



APPENDIX J

Environmental Justice Study

November 2014



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1 Environmental Justice

Section 1-1 of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires, “[t]o the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...”. There is no federal action associated with the Long-Range Plan Update. This analysis is also not required by the Washington State Environmental Policy Act. However, Sound Transit has prepared this environmental justice study to promote the principles of environmental justice and to facilitate any future environmental justice analysis associated with subsequent project-level review with a federal action. This study is based on the guidance set forth in the U.S. Department of Transportation’s Order to Address Environmental Justice in Minority Populations and Low-Income Populations (subsequently referred to as the USDOT Order) (USDOT 1997).

The USDOT Order requires agencies to:

- (1) “...provide meaningful opportunities for public involvement by members of minority populations and low-income populations during the planning and development of programs, policies, and activities (including the identification of potential effects, alternatives, and mitigation measures).”
- (2) “...provide the public, including members of minority populations and low-income populations, access to public information concerning the human health or environmental impacts of programs, policies, and activities, including information that will address the concerns of minority and low-income populations regarding the health and environmental impacts of the proposed action.”

The USDOT Order provides that “[i]n making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancements measures that will be taken and all offsetting benefits to the 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 Order 8(b)].

The USDOT Order defines key environmental justice terms as follows:

- Low-Income: having a median household income at or below the U.S. Department of Health and Human Services poverty guidelines.
- Low-Income Population: any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed program, policy, or activity.
- Minority: a person who is:
 - (1) Black (a person having origins in any of the black racial groups of Africa);
 - (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
 - (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or

- (4) American Indian or Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
- Minority Population; any readily identifiable groups of minority persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed program, policy, or activity.
- Adverse Effects: the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to, bodily impairment, infirmity, illness, or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of benefits of programs, policies, or activities.
- Disproportionately high and adverse effect on environmental justice populations means an adverse effect that is predominately borne by a minority population and/or a 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 purpose of this analysis is to provide a plan-level review of the existing regional environmental justice populations and the potential impacts associated with the Long-Range Plan Update and its two alternatives—the Current Plan Alternative and the Potential Plan Modifications Alternative. The analysis takes into account project benefits and potential mitigation measures, where applicable. For any given corridor within the two Long-Range Plan Update alternatives, a more detailed assessment of localized environmental justice populations and impacts, benefits, and potential mitigation measures would be done during project-level planning and environmental review, as appropriate.

1.1 Methodology

The environmental justice analysis describes the low-income and minority population (collectively, “environmental justice population”) demographics of the Sound Transit District boundary using the most recent census data available at the time the analysis was initiated. The analysis also provides information on the efforts Sound Transit has made to involve environmental justice populations in the Long-Range Plan Update process. Finally, the analysis assesses whether the Long-Range Plan Update would result in disproportionately high and adverse effects on environmental justice populations, taking into consideration plan impacts, benefits, and potential mitigation measures, as appropriate.

The environmental justice study area was defined as the entire Sound Transit District, also referred to in this Long-Range Plan Update Final Supplemental Environmental Impact Statement (SEIS) as the Plan area. The 617 census tracts (as defined in 2010) that fall fully or partially within the Sound Transit District boundary were used for the environmental justice analysis. Data

What are census tracts?

A census tract is a small subdivision of an urban area used by the U.S. Census Bureau to identify population and housing statistics. Census block groups and census blocks are even smaller subdivisions than census tracts. The census collects some information at the tract level, some at the block group level, and some at the block level.

from the 2010 census were used to identify concentrations of minority individuals in the Plan area. Data from the 2008–2012 American Community Survey 5-year summary were used to identify concentrations of low-income individuals and concentrations of individuals that speak a non-English language at home in the Plan area.

1.2 Plan area demographics

1.2.1 Low-income

Consistent with the USDOT definition of low-income, the census data reflect individuals who live in households with a household income at or below the U.S. Department of Health and Human Services' (2008) poverty guidelines. As presented in Table 1-1, most census tracts within the district have a low-income population in the 0 to 25 percent range. There are no census tracts in the Sound Transit District that have over 75 percent of their population living at or below the poverty level. Areas with the highest concentration of low-income residents include downtown Seattle, the Rainier Valley, Kent Valley, and portions of Tacoma and Everett. This information is also shown graphically in Figure 1-1. Sound Transit's most recent Title VI analysis, also based on 2010 census data, determined that 10.6 percent of the Sound Transit District's population is low income [Reference: Sound Transit (Central Puget Sound Regional Transit Authority). Title VI Demographic Study. December 2011.]

Table 1-1. Low-income individuals in the Plan area

Percentage low-income	Number of census tracts	Percentage of census tracts
0–25%	564	91%
26–50%	49	8%
51–75%	4	1%
76–100%	0	0%
Total	617	100%

Source: U.S. Census Bureau (2010), 2008–2012 American Community Survey 5-year summary, Table B17021 Poverty Status of Individuals in the Past 12 Months by Living Arrangement

1.2.2 Minority

The census data summarize the individuals who identify themselves as a race other than White, including Black or African American, Asian American, Native Hawaiian or Pacific Islander, American Indian or Alaskan Native, and two or more races. Forty-two percent of the census tracts in the district have minority populations (including both racial minorities and Hispanic or Latino minorities) in the 0 to 25 percent range, while 47 percent of the census tracts have racial minority populations in the 25 to 50 percent range. Another 10 percent of the census tracts have minority populations in the 51 to 75 percent range and 1 percent of the census tracts have minority populations of over 75 percent. Sound Transit's most recent Title VI analysis determined that 31.1 percent of the Sound Transit District's population is minority. The Rainier Valley area, with census tracts comprised of 76 to 100 percent minority individuals, has the highest concentration of minorities in the Sound Transit District. Other areas with relatively high concentrations (51 to 75 percent minority) include Seattle, the Kent Valley, Tukwila and SeaTac, Tacoma, and portions of east King County. Figure 1-2 and Table 1-2 depict the percentage of racial minorities in the census tracts (by quartile) in the Plan area.



