tract Map ID	Census Tract	Total Population	Minority Population <sup>1</sup>	Disaggregated Minority Populations <sup>1</sup>											
				Black/ African American		Hispanic/Latino		Asian American		American Indian/ Native Alaskan		Native Hawaiian/ Pacific Islander		Other/ Two or More	
A	41051005500	3,008	1,152 38.3%	121	4.0%	242	8.0%	592	19.7%	0	0.0%	0	0.0%	197	6.5%
B	41051005600	6,634	2,457 37.0%	283	4.3%	710	10.7%	974	14.7%	27	0.4%	148	2.2%	315	4.7%
C	41051005700	3,760	999 26.6%	97	2.6%	253	6.7%	395	10.5%	26	0.7%	0	0.0%	228	6.1%
D	41051005800	4,833	839 17.4%	136	2.8%	133	2.8%	466	9.6%	0	0.0%	1	0.0%	103	2.1%
E	41051006001	1,541	236 15.3%	25	1.6%	92	6.0%	48	3.1%	0	0.0%	0	0.0%	71	4.6%
F	41051005900	8,366	2,040 24.4%	217	2.6%	781	9.3%	507	6.1%	0	0.0%	0	0.0%	535	6.4%
G	41051006002	2,348	302 12.9%	15	0.6%	96	4.1%	49	2.1%	0	0.0%	0	0.0%	142	6.0%
H	41051006200	3,153	450 14.3%	106	3.4%	117	3.7%	15	0.5%	6	0.2%	8	0.3%	198	6.3%
I	41051006300	5,525	1,256 22.7%	57	1.0%	441	8.0%	313	5.7%	5	0.1%	20	0.4%	420	7.6%
J	41051006602	5,782	1,036 17.9%	275	4.8%	151	2.6%	260	4.5%	14	0.2%	0	0.0%	336	5.8%
K	41051006502	4,673	789 16.9%	133	2.8%	187	4.0%	252	5.4%	12	0.3%	0	0.0%	205	4.4%
L	41051006402	5,866	829 14.1%	0	0.0%	208	3.5%	226	3.9%	0	0.0%	0	0.0%	395	6.7%
M	41051006501	6,219	592 9.5%	81	1.3%	95	1.5%	166	2.7%	0	0.0%	0	0.0%	250	4.0%
N	41051006403	4,185	1,348 32.2%	745	17.8%	290	6.9%	108	2.6%	0	0.0%	0	0.0%	205	4.9%
O	41051006404	3,811	745 19.5%	132	3.5%	136	3.6%	343	9.0%	0	0.0%	0	0.0%	134	3.5%
P	41067030600	5,360	630 11.8%	48	0.9%	222	4.1%	140	2.6%	15	0.3%	18	0.3%	187	3.5%
Q	41067030700	1,237	287 23.2%	0	0.0%	149	12.0%	66	5.3%	0	0.0%	0	0.0%	72	5.8%
R	41005020304	5,537	1,337 24.1%	92	1.7%	299	5.4%	732	13.2%	0	0.0%	85	1.5%	129	2.3%
S	41067030900	5,367	1,525 28.4%	173	3.2%	989	18.4%	101	1.9%	35	0.7%	197	3.7%	30	0.6%
T	41067031912	4,686	854 18.2%	4	0.1%	455	9.7%	228	4.9%	23	0.5%	0	0.0%	144	3.1%
U	41067030801	6,977	1,944 27.9%	100	1.4%	1,071	15.4%	215	3.1%	58	0.8%	15	0.2%	485	7.0%
V	41067030806	2,946	681 23.1%	18	0.6%	383	13.0%	142	4.8%	52	1.8%	0	0.0%	86	2.9%
W	41005020302	4,204	940 22.4%	9	0.2%	306	7.3%	453	10.8%	0	0.0%	0	0.0%	172	4.1%
X	41067032001	5,155	788 15.3%	11	0.2%	482	9.4%	114	2.2%	49	1.0%	0	0.0%	132	2.6%
Y	41067032005	4,875	2,637 54.1%	65	1.3%	2,149	44.1%	100	2.1%	2	0.0%	155	3.2%	166	3.4%
Z	41005020401	5,872	1218 20.7%	16	0.3%	444	7.6%	188	3.2%	208	3.5%	0	0.0%	362	6.2%
Study area percentage			22.6%		2.4%		8.76%		5.9%		0.45%		0.5%		4.7%
Regional percentage			27.8%		3.3%		12.1%		7.5%		0.5%		0.5%		4.4%

Source: U.S. Census Bureau (2018). American Community Survey 5-Year Estimates, 2014–2018.

Notes: Percentages in *italics with light shading* are one to two times the regional percentage for that population. Percentages in **bold with dark shading** are more than two times the regional percentage for that population.

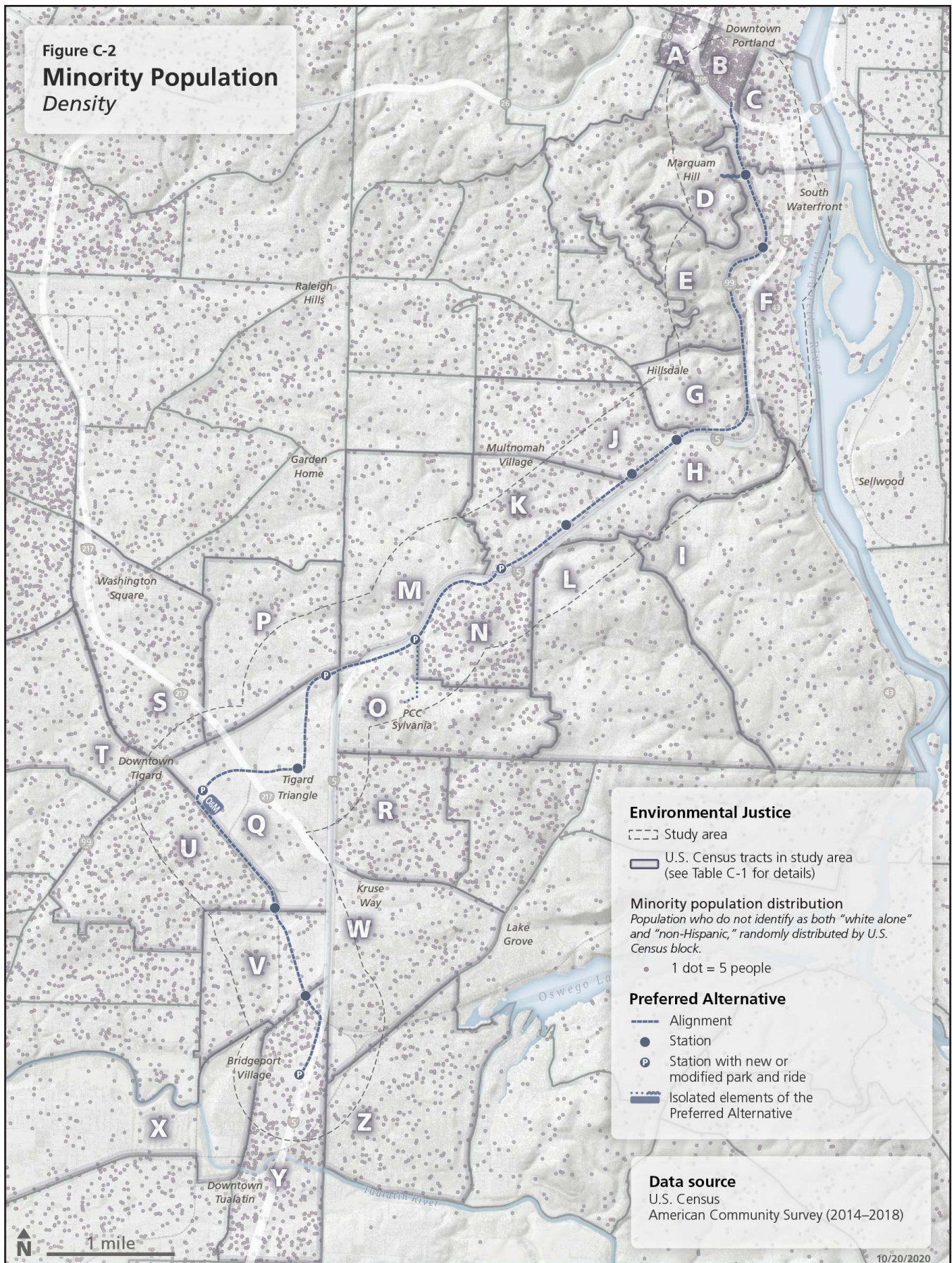
<sup>1</sup> See Section C.2 for the definitions of minority population. Disaggregated minority population values do not add up to the total minority population, because individuals may fall into multiple disaggregated populations.