Figure 1-1. Percentage of low-income individuals

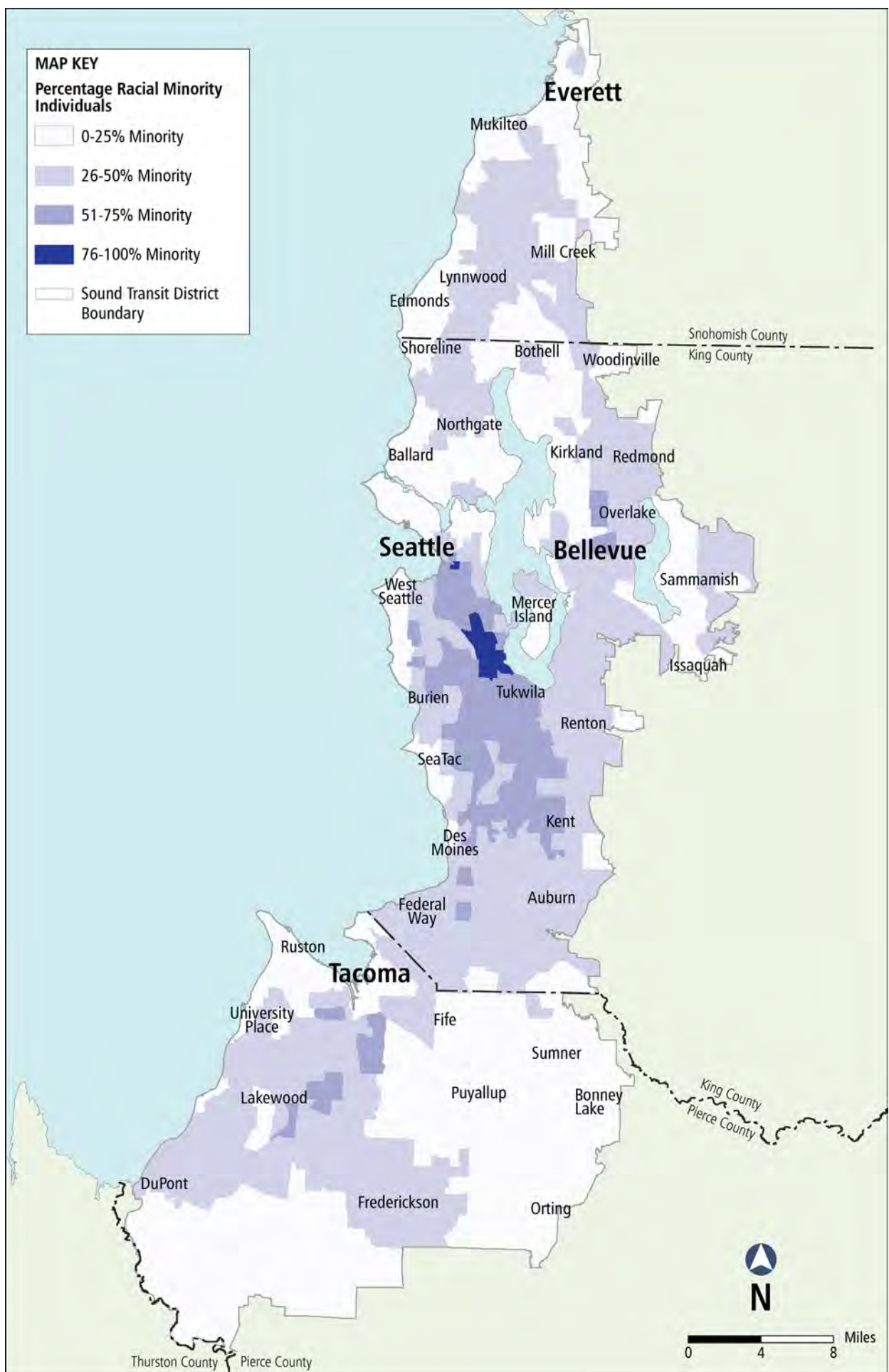


Figure 1-2. Percentage of racial minorities

Table 1-2. Minorities in the Plan area

Percentage of population	Minority populations																Non-minority population (White, not Hispanic or Latino)	
	Black or African American		American Indian and Alaska Native		Asian		Native Hawaiian and Other Pacific Islander		Some other race		Two or more races		Hispanic or Latino (of any race) ¹		All minorities (Non-White and/or Hispanic or Latino) ²			
	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts
0–25%	600	97%	598	97%	559	91%	617	100%	617	100%	617	100%	591	96%	261	42%	7	1%
26–50%	17	3%	19	3%	54	9%	0	0%	0	0%	0	0%	26	4%	287	47%	62	10%
51–75%	0	0%	0	0%	4	<1%	0	0%	0	0%	0	0%	0	0%	62	10%	287	47%
76–100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	7	1%	261	42%
Total	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%

Source: U.S. Census Bureau (2010), Table P5 Hispanic or Latino Origin by Race

¹ Individuals who identify themselves as Hispanic or Latino may be of any race, including White.

² Data in the All Minorities column are more dispersed across the quartiles than data in the specific minority type columns. This is because an individual census tract could have a relatively low representation of each type of minority group, but in aggregate could have a more substantial minority representation in the population. For example, a census tract could fall into the first quartile (0-25%) for each minority type, such as 10% Black or African American, 1% Native American and Alaska Native, 11% Asian, 0.5% Native Hawaiian and Other Pacific Islander, 4.5% Some Other Race, 2% Two or More Races, and 1% Hispanic or Latino. When all the minorities for the census tract are considered in aggregate, this census tract could have a total minority population of more than 25%, so it would be reported in the second quartile (26 to 50%) in the All Minorities column.

1.2.3 Language spoken at home

The census data summarize individuals who speak a non-English language at home, including the languages that Sound Transit District typically translates public outreach materials into—Spanish, Russian, Vietnamese, Korean, and Chinese. For the majority (64 percent) of census tracts, 0 to 25 percent of the population speaks a non-English language at home. For 32 percent of census tracts, 26 to 50 percent of the population speaks a non-English language at home. Table 1-3 depicts the percentage of the population speaking non-English languages at home in the census tracts (by quartile) in the Plan area.

1.3 Outreach to environmental justice populations

As part of the Long-Range Plan Update, Sound Transit has made it a priority to meaningfully engage environmental justice populations throughout the Plan's updating and decision-making process. Sound Transit has undertaken numerous public outreach efforts. The efforts include providing notice of and opportunities for public comment, analyzing collected information, and providing appropriate response.

Multilingual outreach materials

Outreach materials were translated into multiple languages to serve environmental justice populations, including Spanish, Chinese, Russian, Vietnamese, and Korean.

The scoping period for the Long-Range Plan Update, which lasted from October 25 to November 25, 2013, was advertised by mail and email, on Sound Transit's website, on community calendars and blogs, in briefings with a variety of city councils, chambers, boards, and interest groups, in local newspapers (in print and online), and on event posters at locations around Puget Sound. Translated advertisements and posters were also distributed. Materials were translated into five different languages to reach the diverse population in the Sound Transit District. Table 1-4 lists ongoing outreach activities and those that were conducted during the scoping period. This table also identifies those events where additional efforts were used to engage environmental justice populations (e.g., use of a translator). The following themes relevant to environmental justice populations emerged during the scoping period, which collected over 5,000 comments from jurisdictions, agencies, stakeholder organizations, and the public:

- Focus more attention on transit-dependent and environmental justice communities because they are underrepresented.
- Preferentially serve those people being displaced.
- Provide better transit service to low-income populations because affordable neighborhoods in Seattle have slower service or less-frequent service.
- Implement a need-based or reduced-fare pass system for low-income passengers.
- Provide improvements to better accommodate disabled and elderly riders.

Following completion of the scoping period, Sound Transit remained committed to meaningfully engaging environmental justice populations during the Draft SEIS comment period by implementing similar techniques as were used during the scoping period to reach these populations, such as distributing project-specific updates, event posters, and display ads. Outreach materials continue to be translated into Spanish, Chinese, Russian, Vietnamese, and Korean. In addition, Sound Transit has offered numerous mechanisms and opportunities for environmental justice populations to provide feedback about the Draft SEIS and Long-Range Plan Update, including a Long-Range Plan Update online questionnaire/survey, Facebook page, information phone line, and website, as described in Table 1-4. In addition, Sound Transit met with various community groups throughout the SEIS process, including the Eastside Transportation Partnership, Economic Development Alliance, and Bicycle Advisory Board. For additional outreach effort details, refer to Table 3-3 in Appendix B, Agency Coordination and Public Involvement.

Table 1-3. Language spoken at home in the Plan area

Percentage of population	Non-English languages spoken at home														English spoken at home	
	Spanish		Russian		Vietnamese		Korean		Chinese		Other non-English Languages		All non-English languages ¹			
	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts	Census tracts	% tracts
0–25%	594	96%	617	100%	617	100%	617	100%	614	100%	617	100%	394	64%	1	0%
26–50%	23	4%	0	0%	0	0%	0	0%	3	<1%	0	0%	195	32%	27	4%
51–75%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	28	4%	195	32%
76–100%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	394	64%
Total	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%	617	100%

Source: U.S. Census Bureau (2010), 2008-2012 American Community Survey 5-year summary, Table B16001 Language Spoken at Home by Ability to Speak English for the Population 5 Years and Older

¹ Data in the All Non-English Languages column are more dispersed across the quartiles than data in the specific non-English language columns. This is because an individual census tract could have a relatively low representation of each non-English language, but in aggregate could have a more substantial representation of non-English speakers in the population. For example, a census tract could fall into the first quartile (0-25%) for each non-English language, such as 15% Spanish, 10% Russian, 5% Vietnamese, 3% Korean, 6% Chinese, and 4% Other Non-English Languages. When all the non-English languages for the census tract are considered in aggregate, this census tract could have a non-English speaking population of more than 25%, so it would be reported in the second quartile (26-50%) in the All Non-English Languages column.

Table 1-4. Environmental justice outreach summary

Outreach type	Outreach summary	Date	Outreach period	Additional outreach to Environmental Justice populations
Website	Posted information on the Sound Transit website www.soundtransit.org/longrangeplan . Over 14,900 unique webpage views occurred during the scoping period.	Ongoing	Scoping	
Information line	Answered an information phone-line before, during, and after the comment period. Formal scoping comments were not accepted over the phone; however, the information line provided a way for callers to interact with a member of the outreach team directly. The outreach team received 26 calls during the scoping comment period.	Ongoing	Scoping	The information line provides an opportunity for populations without access to internet or who are otherwise unable to engage in modern technologies to ask questions and learn more from the project team.
Public notice	Provided legal notices in three major local newspapers in Snohomish, King, and Pierce Counties: <i>The Seattle Times</i> , <i>The News Tribune</i> , and <i>The Herald</i> (Everett).	October 2013	Scoping	
Public notice	Sent approximately 350 letters and the Scoping Notice to all jurisdictions within the Sound Transit District, federal, state, regional, and local agencies, tribes, and other stakeholders.	October 2013	Scoping	
Public notice	Provided copies of the Scoping Notice to the Olympia bureaus of the Associated Press and United Press International.	October 2013	Scoping	
Public notice	Letter and follow-up email sent to approximately 350 agency contacts was sent out to launch the scoping period and invite recipients to an informational meeting.	October 18, 2013	Scoping	
Public notice	Issued the formal Scoping Notice on October 18, 2013, that was subsequently published in the Washington State Environmental Policy Act Register on October 25.	October 18, 2013; October 25, 2013	Scoping	
Public notice	Published a press release on the project website that formally announced the Long-Range Plan environmental process, including the scoping period and ways to comment.	October 25, 2013	Scoping	
Mailer	Distributed a direct mailer to all registered voters within the Sound Transit District boundary, reaching approximately 938,100 single-family homes, apartments, and businesses.	November 2013	Scoping	A translated text box was provided in Spanish, Chinese, Korean, Russian and Vietnamese.
Public notice	Distributed over 900 event posters across the region to community centers and businesses and posted on utility poles beginning 10 days before the public meetings. Translated posters were delivered to ensure inclusion of all environmental justice communities, advocates and underserved populations. Posters were geographically distributed and translated into Spanish, Korean, Russian, Vietnamese, and Chinese.	November 2013	Scoping	To reach target audiences who may be more transit-dependent, posters were distributed to social service agencies around the region. Translated posters included Spanish, Chinese, Russian, Vietnamese, and Korean.

Table 1-4. Environmental justice outreach summary (continued)

Outreach type	Outreach summary	Date	Outreach period	Additional outreach to Environmental Justice populations
Public notice	Posted display advertisements in local online blogs including the Seattle Transit Blog and West Seattle Blog. Two weeks prior to the first meeting, engagement was made with entities that house community calendars.	October and November 2013	Scoping	
Individual briefing	City Councils/City Council staff: Auburn City Council, Bellevue City Council, Bothell City Council, Burien City Council, Des Moines City Council, Edmonds City Council, Everett City Council, Federal Way City Council, Issaquah City Council, Kent City Council, Kirkland City Council, Lake Forest Park Council, Lakewood City Council, Lynnwood City Council, Metropolitan King County Council, Mill Creek City Council, Mount Lake Terrace Council, Mukilteo City Council, Puyallup Council, Redmond City Council, Renton City Council, SeaTac City Council, Seattle City Council, Shoreline City Council, Sumner Council, Tacoma City Council, Tukwila City Council, Woodinville City Council	October and November 2013	Scoping	
Individual briefing	Chambers of Commerce/Downtown Associations: Bellevue Chamber, Bellevue Downtown Association, Downtown Seattle Association, Federal Way Chamber, Seattle Chamber, Sumner/Puyallup Chamber, Tacoma-Pierce County Chamber	October and November 2013	Scoping	
Individual briefing	Other: Bellevue College, Eastside Transportation Partnership, Economic Development Alliance, Northwest Environmental Business Council, SeaShore Transportation Forum, Snohomish County Committee for Improved Transportation, Snohomish County Tomorrow	October and November 2013	Scoping	
Public notice	Included information on the Long-Range Plan public scoping period in the CEO Report on November 8, 2013, which was available on Sound Transit's website in the "CEO Corner" www.soundtransit.org/About-Sound-Transit/CEO-Corner .	November 8, 2013	Scoping	
Agency meeting	Hosted an agency meeting for interested parties including local jurisdictions, tribes, and elected officials.	November 8, 2013	Scoping	
Public meeting	Seattle: Seattle University, Campion Ballroom	November 12, 2013	Scoping	
Public meeting	Federal Way: Federal Way Community Center	November 13, 2013	Scoping	
Public meeting	Redmond: Marriott Hotel	November 14, 2013	Scoping	

Table 1-4. Environmental justice outreach summary (continued)

Outreach type	Outreach summary	Date	Outreach period	Additional outreach to Environmental Justice populations
Public notice	Published display ads in 21 online newspapers. Ads publicized the six public meetings and encouraged readers to take the online survey. Online display ads were placed in the following publications: <i>The Seattle Post-Intelligencer</i> , <i>The Tacoma News Tribune</i> , <i>The Seattle Times</i> , <i>The Everett Herald</i> (HeraldNet.com), <i>Kent Reporter</i> , <i>Bellevue Reporter</i> , <i>Kirkland Reporter</i> , <i>Issaquah Reporter</i> , <i>Redmond Reporter</i> , <i>Auburn Reporter</i> , <i>Renton Reporter</i> , <i>Federal Way Mirror</i> , <i>The Highline Times</i> , <i>Bellevue Business Journal</i> , <i>King5.com</i> , <i>Bothell-Kenmore Reporter</i> , <i>Mercer Island Reporter</i> , <i>Crosscut.com</i> , <i>La Raza</i> (nuestrooriente.com).	Between October 28 and November 17, 2013	Scoping	Some ads were regionally targeted, focusing on the public meeting in that subarea. Environmental justice populations and individuals with limited English proficiency were reached through translated ads (Spanish, Russian, Vietnamese, Korean, and Chinese).
Public notice	Published display ads in 14 local daily, weekly, or monthly print newspapers. Ads publicized the six public meetings and encouraged readers to take the online survey. Print display ads were placed in the following publications: <i>The Tacoma News Tribune</i> , <i>The Seattle Times</i> , <i>The Daily Herald</i> , <i>The Seattle Medium</i> , <i>Tacoma Weekly</i> , <i>The Herald Business Journal</i> , <i>The Stranger</i> , <i>Northwest Asian Weekly</i> , <i>La Raza</i> , <i>International Examiner</i> , <i>Korea Daily</i> , <i>The Seattle Chinese Times</i> , <i>The Seattle Chinese Post</i> , <i>Northwest Vietnamese Weekly</i> .	Between October 28 and November 17, 2013	Scoping	Some ads were regionally targeted, focusing on the public meeting in that subarea. Environmental justice populations and individuals with limited English proficiency were reached through translated ads (Spanish, Russian, Vietnamese, Korean, and Chinese).
Public meeting	Tacoma: Tacoma Convention Center	November 18, 2013	Scoping	
Public meeting	Everett: Eisenhower Middle School	November 19, 2013	Scoping	
Public notice	A project-specific email was sent to two Sound Transit notification lists. The first sent an email on October 28, 2013 to over 17,000 contacts. The second email a list of over 16,000 contacts on November 21, 2013 who expressed interest in Sound Transit news and capital projects.	October 28, 2013; November 21, 2013	Scoping	All the project-specific updates included information translated into Spanish, Chinese, Russian, Vietnamese, and Korean to ensure members of the public who spoke one of these languages had opportunity to receive information.
Public meeting	Seattle: Sound Transit/Union Station	November 21, 2013	Scoping	
Online questionnaire	Online questionnaire/survey gathered feedback as part of the scoping process to inform development of alternatives to be examined in the Long-Range Plan Draft SEIS. A total of 11,280 surveys were completed.	October 25 through November 25, 2013	Scoping	
Sound Transit Facebook page	Used Facebook as a marketing tool to reach the online social media community. From November 7–25, the ads generated 3,976 clicks (clicks include clicking through to the website, “likes” or comments).	November 7–25, 2013	Scoping	

Table 1-4. Environmental justice outreach summary (continued)