**Figure C-1**  
**Minority Population**  
**Percentage**



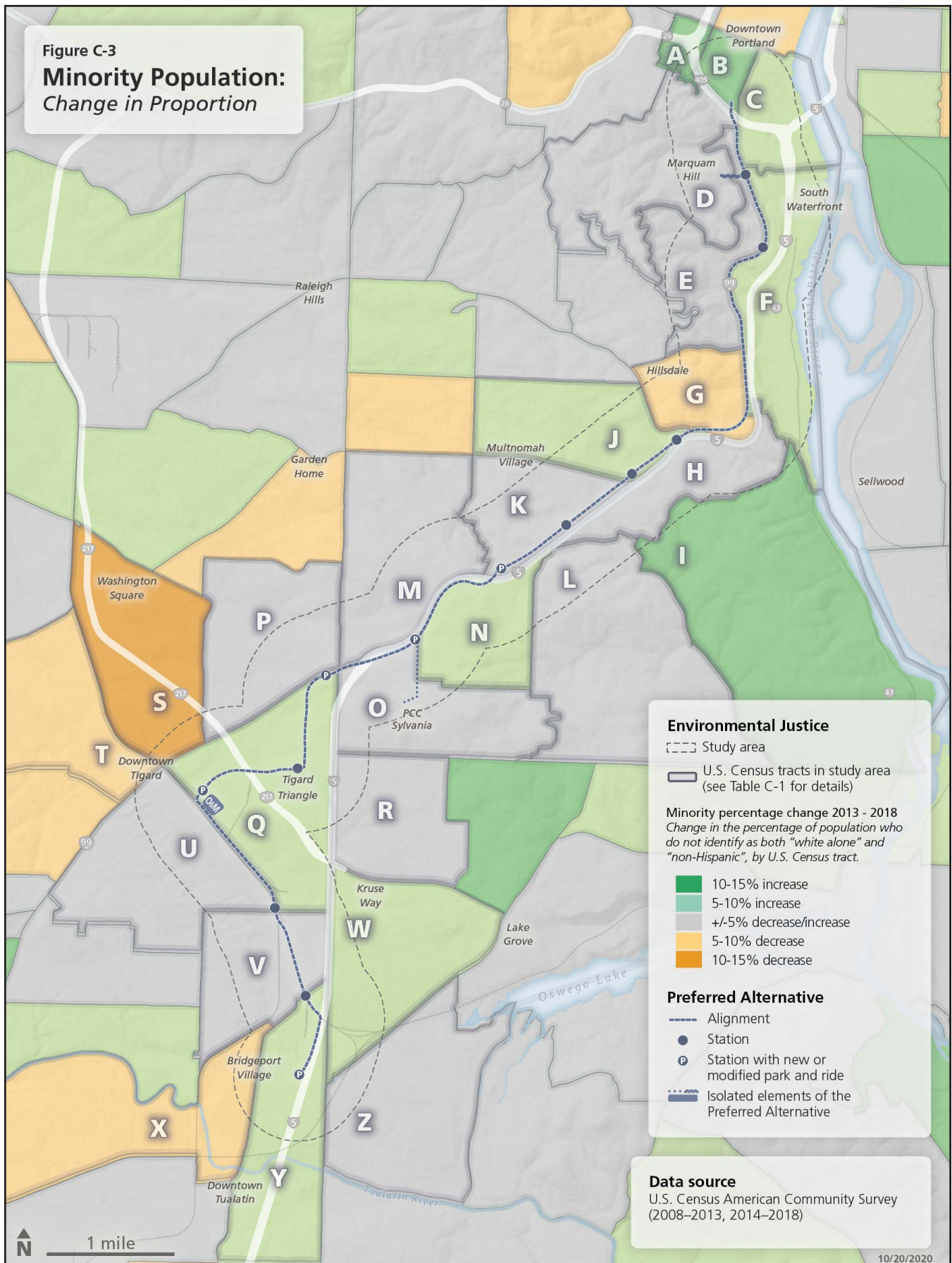


**Figure C-2**  
**Minority Population**  
**Density**





**Figure C-3**  
**Minority Population:**  
**Change in Proportion**



## Low-Income Populations

On a regional level, 29.6 percent of the population is low-income. In the study area census tracts, 26.0 percent of the population is low-income. Figure C-4 and Table C-2 identify the percentage of low-income population within study area census tracts. Areas in the study area with higher percentages of low-income population than the regional rate are:

- south of downtown Portland, between I-5 and SW Barbur Boulevard
- south of the Hillsdale neighborhood adjacent to SW Terwilliger Boulevard
- south of West Portland along I-5, northwest of I-5 around SW Capitol Hill Road
- within the Tigard Triangle, and in Tigard north of the Tigard Triangle between Highway 217 and Pacific Highway

**Table C-2. Low-Income Population by U.S. Census Tract**

Tract Map ID	Census Tract	Total Population	Low-Income Population <sup>1</sup>	
A	41051005500	3,008	1,767	58.7%
B	41051005600	6,634	4,782	<b>72.1%</b>
C	41051005700	3,760	868	23.1%
D	41051005800	4,833	896	18.5%
E	41051006001	1,541	252	16.4%
F	41051005900	8,366	1,919	22.9%
G	41051006002	2,348	208	8.9%
H	41051006200	3,153	423	13.4%
I	41051006300	5,525	1,883	34.1%
J	41051006602	5,782	1,802	31.2%
K	41051006502	4,673	1,211	25.9%
L	41051006402	5,866	357	6.1%
M	41051006501	6,219	656	10.5%
N	41051006403	4,185	1,309	31.3%
O	41051006404	3,811	689	18.1%
P	41067030600	5,360	926	17.3%
Q	41067030700	1,237	555	44.9%
R	41005020304	5,537	652	11.8%
S	41067030900	5,367	2,044	38.1%
T	41067031912	4,686	755	16.1%
U	41067030801	6,977	2,202	31.6%
V	41067030806	2,946	713	24.2%
W	41005020302	4,204	522	12.4%
X	41067032001	5,155	1,219	23.6%
Y	41067032005	4,875	2,334	47.9%
Z	41005020401	5,872	728	12.4%
Study area percentage			26.0%	
Regional percentage			29.6%	

Source: U.S. Census Bureau (2018). American Community Survey 5-Year Estimates, 2014–2018.

Note: Percentages in *italics with light shading* are one to two times the regional percentage for that population. Percentages in **bold with dark shading** are more than two times the regional percentage for that population.

<sup>1</sup> Defined as persons whose annual household income is at or less than 200% of the federal poverty level.

Figures C-5 and C-6 provide additional information on the low-income household density and percentage change between 2013 and 2018.

Figure C-5 displays the distribution and density of the low-income population, shown as dot clusters, where each dot represents five low-income persons. Low-income household density is greatest near downtown Portland, north of I-5 and SW Barbur Boulevard in the Multnomah Village area, and west of Highway 217 near downtown Tigard. Low-income household densities are relatively even throughout the rest of the study area.

As shown in Figure C-6, concentrations of low-income households have remained relatively constant within the study area between 2013 and 2018. Decreases in low-income households are most concentrated along Highway 217 and near Bridgeport Village and Downtown Tualatin. There have also been some moderate decreases in the concentration of low-income households near Lake Grove and north of the Tualatin River.

### **Environmental Justice Concentrations**

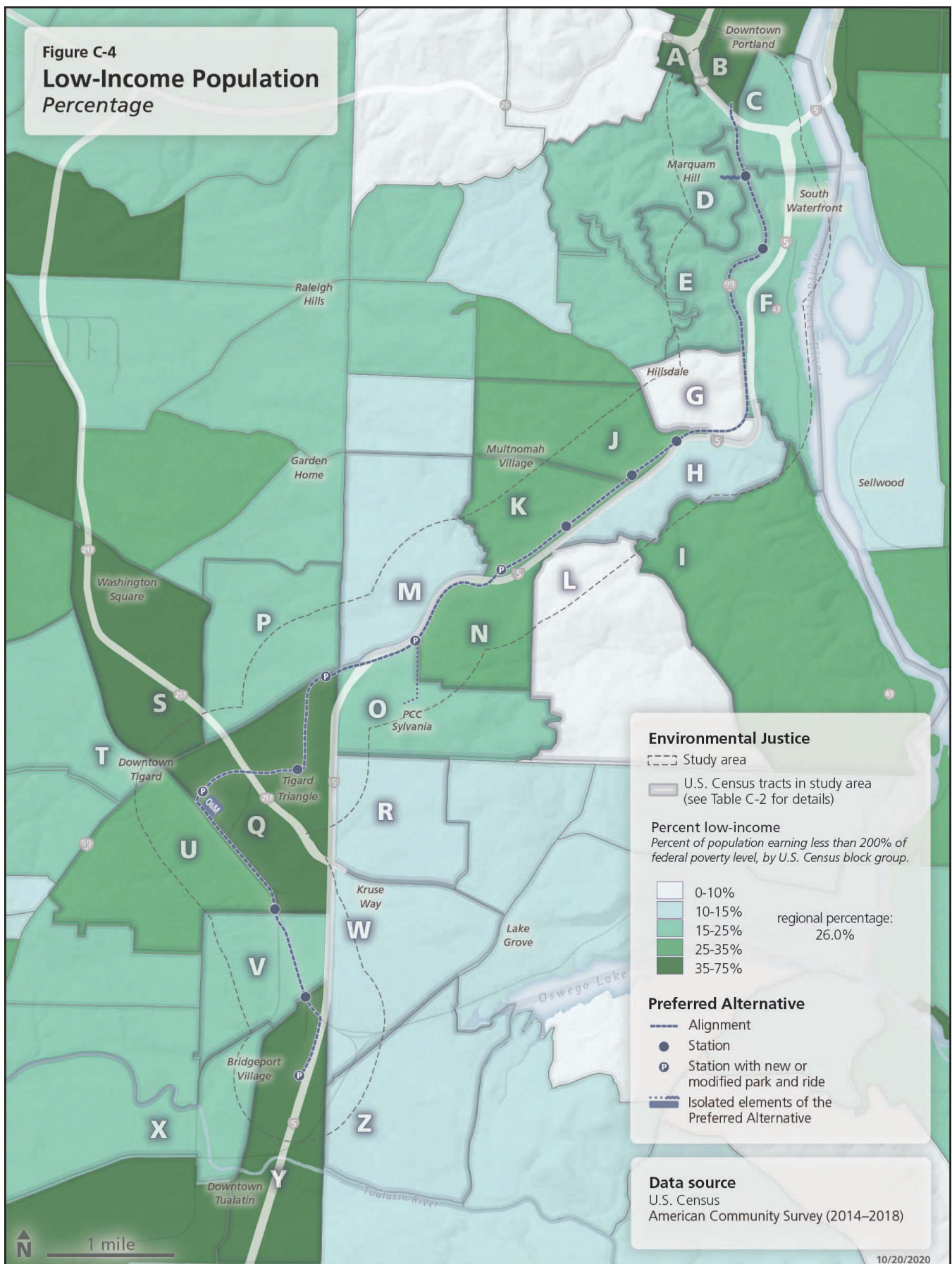
Based on these data, some study area census tracts have been identified as having relatively high concentrations of either low-income populations or minority populations, with a higher potential for these populations to be impacted. These areas include census tracts near:

- downtown Portland
- Multnomah Village and West Portland Park
- Downtown Tigard
- Bridgeport Village and Downtown Tualatin
- west of Highway 217 and along SW Hall Boulevard

Minority and low-income populations are also likely more concentrated in the areas with multifamily housing that are found directly adjacent to SW Barbur Boulevard, Pacific Highway and other major transportation facilities near the light rail alignment, than they are in the single-family neighborhoods found in surrounding areas.

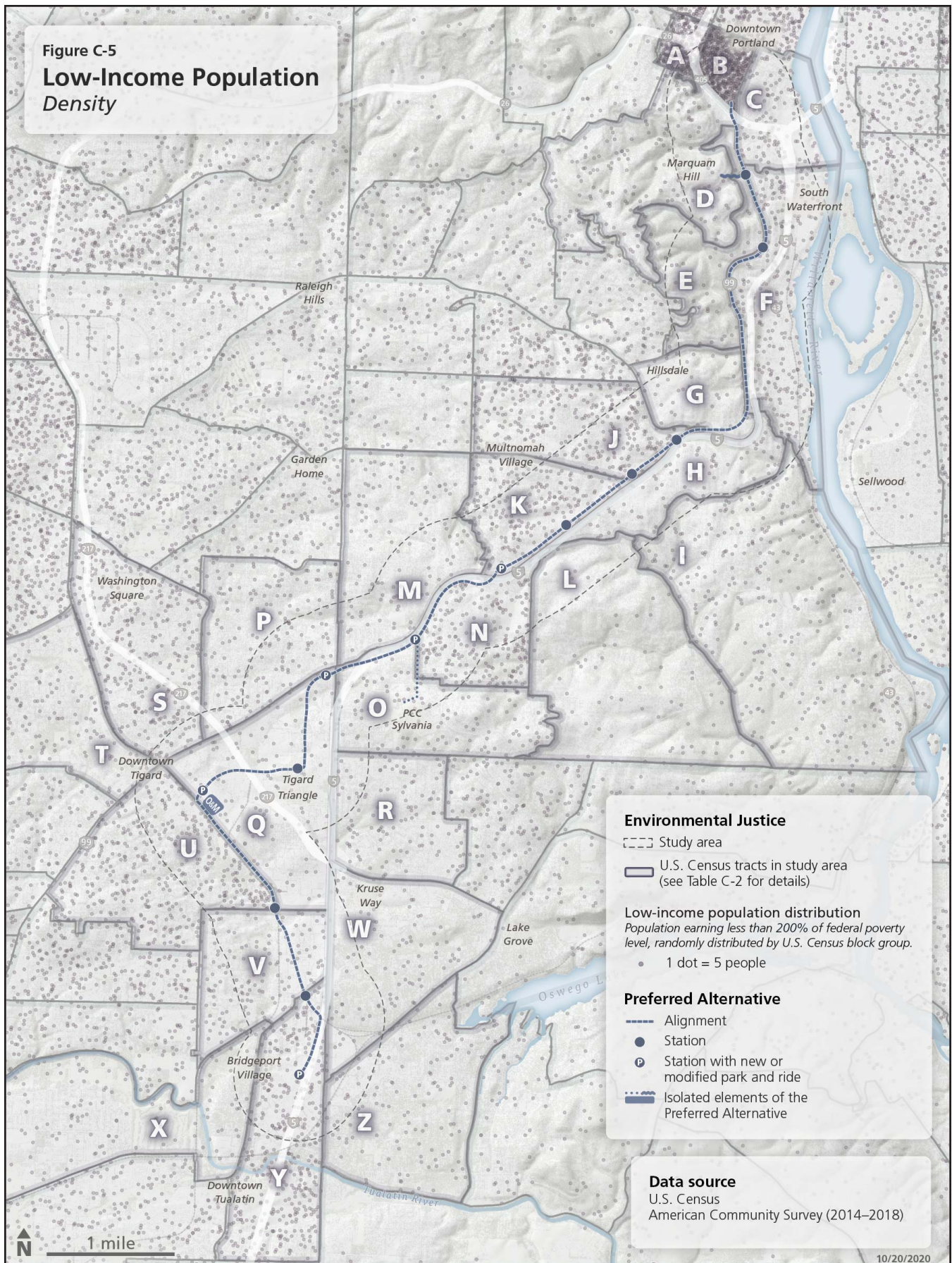


**Figure C-4**  
**Low-Income Population**  
**Percentage**



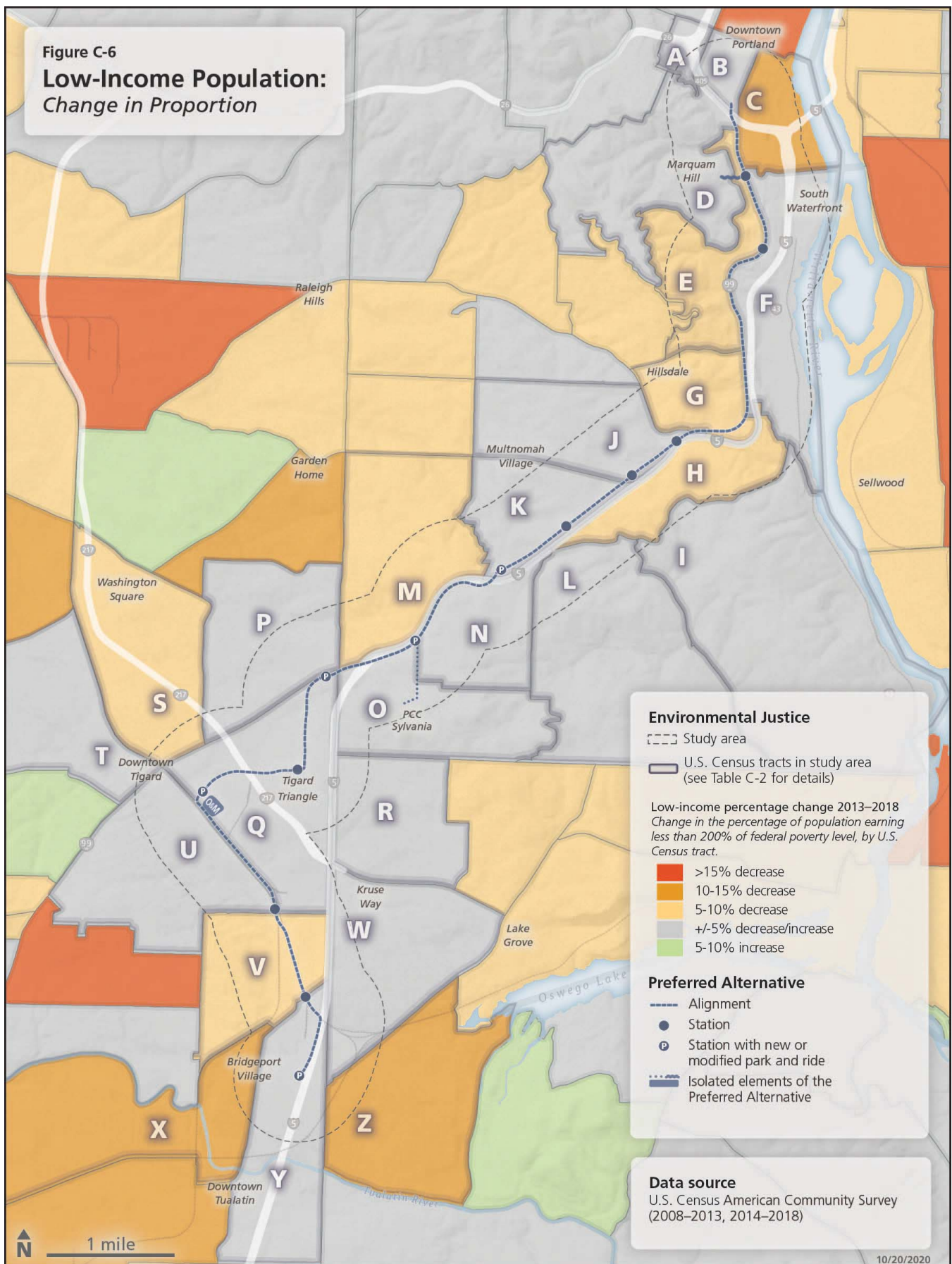


**Figure C-5**  
**Low-Income Population**  
**Density**





**Figure C-6**  
**Low-Income Population:**  
**Change in Proportion**





## Facilities Serving Minority or Low-Income Populations

Facilities in the study area that could serve or employ minority or low-income populations include businesses, places of worship, parks, affordable housing, and community centers and gathering places. Examples of such businesses or institutions in the study area include:

- La Grand Industrial Supply Co: distribution company providing foundry supplies, equipment and industrial products; may provide access to low- and medium-wage jobs (which are defined as jobs with earnings of \$3,333 per month or less)
- ASSIST non-profit organization: Social Security disability assistance program that helps the disabled population claim and receive Social Security benefits; many clients are homeless or live in poverty
- ethnic restaurants
- Goodwill Donation Center: donation center with no retail
- Groundspring Healing Center: provides adult and pediatric acupuncture, traditional Chinese medicine and other related services
- Wallace & Associates vocational rehabilitation: vocational rehabilitation firm providing services to insurance companies, attorneys, employers, injured workers and clients making career transitions; offers vocational counseling, work site assessment, vocational testing and career development
- Bonita Pioneer: package products company offering a full line of retail packaging supplies including wrapping paper, custom shopping, gift and merchandise bags and boxes; may provide access to low- and medium-wage jobs (which are defined as jobs with earnings of \$3,333 per month or less)
- Williams Control: provides electronic, hydraulic and pneumatic components for all types of commercial vehicles; may provide access to low- and medium-wage jobs (which are defined as jobs with earnings of \$3,333 per month or less)
- Value Village: thrift store offering secondhand clothing, footwear, furniture, books and household items
- Maurice Lucas Foundation: provides a combination of education and activity-based after-school programs for middle school students; focused on providing a positive educational experience and skill building through sports training, skills building and games
- Portland Clinic Urgent Care: provides primary care and specialty services that may serve minority and low-income populations

In general, the commercial and employment areas adjacent to the Preferred Alternative include many retail, service and industrial businesses that may provide low- and medium-wage jobs. There is a particularly high concentration of employment in Segment C, including many retail and industrial businesses, such as the large retail stores in the Tigard Triangle and the retail and dining businesses in and around Bridgeport Village.