Outreach type	Outreach summary	Date	Outreach period	Additional outreach to Environmental Justice populations
Website	Posted an announcement of the Draft SEIS comment period on June 13, 2014, which remained throughout the comment period. Over 6,500 people reached the online questionnaire through the website announcement. Almost 7,000 people viewed the website in total during the comment period.	Ongoing	Draft SEIS	
Information line	Answered an information phone-line before, during, and after the comment period. Formal Draft SEIS comments were not accepted over the phone, but callers could receive information regarding the LRP and where to learn more. A total of 39 calls were received with inquiries about the Draft SEIS comment period.	Ongoing	Draft SEIS	
Public notice	Provided a legal notice in the Everett Herald, Seattle Times, and The Tacoma News Tribune at the start of the Draft SEIS comment period to advise the public, tribes and agencies that the Draft SEIS was available for review and comment.	June 13, 2014	Draft SEIS	
Public notice	A notice was published in the Washington State Environmental Policy Act Register on June 13, 2014. The notice described how to comment, included background information on the environmental review process, and listed where to find copies of the Draft SEIS.	June 13, 2014	Draft SEIS	
Mailer	Sent a saturation mailer to all registered voters in the Sound Transit district boundary, reaching about 980,000 homes and apartments. Mailer announced the Draft SEIS comment period and public meetings.	Beginning June 13, 2014	Draft SEIS	A translated text box was provided in Spanish, Chinese, Korean, Somali and Vietnamese.
Posters	Poster distribution was used to enhance public awareness of the comment period and public meetings. The posters were distributed to 69 community locations.	Beginning June 13, 2014	Draft SEIS	Translated posters were provided in Chinese, Korean, Somali, Spanish and Vietnamese.
Individual briefing	Lakewood City Council, South County Area Transportation Board, Tacoma Transportation Commission, SeaTac City Council, Snohomish County Committee for Improved Transportation, Snohomish County Tomorrow, Tacoma IPS Committee, Lynwood City Council, Snohomish County Council, Mountlake Terrace City Council, Regional Access Mobility Partnership (RAMP), Kent Public Works Committee, West Seattle Transportation Coalition, Representative Jake Fey, Senator Marko Liias, Tukwila City Council, Fife City Council, Federal Way City Council, SeaShore Transportation Forum, Senator Jeanne Kohl-Welles, West Seattle Chamber, Representative Cyrus Habib, Representative Tana Senn, Lynnwood Rotary.	June and July 2014	Draft SEIS	
Public meeting	Redmond: Marriott Hotel	July 8, 2014	Draft SEIS	
Public meeting	Seattle: Union Station	July 10, 2014	Draft SEIS	
Public meeting	Tacoma: Greater Tacoma Convention and Trade Center	July 10, 2014	Draft SEIS	

Table 1-4. Environmental justice outreach summary (continued)

Outreach type	Outreach summary	Date	Outreach period	Additional outreach to Environmental Justice populations
Public meeting	Seattle: Museum of History and Industry	July 15, 2014	Draft SEIS	
Public meeting	Federal Way: Truman High School	July 16, 2014	Draft SEIS	
Public meeting	Everett: Everett Station	July 17, 2014	Draft SEIS	
Sound Transit Facebook/Twitter	Used Facebook and Twitter as a tool to direct the online community to the online questionnaire, to the website and to advertise the public meetings. During the Draft SEIS comment period, 540 people directly interacted (clicks, likes, comments, shares, etc.) through these social media venues.	June 6 through July 24, 2014	Draft SEIS	
Questionnaire/survey	Implemented an online questionnaire/survey to gather feedback as part of the Draft SEIS process. A total of 12,190 surveys were completed.	June 13 through July 28, 2014	Draft SEIS	
Online questionnaire	Implemented an online questionnaire to gather feedback as part of the Draft SEIS comment period. A total of 12,190 surveys were completed.	June 13 through July 28, 2014	Draft SEIS	
Advertisements	Four print advertisements and one online advertisement were translated into common community languages.	June 13 through July 28, 2014	Draft SEIS	Translated languages include Chinese, Korean, Somali, Spanish, and Vietnamese.
Fairs and festivals	Sound Transit representatives hosted display booths at fairs and festivals, including the Ethnic Fest in Tacoma, to coincide with the Draft SEIS comment period.	June 15 through July 28, 2014	Draft SEIS	A translated text box was provided for the Long-Range Plan folio in Spanish, Chinese, Korean, Somali and Vietnamese.

Source: *EnviroIssues 2014*

This table describes outreach activities undertaken during the scoping process and the Draft SEIS public comment period for the Plan update. As individual projects are approved and moved forward, additional outreach would occur that is project-specific and would include efforts to engage environmental justice populations.

1.4 Plan update impacts, benefits, and potential mitigation

The USDOT Order requires agencies to explicitly consider human health and environmental effects related to transportation projects that may have a disproportionately high and adverse effect on minority or low-income populations. The Long-Range Plan Update includes high-capacity transit (HCT) corridors located within and intended to serve and benefit the Plan area as a whole, although individuals residing closest to these corridors would likely experience the greatest impacts and benefits. The following section identifies the potential impacts and benefits of the Long-Range Plan Update alternatives to environmental justice populations and provides potential mitigation measures.

Transit projects are particularly relevant to environmental justice populations in large part because minority and low-income populations tend to be more dependent on transit service than other groups, indicating that the transit service improvements could provide greater, or at least equal, benefits to environmental justice populations. In 2008, approximately 60 percent of all transit passengers in the U.S. were minorities (American Public Transportation Association 2008). Based on 2010 census data and 2008–2012 American Community Survey data, the Plan area has 69 census tracts with minority populations above 50 percent and 4 census tracts with more than 50 percent low-income individuals. In addition, for 223 census tracts in the Plan area, over 25 percent of the population speaks a non-English language at home.

This is a plan-level analysis, so the assessment of potential impacts, benefits, and mitigation measures relevant to environmental justice populations was made at a broad level. Many of the potential impacts identified in the plan-level SEIS would be avoided or minimized during future project-level planning and environmental review. Furthermore, taking into consideration mitigation measures that would be implemented and project benefits, impacts to low-income or minority populations are not likely to be disproportionately high and adverse.

Table 1-5 summarizes the potential impacts, mitigation measures, and benefits of expanded transit opportunities and modes in general and as they pertain to environmental justice populations. The table, organized by elements of the environment, also identifies potential mitigation measures. The information presented in Table 1-5 is relevant to both of the Long-Range Plan Update alternatives: the Current Plan Alternative and the Potential Plan Modifications Alternative.

The existing Sound Move and ST2 programs as well as the Current Plan Alternative already serves many of the areas with the highest concentrations of environmental justice populations (Figure 1-3 and Figure 1-4). For example, Link light rail, Tacoma Link, Sounder commuter rail and ST Express bus provide service to those areas with some of the highest concentrations of low-income and minority populations in the Sound Transit district such as downtown Seattle, the Rainier Valley, the Kent Valley, and portions of Tacoma/Pierce County, and Everett. In addition, each of the potential rail extensions and regional express/BRT corridors included in the Current Plan Alternative would provide additional service to these areas as well as to areas in east King County and Snohomish County that also have environmental justice populations, especially minorities.

The Potential Plan Modifications Alternative would provide additional services to these areas by providing more study corridors that would pass through areas with concentrations of environmental justice populations, including: downtown Seattle (corridors 2, 9, 23, , 25, , 33, and 36), Rainier Valley¹ (corridors 25 and 33), Tacoma (corridors 5, 6, 20, 21, 22, 34), Tukwila/SeaTac (corridors 7, 23, 29, 32), and Kent Valley (corridors 7, 29, 33, and 46), (Figure 1-5, Figure 1-6, Figure 1-7, and Figure 1-8).

¹ In 2010, the U.S. Census Bureau reported that the 98118 ZIP code—which includes most of Rainier Valley—is America's most diverse zip code area. More than 50 languages are spoken in Rainier Valley. Its population is 26 percent Black or African American, 31 percent White, and 33 percent Asian, with most of the remaining 10 percent made up of immigrants from around the world (U.S. Census Bureau 2010).