## C.6 Outreach

From the beginning of the overall Southwest Corridor planning program and leading up to the identification of light rail as the preferred mode, the publication of the Draft EIS and the development of this Final EIS, public involvement efforts have focused on engaging minority and low-income populations as part of the overall outreach plan.

Outreach activities were held within the Southwest Corridor at convenient sites located on local bus lines to facilitate the participation of a diversity of residents. To accommodate working schedules and families, most meetings were held on weekends or evenings, and provided food and children's activities.

### **Outreach Prior to the Draft EIS**

The following describes the major phases of the Project's development before the publication of the Draft EIS in June 2018:

- **Early Scoping: 2012–2013.** Outreach during this period focused on the challenges facing communities and desired outcomes, generating feedback on the need for high capacity transit in this corridor, gathering ideas on future potential high capacity transit service and engaging minority and low-income populations throughout the region.
- **Project Pre-Refinement: 2014.** Staff conducted targeted outreach to the Spanish and Vietnamese communities through a Transit Fair at St. Anthony Church in Tigard, which has large numbers of Spanish and Vietnamese parishioners.
- **Project Refinement: 2015–Fall 2016.** Outreach during this period focused on place-based outreach specific to neighborhoods along the proposed alignment. This meant providing outreach on potential underground transit tunnels under consideration and determining preferences for bus rapid transit or light rail as the transit mode. Metro staff implemented targeted efforts during this period to reach minority and low-income populations.
- **Draft EIS Scoping: Fall 2016.** A formal scoping comment period for the Project was held from September 2, 2016, to October 3, 2016. Staff targeted specific scoping outreach to minority and low-income populations by publishing advertisements of the public comment opportunities in all local newspapers that included Spanish and Vietnamese translation and through targeted emails to organizations working with minority and low-income populations.

For more detailed information on these previous scoping and outreach phases, refer to Appendix C, Environmental Justice, of the Draft EIS.

### **Publication of the Draft EIS**

The Draft EIS comment period officially began June 15, 2018, when the Notice of Availability appeared in the Federal Register. The comment period closed on July 30, 2018. In addition, Metro and the Tri-County Metropolitan Transportation District of Oregon (TriMet) sent announcements on June 7, 2018, when the Draft EIS was available on the project website, and accepted comments received from that date. The comment period included the following public involvement and coordination activities:

- **Notification postcards** were mailed to all physical addresses within approximately 0.25 mile of the Draft EIS alignment alternatives and design refinements (approximately 11,000 postcards). Postcards included the website address, the times and locations of open houses and the public hearing, and the closing date of the public comment period. The postcard included information in Spanish.
- **Letters** were sent to owners of properties that might have a full or partial acquisition under any alignment studied, including those who would be affected only by the design refinements. These letters included information on the electronic and physical locations of the Draft EIS document, along with a

phone number to contact Metro directly with any questions. These letters included information in Spanish, Vietnamese, Russian, Chinese and Korean, as well as a phone number for the multilingual hotline.

- **Notices** were posted at key bus stops and transit stations, including the Tualatin Park & Ride, Tigard Transit Center and Barbur Transit Center.
- **Newspaper advertisements** were run for several weeks after the June 7, 2018 Notice of Availability, announcing the availability of the Draft EIS, and the time and location of the public hearings. This effort included advertisements in three culturally specific periodicals and two advertisements in languages other than English (Spanish and Vietnamese).
- **Emails** were sent to Metro's Southwest Corridor interested parties email list of approximately 2,000 addresses with information about the Draft EIS comment period and how to participate. Metro's project website included general project information, a calendar of upcoming events, and digital versions of the Draft EIS document and all of its appendices and attachments. The executive summary of the Draft EIS was translated into Spanish and posted on the project website.
- **A handout** was produced to explain the initial route proposal. This handout was used at all public events during the Draft EIS comment period. The handout was produced in English, Spanish, Arabic and Somali.

As described in Chapter 6 of this Final EIS, the Draft EIS was made available to the public in both physical and digital versions, including all appendices, attachments and supporting reports. Compact disks were available to be mailed to those who requested them. Spiral-bound copies of the Draft EIS, including appendices, and compact disks were placed in 11 public locations in and around the project area.

### **Outreach Events During Draft EIS Comment Period**

During a period starting just before the release of the Draft EIS and continuing through the close of the public comment period, project partner staff attended or hosted 33 community meetings and events attended by more than 650 people, including:

- two open house events (including translation services) on June 26 and July 12, 2019
- two public hearings were on July 19 and 26, 2019
- four informational hours at libraries were held near the proposed alignments with staff available to answer questions on June 21, June 28, July 2 and July 16, 2019
- 24 association, commission and community organization visits
- approximately 35 phone calls from the public that were fielded by staff during the Draft EIS comment period

In addition to the hearings described above, one multilingual event/hearing was held on July 10, 2019. The multilingual event/hearing was planned in collaboration with Unite Oregon, a community-based organization. Leading up to the Draft EIS comment period, Unite Oregon had been organizing residents in areas near the proposed alignments, focusing on concerns about the shortage of local affordable housing and fears of rising rents and displacements resulting from the construction of light rail. The event was held



at St. Anthony's Catholic Church in Tigard. The event was bilingual in English and Spanish, with Arabic and Chinese interpreters available as well. Small groups of Somali speakers also participated. Two Metro councilors, who were also the chairs of the Southwest Corridor Steering Committee at the time, listened to testimony from attendees at the event. Testimony received in Spanish was translated into English for the Metro councilors in attendance.

Testimony at the public hearings, including the multilingual event/hearing, was recorded as Draft EIS public comments. Comment cards were accepted at the open house events. More detail about these events, including information about participants, can be found in the *Summary of Public Input on Route Selection for Southwest Corridor Light Rail* (Metro, 2018), and in Chapter 6 of the Final EIS.

### **Outreach Between Draft EIS Comment Period and Publication of the Final EIS**

FTA, Metro and TriMet continued public outreach, including to minority and low-income populations, following the Draft EIS comment period. This outreach was conducted in support of further refinements to the Preferred Alternative design, to inform future conceptual design efforts, and to engage agencies and other stakeholders about impacts to parks and historic properties. Chapter 6 of the Final EIS has more information on these engagement efforts.

### **Next Steps**

As the Project continues into final design and construction, TriMet will continue engagement and outreach with the communities of the corridor, including those with minority or low-income populations, who may be affected by property acquisition, displacements, relocations, construction, service changes or other project effects.

## **C.7 Draft EIS Comments**

Consistent with FTA environmental justice policy guidance (FTA Circular C 4703.1), this analysis considers the affected community's views on the Project and the potential benefits and burdens of the Project. Comments related to environmental justice considerations that were received as part of the Draft EIS comment period are summarized below, organized by major themes. For a summary of all Draft EIS comment topics, see Chapter 7, Draft EIS Comment Summary. For all Draft EIS comments and responses, see Appendix J, Draft EIS Comments and Responses.

### **Methods used for Environmental Justice Analysis**

Some comments expressed concerns about using census tract geography and data, which they believed could underrepresent minority and low-income populations living in Southwest Portland. They recommended working with smaller community groups to support a more localized analysis of community characteristics and impacts. Other comments questioned the use of a 0.5-mile buffer to establish a study area for environmental justice assessments.

### **SW Slavin Road Transit and Trail Access Improvements**

One commenter suggested street network improvements to improve east/west access from SW Slavin Road to SW Barbur Boulevard, along with improved access to the Hillsdale neighborhood and the City of Portland's planned Red Electric Trail. The comment suggested this would improve access to areas with

multifamily residences that include a public housing complex and affordable housing with minority and low-income households.

### Concerns about Displacement and Gentrification

Some commenters expressed concerns about housing affordability, displacement, gentrification and other related issues as potential indirect consequences of the Project, stemming from the impact of light rail on property values and rents. These concerns about displacement and gentrification are summarized below:

- **Indirect impacts on housing affordability.** Some commenters expressed concerns that light rail would increase property values and rents, and that as a result it would displace existing tenants. Commenters suggested strategies to prevent or mitigate these displacements via affordable housing strategies; stronger protections for current tenants and rental applicants; and prioritization of new affordable housing for people of color, seniors and low-income households.
- **Affordable housing preservation and construction.** Some commenters expressed a desire for project partners to preserve and construct affordable housing in the corridor, either as part of the light rail investment or in close coordination with it.
- **Adequacy of Draft EIS analysis and mitigation measures.** Some commenters expressed concerns about the adequacy of the Draft EIS analysis related to housing, indirect and cumulative impacts, and environmental justice. Specific concerns included that the analysis focused too narrowly on direct displacements as a result of light rail, and did not consider indirect displacements as a result of real estate activity and property value changes, as discussed above. Commenters pointed towards the indirect displacement impacts of past transit investments on low-income households and communities of color. Some commenters expressed concerns that the mitigation measures proposed to address residential displacements would be inadequate, and that the Final EIS should include additional mitigation measures.
- **Related efforts to address housing affordability.** Some commenters referenced general support for related efforts to address housing affordability in the corridor, including the Southwest Corridor Equitable Housing Strategy, which is a joint effort between Portland and Tigard, as well as the broader Southwest Corridor Equitable Development Strategy, which Metro developed in collaboration with partners from the community and other agencies.

### Preference for Bus Improvements over Light Rail

Some commenters expressed preferences for the Project to pursue other transit modes, other alignments, or destinations for light rail that were not studied in the Draft EIS. Specifically, one organization expressed that bus improvements or bus rapid transit should be studied in the EIS along with light rail, based on the belief that bus services may more effectively serve the transit-dependent community and would result in fewer direct and indirect displacements of low-income individuals and people of color.

## C.8 Long-Term and Short-Term Impacts

Table C-3 evaluates the potential long-term and short-term impacts of the Preferred Alternative on minority and low-income populations. The terminus options and the related transportation improvements are addressed separately in the discussion below.

Table C-3 is organized by the resources analyzed in Chapter 3, Transportation Impacts and Mitigation, and Chapter 4, Environmental Impacts and Mitigation, of this Final EIS. The “Adverse Impacts” column in Table C-3 considers the adverse impacts that have been identified for each resource, including the locations where impacts would occur, and then identifies impacts that may affect minority and low-income populations differently than the overall population. The “Mitigations and Benefits” column first describes, as applicable, design measures that were incorporated into the Preferred Alternative to avoid or minimize adverse impacts identified for the Draft EIS light rail alternatives and proposed mitigation measures or enhancements that are identified in this Final EIS. This column then notes how the Preferred Alternative could provide benefits for that resource, and how those benefits may affect minority and low-income populations differently than the overall population. Finally, the “Conclusion” column evaluates whether any disproportionately high and adverse impacts would remain for minority and low-income populations after mitigations, enhancements and benefits have been accounted for. The impacts and mitigation measures summarized in Table C-3 are described in detail in Chapters 3 and 4 of the Final EIS, and the mitigation measures are consolidated in Appendix M, Mitigation Plan.

The impacts and benefits of the terminus options would be similar to those of the Preferred Alternative, as described in Table C-3. While the terminus options would defer construction of a portion of the Preferred Alternative, this change would not result in the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations, which are largely located to the north, as are the major centers for education, services and employment. In addition, the terminus options would include adjustments to bus routing to connect to the areas that would not be served directly by light rail, which would still result in mobility improvements for persons south of each terminus station.

The related transportation improvements would have relatively few and minor adverse impacts, and would be particularly beneficial for minority and low-income populations because they would improve bicycle and pedestrian access and safety. Adding the related transportation improvements to the Preferred Alternative would not change the conclusions in Table C-3 regarding whether each resource would have a disproportionately high and adverse impact on minority and low-income populations.

Section C.10 of this appendix provides the overall conclusion regarding whether the Project would have a disproportionately high and adverse impact on minority and low-income populations.

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
<p>Transportation</p> <ul style="list-style-type: none"> <li>· regional and corridor travel</li> <li>· public transportation</li> <li>· active transportation (pedestrians and bicyclists)</li> <li>· motor vehicle operations</li> <li>· on-street parking</li> <li>· freight</li> <li>· safety</li> </ul>	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>· In all segments, areas with increased local traffic and bicycle and pedestrian activity around transit stations, particularly with passenger drop-off/pick-up activity, nearby bus stops, and park and ride facilities</li> <li>· The Preferred Alternative includes measures to improve local and arterial intersections affected to achieve the same or better conditions as the No-Build.</li> <li>· Limited areas with existing on-street parking removed</li> <li>· Potential for spillover parking in neighborhoods near stations</li> <li>· Temporary construction impacts from reduced highway and local roadway capacity, truck traffic, loss of parking, road closures or detours</li> <li>· Construction period changes in bus routes or travel times, reduced capacity of transit park and rides</li> <li>· Changes to property access</li> <li>· Temporary closures of sidewalks, bicycle facilities, bus stops and SW Barbur Boulevard transit center and Tualatin South park and rides</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>· Construction-period changes to transit stops, transit travel times, sidewalks and bicycle facilities may be more likely to affect minority or low-income populations, who depend on transit, bicycling and walking.</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>· The Preferred Alternative design includes mitigation measures identified in the Draft EIS that would reduce queues and congestion to operate the same as or better than the No-Build Alternative.</li> <li>· There would be no remaining long-term significant impacts that would not be mitigated. Remaining mitigations are in areas with ramps and interchanges that already operate poorly with No-Build Alternative.</li> <li>· Parking management strategies coordinated in station areas would minimize spillover parking in neighborhoods.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>· The Preferred Alternative would improve transit service reliability and transit travel times in the corridor, increase service frequency throughout the day, extend service hours and increase transit capacity.</li> <li>· Improved transit service would enhance access between corridor neighborhoods and to other centers providing jobs, education and public services, including downtown Portland, OHSU and VA Portland Health Care System, PCC-Sylvania, PSU and the Portland airport.</li> <li>· In areas where light rail would be in street rights of way, rebuilt facilities would meet current safety and Americans with Disabilities Act standards, including at intersections and near stations and other transit facilities.</li> <li>· Walking access would be improved due to new or replaced sidewalks along SW Barbur Boulevard between downtown Portland and the Barbur Transit Center.</li> <li>· Bicycling access would be improved on SW Barbur Boulevard between SW Naito Parkway and the Barbur Transit Center due to new raised protected bikeways, including on the new bridges that would replace the Newberry and Vermont trestle bridges.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>· Improved transit service and pedestrian and bicycle facilities are anticipated to result in same or greater benefits to minority and low-income populations compared to the overall population, because minority and low-income populations correlate statistically with transit dependency.</li> </ul>	<p>Taking into account mitigations, enhancements and benefits, long-term transportation effects as a result of the Preferred Alternative would not result in high and adverse impacts to any populations, and therefore would not have a disproportionately high and adverse impact on minority or low-income populations.</p> <p>The Preferred Alternative would result in unavoidable adverse impacts on transportation during construction, but these impacts would not be disproportionately high and adverse for minority and low-income populations after mitigations and project enhancements are applied. See Section C.10 for more discussion.</p>



**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Acquisitions, displacements and relocations	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>· The Preferred Alternative would acquire all or a portion of 402 parcels, affecting a mix of residential, commercial and vacant properties.</li> <li>· The Preferred Alternative would displace a total of 95 residential units, including 52 single-family homes; 25 units in nine duplexes, triplexes or fourplexes; and 18 units in two apartment complexes. Of the 95 total residential units displaced, 8 units are assumed to be retained for future residential use because the existing houses or apartments would remain intact.</li> <li>· The Preferred Alternative would displace an estimated 114 businesses (see “Economics” row, below).</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>· Property acquisitions and displacements are determined based on the needs of the Project, and not on the basis of race, color, religion, sex, national origin, physical or mental disability, reprisal, or sexual orientation status of any owner or inhabitant, as protected by Title VI of the Civil Rights Act of 1964, Title II of the Americans with Disabilities Act and Oregon Revised Statute 659.403A.</li> <li>· Acquisitions and displacements would occur in areas where minority and/or low-income populations are present. The largest clusters of residential displacements, which would be in South Portland and along the north side of SW Barbur Boulevard near Fulton Park, would be in areas with relatively low proportions of minority and low-income residents.</li> <li>· Displacements include the removal of some housing that may serve as “naturally-occurring” affordable housing (properties with relatively low rents), but no subsidized affordable housing would be displaced.</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>· The Preferred Alternative includes a design refinement to avoid displacing a cluster of 69 residential units in Downtown Tigard that would be impacted by Alternatives C1, C2 and C5 from the Draft EIS. These units are in an area with a relatively high proportion of low-income residents.</li> <li>· Property owners and displaced residents and businesses would receive compensation and relocation assistance consistent with federal and state regulations, including the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Chapter 35 of the Oregon Revised Statutes.</li> <li>· TriMet would use interpreters to help people with limited English proficiency navigate the relocation and compensation process.</li> <li>· When disposing of property no longer needed by the Preferred Alternative, TriMet would consider the Memorandum of Understanding signed between the Cities of Tigard and Portland, Metro, TriMet and Washington County with the goal of identifying locations for 700 to 800 affordable housing units in Portland and 150 to 250 units in Tigard.</li> <li>· TriMet would identify replacement housing options that consider such factors as proximity to commercial and community facilities, schools (if applicable), an individual’s place of employment and accessibility to transit if the residents are transit dependent.</li> <li>· TriMet would be required to provide appropriate replacement housing that would be affordable for the displaced resident. Tenants of rented property may be eligible for rent supplement if comparable decent, safe and sanitary replacement housing costs more than their current rental cost. In these cases, TriMet would pay the difference, or a portion of the difference, between the tenant’s current and new rental rates for up to 42 months.</li> </ul>	<p>The design and avoidance measures included in the Preferred Alternative have helped to reduce displacements overall and avoid concentrations of residential displacements in areas with higher proportions of minority or low-income residents. Considering mitigations, including property owner compensation and financial and service-oriented relocation assistance, the Preferred Alternative’s remaining acquisitions, displacements and relocations would not result in disproportionately high and adverse impacts on minority and low-income populations.</p>