Table 1-5. Summary of potential impacts, benefits, and mitigation measures

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Transportation	<ul style="list-style-type: none"> • Changes to property access/driveways. • Changes to turning movements along transit corridors, which may result in fewer or altered turning options. • Increased parking demand by transit users near station areas. • Reduced roadway capacity, changed local access or circulation along existing streets, highways, and rail lines. • Construction of plan elements could temporarily negatively affect traffic congestions and speeds. 	<ul style="list-style-type: none"> • Improved transit travel times, reliability, and convenience. • Increased choices for travel in the region. • Increased transit services, access, and ridership from increased transit frequency, geographic coverage, parking, access, speed, and reliability. • Decreased regional traffic volumes for single-occupancy vehicles. • Increased transportation opportunities for the elderly and people with disabilities. • The transportation benefits would likely include safety improvements for transit vehicles and other vehicles, such as dedicated turn signals. • Improved transit reliability and decreased travel times would benefit low-income persons, who are often hourly employees who need to arrive to work at specific times. • Transit improvements would include improved accessibility, which would directly benefit people with disabilities¹ and the elderly² who often rely on transit and may have lower or fixed incomes. • Increased transit opportunities and geographic coverage often increases access to employment. 	<ul style="list-style-type: none"> • Communicate often and broadly about potential construction impacts. Send out advanced construction notifications and implement a construction location hotline. • Translate construction notifications and materials into additional languages as needed. • Use signage or flaggers to guide traffic through detours. • Phase construction activities. • Prepare a detailed traffic impact mitigation plan. • Close lanes during off-peak times. • Provide special transit services through some construction areas. • Implement residential parking zones and develop parking management plans. • Increase the number of feeder buses. • Improve pedestrian and bicycle facilities. • Provide additional parking at selected stations.
Acquisitions, displacements, and relocations	<ul style="list-style-type: none"> • Residential or business relocations. • Some businesses may close or relocate due to construction activities. 	<ul style="list-style-type: none"> • Sometimes acquisitions or displacements benefit the residents or businesses by allowing them to move into improved housing or facilities. 	<ul style="list-style-type: none"> • Provide relocation services and monetary compensation in accordance with state and federal laws and Sound Transit policy when acquiring real property and relocating people and businesses.

Table 1-5. Summary of potential impacts, benefits, and mitigation measures (continued)

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Land use	<ul style="list-style-type: none"> Acquired land would convert from existing use to a transportation-related use. New development, redevelopment or infill, and land use intensification surrounding transit stations could replace some dispersed automobile-oriented land uses. 	<ul style="list-style-type: none"> All actions would be consistent with land use plans, policies, and legislation, including <i>VISION 2040</i> and Destination 2030 Update. Promote development that is supportive of plans and policies for higher-density multi-use areas. Some mixed-used developments have requirements for low-income residences and minority-owned businesses. Land use conversions to these types of developments could benefit environmental justice populations. Both <i>VISION 2040</i> and Destination 2030 Update incorporate environmental justice studies and analyses. By complying with the two planning documents, Sound Transit continues to consider environmental justice populations throughout the Plan update process. Goals include not only mitigating any adverse effects on environmental justice populations, but also establishing regional strategies that serve environmental justice populations and conducting meaningful outreach to environmental justice populations (Puget Sound Regional Council 2007 and 2009). 	<ul style="list-style-type: none"> Design individual projects to minimize displacements and encroachment on surrounding land uses. Provide relocation advisory services and monetary compensation in accordance with state and federal laws and Sound Transit policy when acquiring real property and relocating people and businesses.

Table 1-5. Summary of potential impacts, benefits, and mitigation measures (continued)

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Economics	<ul style="list-style-type: none"> • Business and employee displacements. • Temporary reduction in tax revenues from property acquisitions and conversions of land. 	<ul style="list-style-type: none"> • Expanded transit options promote the use of transit and provide more transit choices for low-income individuals who generally have limited disposable income. • Expanded transportation options improve regional mobility and access to employment nodes or other commercial centers, which can result in positive economic impacts throughout the region. This could include increasing employment opportunities for transit-dependent individuals. • Decreased travel times, more frequent service, decreased congestion, and increased reliability benefit low-income populations. • Single mothers experience higher rates of poverty than the general population. Providing expanded transit options may benefit single mothers by increasing their mobility and decreasing their travel time to and from work (Blumenberg 2004). This time savings can have an economic benefit by savings costs on expenses such as child care. • Improved transit service can decrease cost and provide low-income populations with meaningful cost savings that can then be used for basic needs such as food, health care, and housing. 	<ul style="list-style-type: none"> • Provide compensation and relocation assistance for displaced businesses, where applicable, in accordance with the provisions of Sound Transit's adopted Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines.

Table 1-5. Summary of potential impacts, benefits, and mitigation measures (continued)

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Social, neighborhoods, community	<ul style="list-style-type: none"> Depending on how a transit project is implemented, it may become a physical or perceived barrier to neighborhood connectivity. Transit projects can also produce either physical or perceived barriers between communities. 	<ul style="list-style-type: none"> Projects can enhance cohesion by providing new meeting points for adjoining neighborhoods. Increased transit access and transit-oriented developments could also improve neighborhood connectivity. Transit projects that connect environmental justice populations, including social services that serve environmental justice populations, can improve neighborhood connectivity. Increased transit opportunities generally increase access to social services such as libraries, health care centers, and community centers in the long-term. Since many low-income individuals are transit-dependent, an increase in transit opportunities therefore provides more access to these services for these individuals. 	<ul style="list-style-type: none"> Coordinate with public service providers and utilities when a transit project has the potential to affect fire, emergency services, police, water and sewer, for instance, to minimize impacts during construction.
Parks, recreation, and physical activity	<ul style="list-style-type: none"> Some projects may require the use of parks and recreational lands. Projects near parks and recreational resources may affect access, noise, air quality, traffic, aesthetics, or use of the resource. Views of parks could be obstructed. Construction activities may temporarily decrease park access, public safety, and usability. 	<ul style="list-style-type: none"> Projects that add bicycle lanes or trails would increase recreational opportunities, including improved access to parks. Many transit projects often include bicycle and pedestrian improvements, which could facilitate walking and biking and overall increased physical activity. The connection between poverty and health, in which low-income individuals experience greater risk of health issues, is well documented (Morley 2006; Murray 2006). Improving transit service can facilitate physical activity and provide associated health benefits by encouraging more people to use alternative transportation. Most health benefits occur with at least 150 minutes per week (less than 22 minutes per day) of moderate-intensity physical activity, such as brisk walking (U.S. Department of Health and Human Services 2008); walking to and from transit stops is an example of an activity that can provide health benefits. 	<ul style="list-style-type: none"> Design high-capacity transit projects to avoid or minimize potential adverse effects where possible. Use design that is sensitive to neighborhood context, character, architectural styles, scale, and views to reduce the level of impacts. Restore facilities to pre-project conditions and provide comparable replacement of facilities if acquisition of parks and recreation facilities is necessary. Maintain access during temporary road and trail closures, and screen views of construction sites during construction. Provide signage explaining the nature and duration of construction. Use noise and light barriers or shields during construction and for system operation.

Table 1-5. Summary of potential impacts, benefits, and mitigation measures (continued)

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Visual and aesthetic resources	<ul style="list-style-type: none"> Impacts may include vegetation removal. Projects may alter or add features to the landscape, including stations, park-and-ride lots, and overhead power structures. Light rail options may include elevated guideways, which would be more visible than at-grade or below-grade rail. Light and glare could increase around park-and-ride lots and along new corridors. Views may be affected; temporary visual impacts could occur from construction equipment, materials, signage, etc. Temporary lighting may be required for nighttime construction. 	<ul style="list-style-type: none"> Projects may improve the aesthetic conditions by improving streets, sidewalks, and landscaping. Transit projects have intended safety benefits of improved lighting and those benefits would be accrued by the community as a whole. 	<ul style="list-style-type: none"> Direct lighting down and shield light sources to minimize spillover. Provide replacement landscaping where applicable. Select and modify routes to avoid or minimize the need to acquire and clear new rights-of-way. Modify structure designs to integrate scale and character with surroundings. Screen views of construction areas.
Air quality	<ul style="list-style-type: none"> Nitrogen oxide and particulate matter (from diesel-powered commuter rail) would increase, but would be more than offset by reductions in automobile use. Localized emissions would increase around park-and-ride lots and stations in the long-term. Temporary localized emissions would increase near construction areas due to stalled traffic and construction equipment. 	<ul style="list-style-type: none"> Regional motor vehicle emissions, including greenhouse gas emissions, would be reduced due to a reduction in vehicle use and vehicle delays. The use of electric rail vehicles (light rail transit and streetcar) and hybrid buses greatly reduces transit vehicle emissions. 	<ul style="list-style-type: none"> Use multiple measures to control particulate matter less than 10 micrometers in size (PM₁₀) during construction. Develop a detailed assessment and mitigation plan during project-level environmental review. Where needed, reduce localized emissions by reducing vehicle delays or volumes at major intersections. Mitigation to reduce <i>regional</i> long-term emissions should not be needed under the Potential Plan Modifications Alternative as a result of expected improvement over the Current Plan Alternative, and that no exceedances of the National Ambient Air Quality Standards would result from improvements or projects.