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
<i>Acquisitions, displacements and relocations, continued</i>		<p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>TriMet relocation policies and federal and state requirements for safe, sanitary and affordable replacement housing can often result in replacement housing that exceeds the quality of existing housing. On previous projects, total compensation and relocation support has enabled parties to purchase a replacement dwelling rather than continuing to rent, which helps avoid future displacements from rental properties due to market forces.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>As noted above, relocation can often result in replacement housing that exceeds the quality of existing housing. This occurs most often when families are presently in dwellings that do not meet the space requirements (separate bedrooms for children of opposite sex) or other safe, sanitary and affordability requirements. Low-income populations are more likely to be living in dwellings that do not meet these requirements, and thus are more likely to benefit from relocation through improved quality of housing, added bedrooms, or the opportunity to purchase housing.</li> </ul>	
Land use	<p><b>Impacts on the overall population</b> <i>No adverse impacts – consistent with planning goals</i></p> <p><b>Impacts on minority and low-income populations</b> <i>No adverse impacts</i></p>	<p><b>Design measures, mitigations and enhancements</b> <i>None</i></p> <p><b>Benefits to the overall population</b> <i>None</i></p> <p><b>Benefits to minority and low-income populations</b> <i>None</i></p>	The Preferred Alternative would not result in high and adverse land use impacts on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.
Economics	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>In total, the Preferred Alternative would displace an estimated 114 businesses or institutions, affecting a total of approximately 1,231 employees. Of these displacements, 13 businesses with 150 employees are in Segment A, 66 businesses with 447 employees are in Segment B, and 35 businesses with 821 employees are in Segment C.</li> <li>While property owners and businesses would receive compensation and relocation assistance, there is the potential that some businesses could take the</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet would provide compensation and relocation benefits to property owners and affected businesses and institutions. TriMet would work closely with affected business owners to identify their needs and would treat them fairly and equitably. TriMet would offer to work with businesses serving or employing minority and low-income populations to identify opportunities located within the areas they serve. In general, TriMet would investigate opportunities for businesses to relocate in the surrounding area, which would help to minimize impacts to employees.</li> </ul>	The design and avoidance measures included in the Preferred Alternative have helped to reduce business displacements overall and avoid most concentrations of business displacements. Considering mitigations and benefits, including compensation to displaced businesses and relocation assistance, the

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
<i>Economics, continued</i>	<p>compensation and close, or they could relocate to other areas, thus eliminating some local jobs.</p> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>Businesses or institutions that would be displaced could have minority or low-income owners, employees or customers. Some displacements would be in areas with relatively high proportions of minority and low-income populations, and some individuals from these populations are likely to be affected.</li> <li>ASSIST is a non-profit organization serving homeless and disabled populations that would be displaced in Segment A.</li> <li>The Preferred Alternative would displace ethnic restaurants along the corridor, including establishments along SW Barbur Boulevard near SW Barbur Court and SW Huber Street.</li> <li>Two displacements in Segment B appear to serve minority and low-income populations: Groundspring Healing Center (Chinese medicine) and Wallace &amp; Associates vocational rehabilitation firm.</li> <li>Segment C would include displacements to industrial employers and other larger businesses that may be more challenging to relocate nearby, resulting in a higher likelihood of closure or impacts to employees. Some of these businesses may provide low- and medium-wage jobs.</li> </ul>	<ul style="list-style-type: none"> <li>Construction impact mitigation measures include programs and outreach with businesses to develop a detailed mitigation plan and to coordinate with businesses during construction to minimize impacts that could disrupt business activities.</li> <li>TriMet would provide business planning, marketing and other technical assistance to businesses or institutions that could be affected by construction-period impacts or by relocation.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would improve access and reduce travel times to employment centers via better transit, walking and bicycling facilities and services. This includes service to high concentrations of employment in downtown Portland, on Marquam Hill and near the light rail alignment in Tigard and Tualatin.</li> <li>Of the Project's total potential capital investment of up to \$2.4 billion, approximately \$1.71 billion would be spent on professional services and general construction. Approximately \$1.0 billion is expected to be paid for with state and federal funding sources constituting "new dollars" flowing into the region. The multiplier effect from the short-term influx of project funds would likely result in a one-time total impact of approximately: \$2.69 billion to \$2.76 billion in economic output (total value of goods and services); \$1.16 billion to 1.89 billion in metropolitan area earnings (wages and proprietor income); and 23,200 to 27,800 (person-year) jobs.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>The improved access to employment would be particularly beneficial for minority and low-income populations who may have limited access to personal vehicles.</li> <li>Positive construction effects include a variety of skilled and lower-skilled construction jobs, as well as worker expenditures at nearby businesses.</li> </ul>	<p>Preferred Alternative's remaining business displacements and relocations would not result in high and adverse impacts on any populations. Past TriMet projects have also resulted in relocations within the same general areas as the original property, which would reduce the potential for lost services or employment to a given area. Therefore, the Preferred Alternative would not have a disproportionately high and adverse impact on minority and low-income populations.</p> <p>TriMet's construction planning and business outreach and coordination programs would minimize the potential for high and adverse impacts to businesses during construction.</p>
Communities	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Overall cohesion in the adjacent neighborhoods would remain intact, because the alignment would not create neighborhood barriers or otherwise divide communities,</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative includes a design refinement to avoid displacing a cluster of 69 residential units in Downtown Tigard that would be impacted by Draft EIS Alternatives C1,</li> </ul>	<p>Taking into account design measures, mitigations, enhancements and future benefits, community impacts as a result of the Preferred</p>

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
<i>Communities, continued</i>	<p>though residential and business displacements could disrupt individual social ties.</p> <ul style="list-style-type: none"> <li>Impacts to historic properties in the South Portland neighborhood could detract from the identity of a portion of that neighborhood as a historic district, and the Preferred Alternative could remove a building that serves as a landmark for the neighborhood due to its distinctive design.</li> <li>The Preferred Alternative would impact a historic motel along SW Barbur Boulevard and thus could detract from the identity of that roadway as a mid-20th century auto tourism route.</li> <li>Neighborhood quality of life would be diminished in the area directly adjacent to the alignment during the construction period as a result of noise, dust, detours, loss of on-street parking, increased congestion and increased truck traffic.</li> <li>The Preferred Alternative would have few and minor effects on community facilities and services. Some displaced businesses could serve transit-dependent populations.</li> <li>Temporary construction impacts could affect neighborhood quality of life along the alignment, including dust, light/glare, noise and traffic congestion.</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>See “Economics” row, above, for displaced businesses and organizations that serve minority and low-income populations.</li> </ul>	<p>C2 and C5. These units are in an area with a relatively high proportion of low-income residents.</p> <ul style="list-style-type: none"> <li>Property owners and displaced residents and businesses would receive compensation and relocation assistance consistent with federal and state regulations, including the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Chapter 35 of the Oregon Revised Statutes. See “Acquisitions, displacements and relocations” row, above, for more information.</li> <li>Mitigations for impacts to historic properties are summarized in the “Historic and archaeological resources” row, below.</li> <li>If there is property no longer needed after construction of the Preferred Alternative, TriMet will manage and dispose of any excess property in accordance with the FTA grant management circular 5010.E rules and all applicable state laws. When disposing of property no longer needed by the Preferred Alternative, TriMet will consider the Memorandum of Understanding signed between the Cities of Tigard and Portland, Metro, TriMet and Washington County with the goal of identifying locations for 700 to 800 affordable housing units in Portland and 150 to 250 units in Tigard.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>Walking and bicycling access would be maintained or improved along SW Barbur Boulevard between downtown Portland and the Barbur Transit Center, including portions with new raised protected bikeways.</li> <li>The Preferred Alternative would improve transit access in the corridor, including to the high concentration of medical and educational facilities in the Homestead and South Portland neighborhoods.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative in Segment C would improve transit access to various areas with high proportions of minority and low-income populations, including downtown Portland, West Portland Park, the Tigard Triangle, Downtown Tigard, Bridgeport Village and downtown Tualatin.</li> <li>In general, improved transit service and pedestrian and bicycle facilities are anticipated to result in greater benefits</li> </ul>	<p>Alternative would not result in disproportionately high and adverse impacts on minority and low-income populations.</p>



**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
<i>Communities, continued</i>		to minority and low-income populations as compared to the overall population, because minority and low-income populations correlate statistically with transit-dependency.	
Visual quality	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>In Segment A, there would be a high localized visual impact from the Marquam Hill Connection due to vegetation removal and the addition of the inclined elevator structure.</li> <li>In Segment C, there would be a high visual impact in the Tigard Triangle from structures, which include a new light rail structure over SW Dartmouth Street and a 2,300-foot-long light rail structure over Highway 217.</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>The Tigard Triangle, which would experience a high visual impact, has a relatively high proportion of low-income population but a low overall population density.</li> </ul>	<p><b>General design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative includes several design refinements that reduced the visual impacts of various project elements, including revisions to the Marquam Hill Connection, reductions to the length of light rail structures near residential areas, and replacement of park and ride structures with surface lots.</li> <li>Aesthetic plans with detailed options for applying various impact minimization measures, including replacement landscaping, would be developed in consultation with affected jurisdictions and communities.</li> <li>Construction mitigation measures would include shielding light sources and designing construction screens or barriers to limit visibility of work areas.</li> </ul> <p><b>Benefits to the overall population</b> <i>None</i></p> <p><b>Benefits to minority and low-income populations</b> <i>None</i></p>	The Preferred Alternative would result in high visual impacts in two locations, but these impacts would not be disproportionately high and adverse for minority and low-income populations. See Section C.10 for more discussion.
Historic and archaeological resources	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would adversely affect eleven eligible historic resources, including seven in Segment A and four in Segment B. One of the resources in Segment A is the South Portland Historic District, where five buildings contributing to the district's significance would be removed.</li> <li>The Preferred Alternative would impact two known archaeological resources, including one in Segment A and one in Segment C.</li> </ul> <p><b>Impacts on minority and low-income populations</b> <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>Mitigations and enhancements to address adverse impacts include: allowing for potential relocation of historic buildings, where feasible, or otherwise dismantling and salvaging re-usable building materials; contributing to the preservation of cultural heritage in the affected community; developing and supporting interpretative exhibits at local museums or on-site kiosks that highlight information gained about cultural resources; developing online history articles; completing archaeological surveys; and developing an Inadvertent Discovery Plan for unidentified archaeological resources.</li> </ul> <p><b>Benefits to the overall population</b> <i>None</i></p> <p><b>Benefits to minority and low-income populations</b> <i>None</i></p>	The Preferred Alternative would result in unavoidable adverse effects to eleven historic resources, but these impacts would not be disproportionately high and adverse for minority and low-income populations. See Section C.10 for more discussion.