Table 1-5. Summary of potential impacts, benefits, and mitigation measures (continued)

Element of the environment	Potential impacts	Potential benefits	Potential mitigation measures
Noise and vibration	<ul style="list-style-type: none"> • Light rail and commuter rail can create noise impacts for residences and other sensitive land uses near tracks. • Transit centers and park-and-ride lots can create noise impacts for nearby land uses. • Individual projects would generate some temporary noise disturbances near construction activities and may require nighttime noise variances. • Vibration impacts may occur to sensitive land uses within 60 feet of light rail tracks with frequent service, and within 80 feet of commuter rail lines used during peak periods. 	<ul style="list-style-type: none"> • New noise barriers where none currently exist may reduce noise levels below existing conditions. 	<ul style="list-style-type: none"> • Use mitigation measures such as acquisition of land for buffer zones, realignment, track and wheel design for rail systems, maintenance, time restrictions, sound insulation, and construction of noise walls or other barriers.
Environmental Health	<ul style="list-style-type: none"> • Implementation of transit projects may disturb known or previously undiscovered hazardous materials sites. • Property values and rents can be lower near known hazardous materials sites. This may mean a concentration of environmental justice populations near these sites. • Electromagnetic field intensities from transit projects would not result in impacts that would negatively affect human health. Locations of human exposure within and adjacent to the corridors are considerably below established exposure guidelines. 	<ul style="list-style-type: none"> • If a transit project affects a hazardous materials site, the site would likely require some level of investigation and clean-up. This clean-up could occur sooner as a result of the transit project. This could benefit environmental justice populations as they may live in higher concentration near these sites. 	<ul style="list-style-type: none"> • Meet health, safety, and hazardous waste regulations. • Segregate hazardous wastes. Handle all hazardous materials encountered during construction according to applicable law. • Protect employee health through ventilation, fire protection, and other measures. • Treat pollutant generating runoff with appropriate BMPs. • Use nontoxic substances. • Use property investigation, remediation, and environmental site assessments (phase I, II, or III) to identify opportunities to remediate contaminated property, or avoid contamination by rerouting the alignment.

¹ Individuals with disabilities experience a higher occurrence of poverty than the general population; over one-quarter of Americans living with disabilities are in poverty according to the 2010 census Current Population Survey (DeNavas-Walt, Proctor, and Smith 2011). Furthermore, rates of individuals with disabilities are increasing in America and children from families in poverty have a higher prevalence of disabilities (Centers for Disease Control and Prevention 2011).

² Elderly populations have higher rates of low and fixed incomes than the general population. Furthermore, poverty in elderly populations disproportionately affects women, minorities, and persons living alone (AARP Foundation 2008).

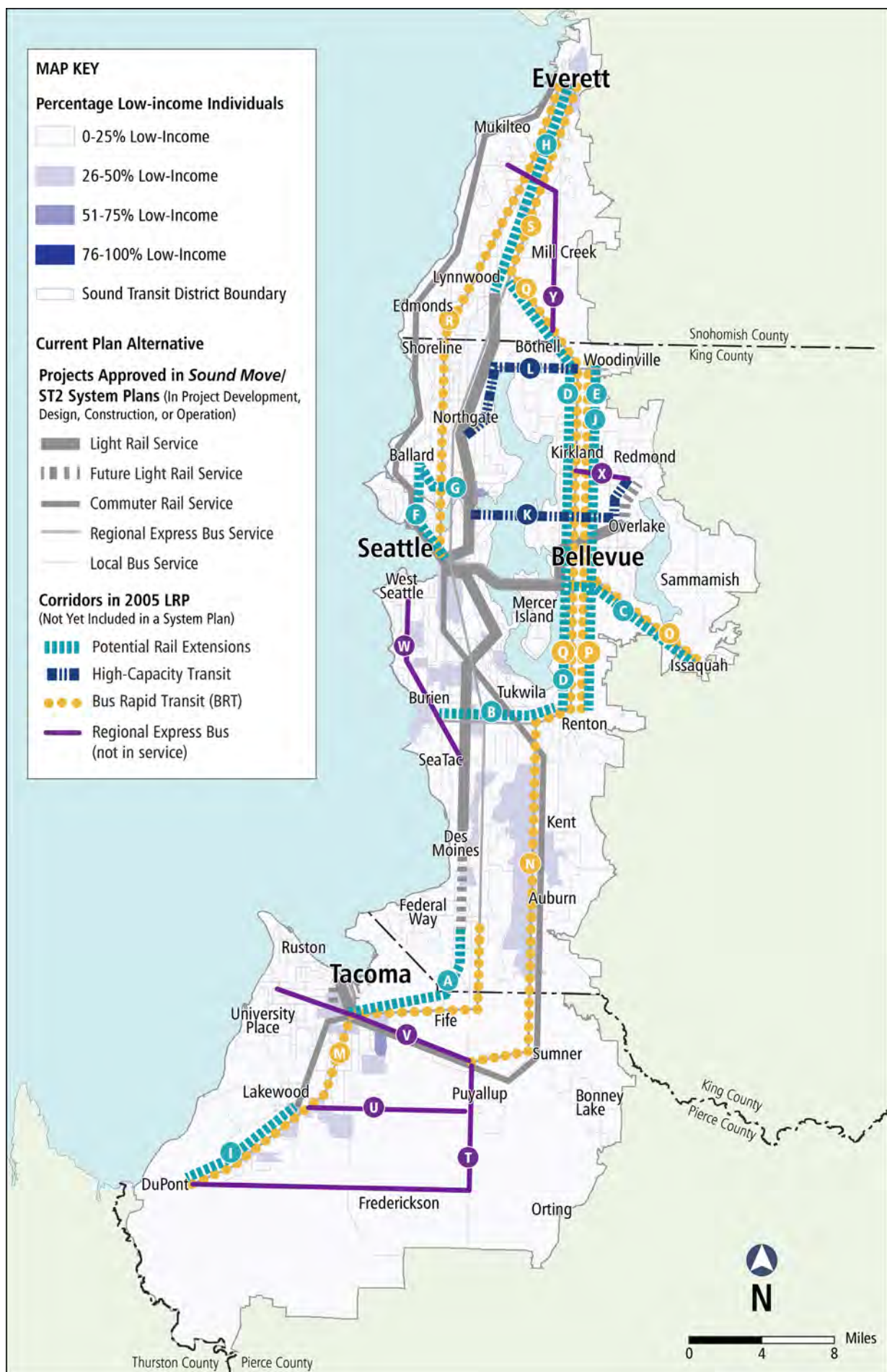


Figure 1-3. Percentage of low-income individuals—Current Plan Alternative



Figure 1-4. Percentage of racial minorities—Current Plan Alternative

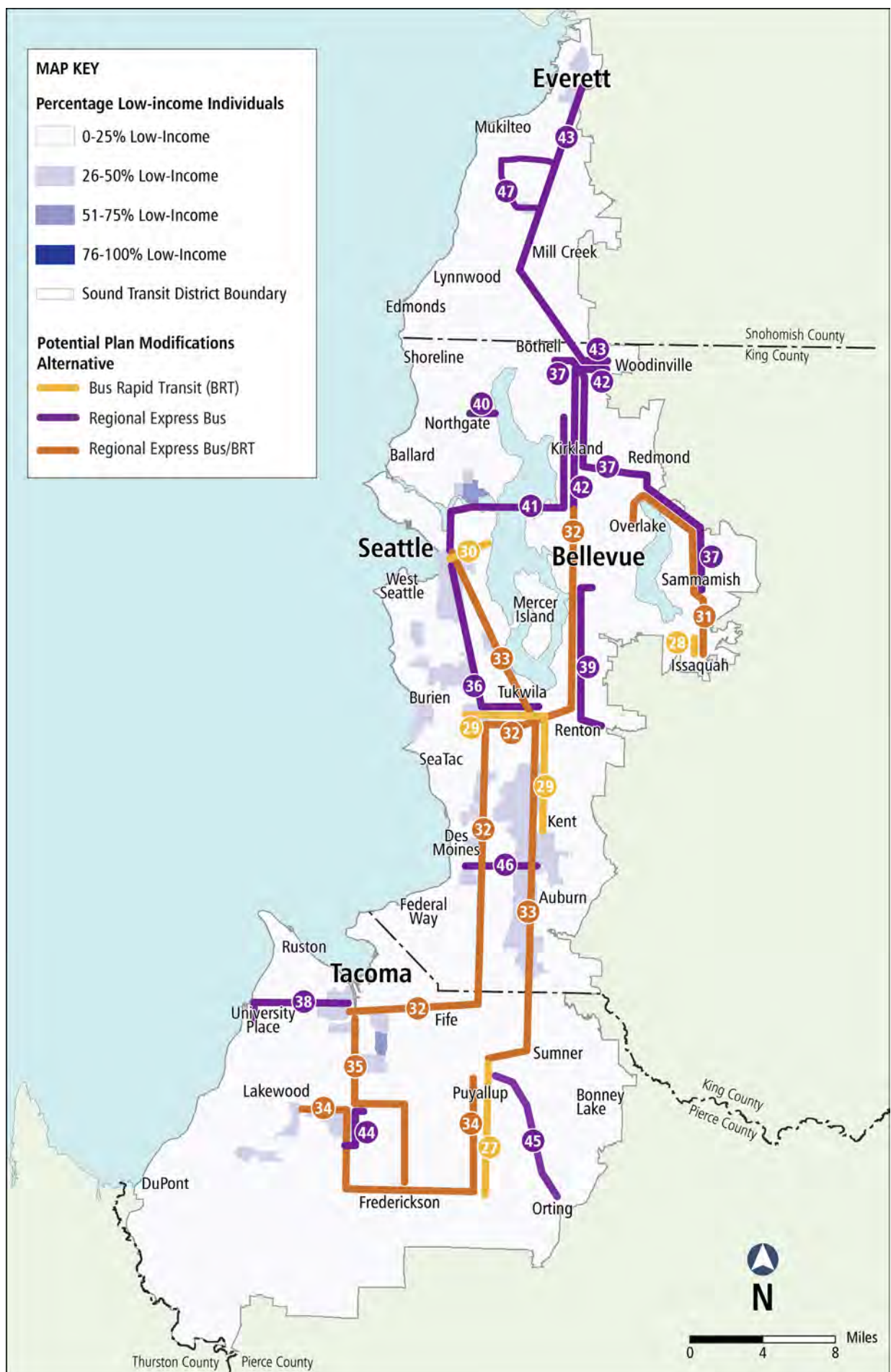


Figure 1-5. Percentage of low-income individuals—Potential Plan Modifications Alternative—light rail, commuter rail, and high-capacity transit

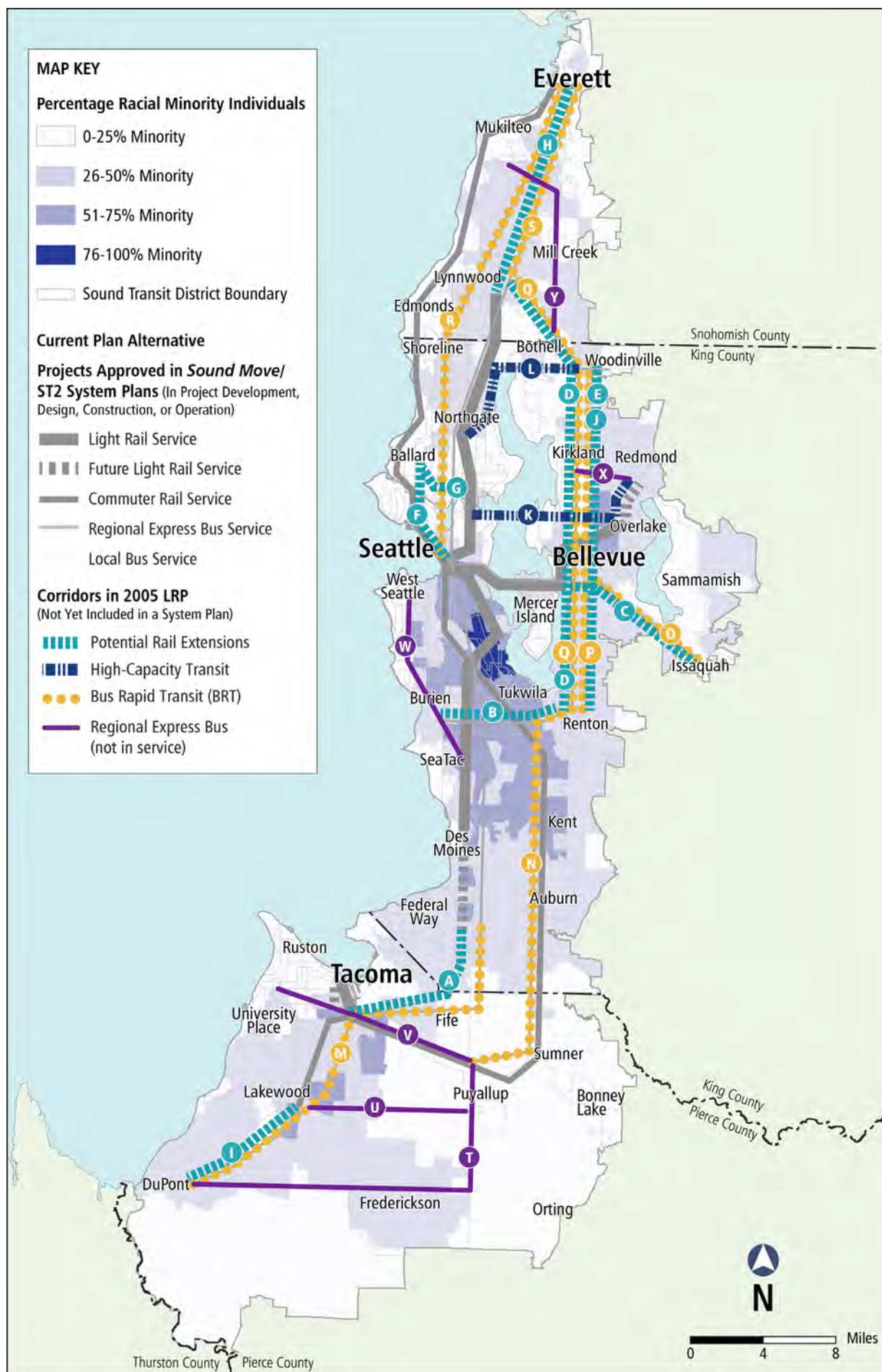


Figure 1-6. Percentage of low-income individuals—Potential Plan Modifications Alternative—regional express bus and bus rapid transit