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Parks and recreation resources	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Several parks in the City of Portland would have minor encroachments due to the Preferred Alternative, affecting bordering trees and vegetation. Construction could reduce access, but all parks would remain open during construction. The affected parks include Duniway Park, Lair Hill Park, George Himes Park, Fulton Park and Sylvania Nature Park. Related transportation improvements could affect corners of three other small parks.</li> <li>The Marquam Hill Connection would alter Terwilliger Parkway, affecting about 0.5 acre of hillside, with a minor construction period detour needed for the multiuse trail adjacent to SW Terwilliger Boulevard.</li> </ul> <p><b>Impacts on environmental justice populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet has developed agreements to define park enhancements, restoration measures, tree and vegetation replacement, and compensation to support offsetting programs and improvements to all affected parks facilities.</li> <li>TriMet would replant trees in parks and, per City of Portland policy, would increase urban tree canopy cover in areas with minority and low-income populations.</li> <li>For temporary trail and partial park closures during construction, TriMet would coordinate with appropriate local jurisdictions to develop detours or alternate access to maintain parks benefits.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>There would be improved walking, bicycling and transit access to several of the affected parks and trails.</li> <li>Increased urban tree canopy cover.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>Tree plantings would be focused in minority and low-income neighborhoods</li> </ul>	<p>Taking into account mitigations, enhancements and benefits, effects on parks and recreation resources as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would avoid disproportionately high and adverse effects on minority and low-income populations.</p>
Geology, soils and hydrogeology	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Low risks to people from steep slope and landslide hazard areas</li> <li>Corridor located in seismically active region</li> <li>Some safety risks from erosion, slope instability, seismic ground-shaking, vibration, settlement, temporary excavations and dewatering during construction</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>Geology and soils risks and impacts would be avoided or minimized through the use of engineering design standards and best management practices.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would replace four existing roadway bridges with new bridges that would meet current standards for seismic resiliency, including the Newbury and Vermont trestle bridges on SW Barbur Boulevard.</li> </ul> <p><b>Benefits to minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p>Taking into account mitigations and benefits, effects on geology, soils and hydrogeology as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would avoid disproportionately high and adverse effects on minority and low-income populations.</p>

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Ecosystems	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Low overall potential for adverse effects on vegetation, wildlife or fish habitat</li> <li>Tree removal within protected areas and very minor wetland impacts in Segments A and B</li> <li>Streams that would intersect with the Preferred Alternative in Segment C would have potential downstream impacts to aquatic species. The Preferred Alternative would result in approximately 0.8 acre of permanent wetland impacts in Segment C.</li> <li>Construction of the Preferred Alternative could result in short-term ecosystem impacts such as soil disturbance and compaction, soil erosion, and tree and other vegetation removal in or adjacent to wetlands and streams.</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative has been designed to avoid and minimize impacts on environmentally sensitive resources, such as by crossing streams on structures instead of using culverts. Compensatory mitigation measures would be used where adverse effects are unavoidable, for no net loss of ecosystem functions.</li> <li>Construction best management practices would minimize short-term impacts such that no additional mitigation measures would be required.</li> </ul> <p><b>Benefits to the overall population</b>  <i>None</i></p> <p><b>Benefits to minority and low-income populations</b>  <i>None</i></p>	<p>Taking into account mitigations, effects on ecosystems as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would avoid disproportionately high and adverse effects on minority and low-income populations.</p>
Water resources	<p><b>Impacts on the overall population:</b></p> <ul style="list-style-type: none"> <li>Increased pollution-generating and non-pollution-generating impervious surfaces</li> <li>Overall improvement in water quality and flow control because most areas lack treatment to current standards</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would be designed to comply with all federal, state and local regulations, which would prevent or minimize potential long- and short-term impacts to water resources.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>In some areas, stormwater treatment facilities with the Preferred Alternative would improve water quality and stream erosion compared to the No-Build Alternative.</li> </ul> <p><b>Benefits to minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p>Taking into account mitigations and benefits, effects on water resources as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would avoid disproportionately high and adverse effects on minority and low-income populations.</p>
Noise and vibration	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Noise and vibration would increase due to light rail in some locations, mostly in Segment A; Segment A would result in 64 moderate noise impacts, 12 severe noise impacts and 20 vibration impacts.</li> <li>Segment B would have 59 moderate noise impacts and 9 vibration impacts.</li> <li>Segment C would have 46 moderate noise impacts and 46 vibration impacts.</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet has identified where noise impacts would be mitigated with sound walls, track design or residential sound insulation, or other measures. All severe noise impacts would be mitigated. Moderate noise impacts would be mitigated where feasible and reasonable but would not be adverse.</li> <li>Vibration mitigation would be evaluated during final design of the Preferred Alternative and incorporated into the design where feasible and reasonable.</li> </ul>	<p>Taking into account mitigations and benefits, effects on noise and vibration as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would avoid disproportionately high and adverse effects on minority and low-income populations.</p>

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Noise and vibration, continued	<ul style="list-style-type: none"> <li>Construction-related noise and vibration impacts would occur with the Preferred Alternative.</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>Noise and vibration impacts would occur in areas where minority and low-income populations reside.</li> </ul>	<ul style="list-style-type: none"> <li>Construction noise would meet local noise-control regulations, dependent on the location of the construction activity. Any potential nighttime construction noise would be restricted to the levels authorized by applicable regulations or variances.</li> <li>Measures to minimize short-term annoyance from construction vibration include the use of alternative methods with less vibration.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>The noise and vibration analysis has identified multiple locations where features of the Preferred Alternative and noise mitigation, such as noise and retaining walls, would reduce noise levels compared to existing conditions.</li> </ul> <p><b>Benefits to minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	
Air quality and greenhouse gases	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>No operational impacts</li> <li>Temporary human health risks associated with increased levels of pollutants during construction, particularly emissions from construction equipment and trucks, and dust and particulates associated with grading and excavation</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>No mitigation is required or proposed for light rail operation.</li> <li>Potential construction mitigation includes mitigation measures and best management practices to control particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and emissions of carbon monoxide and nitrogen oxides.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>With the Preferred Alternative, there would be improved air quality in the longer term due to reduced criteria pollutants and mobile source air toxics compared with No-Build Alternative conditions.</li> </ul> <p><b>Benefits to minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	Taking into account mitigations and benefits, effects on air quality and greenhouse gases as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.
Energy	<p><b>Impacts on the overall population</b>  <i>None</i></p> <p><b>Impacts on minority and low-income populations</b>  <i>None</i></p>	<p><b>Design measures, mitigations and enhancements</b>  <i>None</i></p> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>Minor overall reduction in daily energy consumption compared to the No-Build Alternative.</li> </ul> <p><b>Benefits to minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	Effects on energy consumption as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.



**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Hazardous materials	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would fully or partially acquire parcels with hazardous materials, mostly heating oil tanks for residences, along with a limited set of more complex industrial or service station sites involving soil and groundwater contamination.</li> <li>TriMet would use hazardous materials at the Hunziker O&amp;M Facility, but their use would be strictly controlled to minimize the risk for human health or environmental impacts.</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet completed Environmental Site Assessments for all potentially acquired parcels, defining cleanup and remediation where appropriate, and minimizing the potential for unanticipated contamination to be encountered during construction.</li> </ul> <p><b>Benefits to the overall population</b></p> <ul style="list-style-type: none"> <li>Acquired parcels with hazardous materials would be remediated, thereby improving conditions compared to the No-Build Alternative.</li> </ul> <p><b>Benefits to minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>Some of the acquired parcels where hazardous materials risks would be addressed are in areas with minority or low-income populations, including near Downtown Tigard.</li> </ul>	Effects on hazardous materials as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.
Utilities	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>No long-term impacts on utilities</li> <li>Short-term impacts on utilities could include temporary relocation of facilities and short service interruptions during construction.</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet would coordinate with utility companies during final design to minimize impacts to existing facilities and disturbances to system users.</li> </ul> <p><b>Benefits to the overall population</b>  <i>None</i></p> <p><b>Benefits to minority and low-income populations</b>  <i>None</i></p>	Taking into account mitigations, effects on utilities as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.
Public services	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>There would be changes in access and circulation for public service provider operations.</li> <li>Road closures and rerouting due to construction activities would cause delays and potential confusion for public service providers.</li> </ul> <p><b>Impacts on minority and low-income populations</b>  <i>Same as those experienced by the overall population</i></p>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>TriMet would coordinate with public service providers to inform final design and plan for the training needed for police, fire and emergency services to be able to safely and effectively respond to emergencies involving light rail.</li> <li>TriMet would minimize construction impacts through coordination with police, fire and local emergency response services.</li> </ul> <p><b>Benefits to the overall population</b>  <i>None</i></p> <p><b>Benefits to minority and low-income populations</b>  <i>None</i></p>	Taking into account mitigations, effects on public services as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.