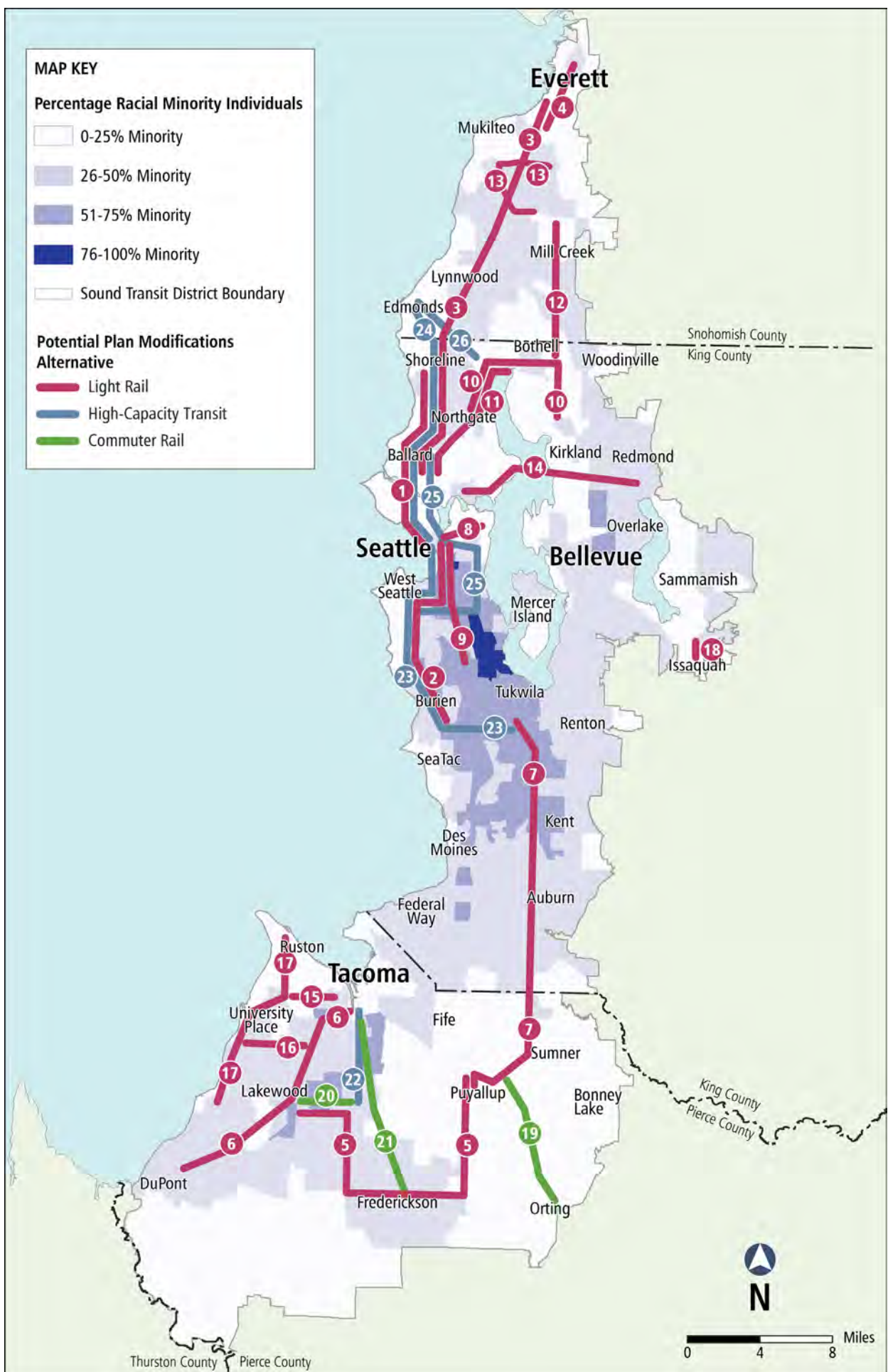
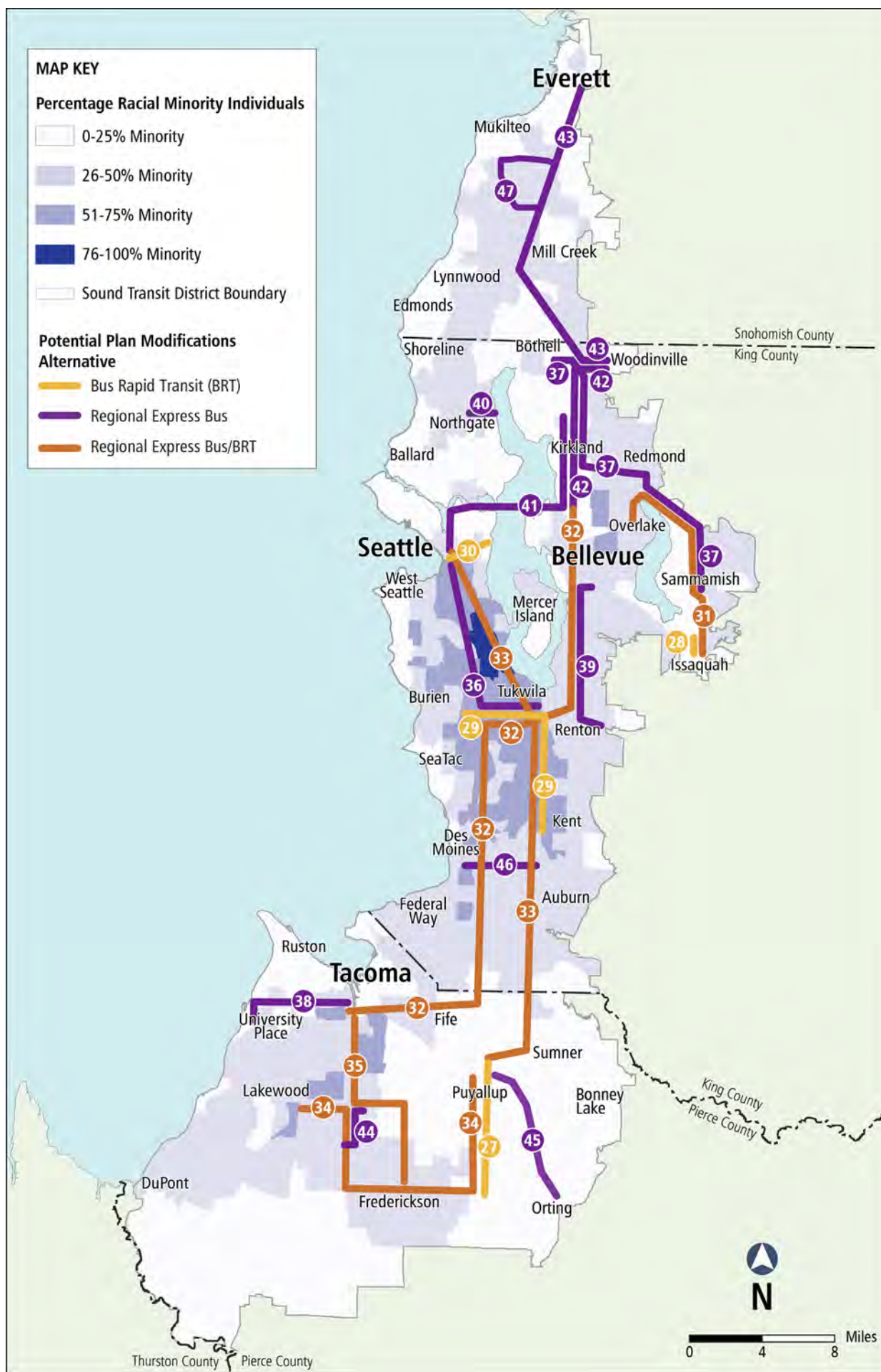


Figure 1-7. Percentage of racial minorities—Potential Plan Modifications Alternative—light rail, commuter rail, and high-capacity transit



1.5 Conclusion

Many of the potential impacts identified in the plan-level Final SEIS would be avoided or minimized during future project-level planning and environmental review and through potential mitigation measures.

Furthermore, taking into consideration mitigation measures that would be implemented, impacts to low-income or minority populations are not likely to be disproportionately high and adverse under Executive Order 12898.

The Long-Range Plan Update would provide substantial benefits that would positively affect environmental justice populations, overall. These benefits include improved access to transit; a safer, more-reliable, and more-efficient transportation system; improved mobility; transit travel-time savings; improved accessibility to employment and social services; and extended transit service hours. While these benefits apply to both of the Long-Range Plan Update alternatives, the Potential Plan Modifications Alternative could have more benefits than the Current Plan Alternative because of its broader scope, as described in Section 1.4 of this study. These benefits further support the conclusion that the Long-Range Plan Update would not result in disproportionately high and adverse effects as defined in both Executive Order 12898 and the USDOT Order.

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