**Table C-3. Long-Term and Short-Term Impacts of the Preferred Alternative on Minority and Low-Income Populations (*multipage table*)**

Resource	Adverse Impacts	Mitigations and Benefits	Conclusion
Safety and security	<p><b>Impacts on the overall population</b></p> <ul style="list-style-type: none"> <li>Station locations in Segment C would be in higher crime areas, particularly in the Tigard Triangle and Downtown Tigard, but the introduction of light rail to these areas would not cause more crime on a per capita basis.</li> <li>New and larger park and rides at the 53rd, 68th, Hall and Bridgeport Stations could increase property crimes, because large numbers of parked vehicles can be potential targets for criminals.</li> </ul> <p><b>Impacts on minority and low-income populations</b></p> <ul style="list-style-type: none"> <li>Transit police presence and other measures to deter crime on the light rail vehicles and near stations could make minority and low-income populations feel unsafe.</li> </ul>	<p><b>Design measures, mitigations and enhancements</b></p> <ul style="list-style-type: none"> <li>The Preferred Alternative would feature the same safety and security techniques and systems that are applied throughout the TriMet system, which includes MAX light rail.</li> <li>Final design and operations planning would consider best practices for Crime Prevention through Environmental Design (CPTED), including modified siting or layout concepts; the use of lighting, communications, electronic and security systems; and controlled entry.</li> <li>Unrelated to the Project, TriMet is gathering feedback from riders, front-line employees and community members on the best approaches to providing security on the transit system that is free from bias. Agency-wide changes resulting from this process could affect future Southwest Corridor safety and security approaches.</li> </ul> <p><b>Benefits to the overall population</b> <i>None</i></p> <p><b>Benefits to minority and low-income populations</b> <i>None</i></p>	<p>Taking into account mitigations, effects on safety and security as a result of the Preferred Alternative would not result in high and adverse effects on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations. Because TriMet would use the same safety and security measures that are applied throughout the TriMet system, the Preferred Alternative would not introduce new impacts to minority and low-income populations.</p>

Note: EIS = Environmental Impact Statement; FTA = Federal Transit Administration; MAX = Metropolitan Area Express; O&M = operations and maintenance; ODOT = Oregon Department of Transportation; OHSU = Oregon Health & Science University; PCC = Portland Community College; PM<sub>10</sub> = particulate matter less than 10 micrometers in diameter; PM<sub>2.5</sub> = particulate matter less than 2.5 micrometers in diameter; PSU = Portland State University; VA = Veterans Affairs.

## **C.9 Indirect and Cumulative Impacts**

Most of the potential indirect and cumulative impacts noted in the Final EIS are related to anticipated redevelopment and property value increases near the proposed light rail stations.

Both population and employment growth are anticipated to continue in the region, with or without the Project. As new residents and businesses move in, land use actions and market forces will encourage development and redevelopment activities. Some existing land uses are different than what is allowable in zoning regulations and called for in local and regional land use plans. As a result, minority and low-income individuals may continue to be economically displaced, or displaced due to property redevelopments, requiring them to seek out more affordable housing in other areas of the region. These effects have been occurring in recent years and are likely to continue to occur regardless of whether or not the Project is built. These redevelopment activities and rises in property values could be accelerated or intensified in the station areas for the Preferred Alternative. However, studies of past light rail projects indicate that the magnitude of increase in property values is typically relatively small—generally less than 5 percent. For further discussion of the potential impact of light rail on redevelopment and property values, see Section 4.18, Indirect and Cumulative Effects, of this Final EIS.

Metro, TriMet and other agencies and organizations are working collaboratively to address economic displacement and increase the supply of affordable housing within the corridor, the region and the state. These efforts include policy changes to provide greater tenant protections, as well as funding and land for regulated affordable housing. See Section 4.18 of this Final EIS for more detailed information about these ongoing efforts.

The Project could also result in indirect economic benefits that could offset the potential adverse indirect impacts. Construction of the Project would be a source for jobs, both directly and indirectly, because construction increases employment and brings money into the economy from construction worker wages and their purchases of local goods and services. Redevelopment near the proposed light rail stations in accordance with local plans could also add jobs to the area. The Project would also improve access to low- and middle-wage jobs, including retail jobs in the Bridgeport Village and Tigard Triangle Areas. The Project would enhance access to major job centers in the region, including at the Marquam Hill medical and educational complex and at the South Waterfront, as well as in Portland's Central City, by adding nearby light rail service and new pedestrian and bicycle facilities. For some residents in the study area, the Project's transit improvements could offset potentially higher rental costs by reducing transportation expenses, because access to transit has the potential to lower personal transportation expenditures.

Based on the relatively small role that light rail projects play in increasing property values, the ongoing efforts to address housing affordability, and the Project's offsetting economic benefits, the Project would not result in high and adverse indirect or cumulative impacts on any populations, and therefore would not have a disproportionately high and adverse impact on minority and low-income populations.

## **C.10 Conclusion**

In accordance with Executive Order 12898 and USDOT Order 5610.2, FTA, Metro and TriMet have assessed the potential for the Southwest Corridor Light Rail Project to have disproportionately high and adverse effects on minority and low-income populations.

## Limited High and Adverse Impacts

For most resources, the Project's design measures, mitigations and enhancements would reduce the severity of impacts to an extent that there would be no high and adverse impacts on any populations, and therefore there would be no disproportionately high and adverse impacts on minority and low-income populations for those resources.

The Project would have few impacts that would remain high after taking into account mitigations, and they would not be an adverse effect to any populations after taking into account off-setting enhancements and benefits. These impacts are summarized below, with an explanation of why each would not have a disproportionately high and adverse impact on minority and low-income populations.

- **Short-term transportation impacts.** During construction, the Project would have temporary adverse impacts to all modes of travel, including reduced highway and local roadway capacity, addition of truck traffic, loss of parking, road closures or detours, changes in bus routes or travel times, closures or relocations of bus stops, reduced capacity of existing park and rides, and closures or detours of sidewalks and bicycle facilities. These temporary impacts would not be predominately borne by minority and low-income populations, because all modes of travel would be disrupted. The areas where travel would be impacted would progress along the corridor as the Project is developed, which would limit the duration of the effects in a given location. Detailed construction planning, including localized detour planning, outreach and other measures would help reduce the intensity of impacts in any given location, including in areas with high proportions of minority and low-income populations.
- **Long-term visual impacts.** The Project would have two localized areas with high visual impacts (Marquam Hill and Tigard Triangle). The Project commits to measures to mitigate the impacts through design and landscape improvements that could lessen the severity of the impact. The Marquam Hill area has a low representation of minority or low-income populations, and the area of impact is not adjacent to residences. The Tigard Triangle is in a census tract with a relatively high proportion of low-income residents, but it has a low population density. The high visual impacts are mostly due to prominent new bridge structures that would affect few households. Other elements of the project design would create a more urban environment on local street, developing new sidewalks, bikeways and improving transit service, which would provide offsetting benefits.
- **Long-term impacts on historic resources.** The Project would have unavoidable adverse effects on 11 eligible historic resources, including two historic districts, three roadway bridges and six other properties with buildings such as homes, apartments, a motel and offices. The affected resources are in census tracts with lower proportions of minority and low-income populations compared to the region and the study area, and do not carry historic associations with minority or low-income populations.

## Offsetting Benefits

The Project would offer offsetting benefits to all populations, but especially those able to take advantage of the mobility benefits and infrastructure investments in neighborhoods near the Project.

Minority and low-income populations reside along the alignment and are more likely to depend upon transit for travel in the region, and to walk or use bicycles to get around locally. According to TriMet agency research and development of the TriMet Equity Index, transit dependency and barriers to mobility are known to have a strong relationship to minority and low-income populations, as well as households with



limited vehicle access (those with zero vehicles or two or more workers and only one vehicle), youth, older adults and people experiencing disabilities. The light rail system would address some of these barriers by providing longer operating hours, increased capacity and more frequent service than the bus transit system with the No-Build Alternative. The Line 12 bus service that is assumed to be removed from SW Barbur Boulevard and Pacific Highway would be reallocated to other bus lines in the corridor, to provide more widespread transit service improvements throughout the corridor. Overall, the transit benefits of the Preferred Alternative would improve mobility to regional activity centers as well as destinations along the corridor itself, including increased access to education, public services and employment providers. For example, the Preferred Alternative would improve transit access to many low- and medium-wage jobs located near the light rail stations, such as industrial businesses in Tigard and retail stores in the Tigard Triangle and at Bridgeport Village.

Minority and low-income populations are also likely more concentrated in the areas with multifamily housing that are found directly adjacent to the major transportation facilities near the light rail alignment, compared to the predominately single-family neighborhoods found in surrounding areas. Because of this geographic proximity to the alignment, minority and low-income populations in particular may experience the following benefits from the Preferred Alternative in addition to the transit mobility benefits described above:

- improved bicycle and pedestrian facilities, including new or replaced sidewalks, signalized crosswalks and buffered or raised protected bikeways
- improved lighting and landscaping
- tree replacements that would result in higher levels of tree plantings in areas with minority or low-income populations
- reduced pollutants and mobile source air toxics compared to the No-Build Alternative
- reduced noise levels in several locations with multifamily residences along the corridor, particularly where no noise barriers currently exist, because retaining walls and noise walls would create additional noise buffers and reduce noise in several areas to levels below the current conditions

## **Overall Conclusion**

Taking into account the impact avoidance measures of the Preferred Alternative, the distribution of high and adverse impacts throughout the community, mitigation measures, and enhancements and benefits, FTA concludes that the Southwest Corridor Light Rail Project would not result in disproportionately high and adverse effects on minority and low-income populations.

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