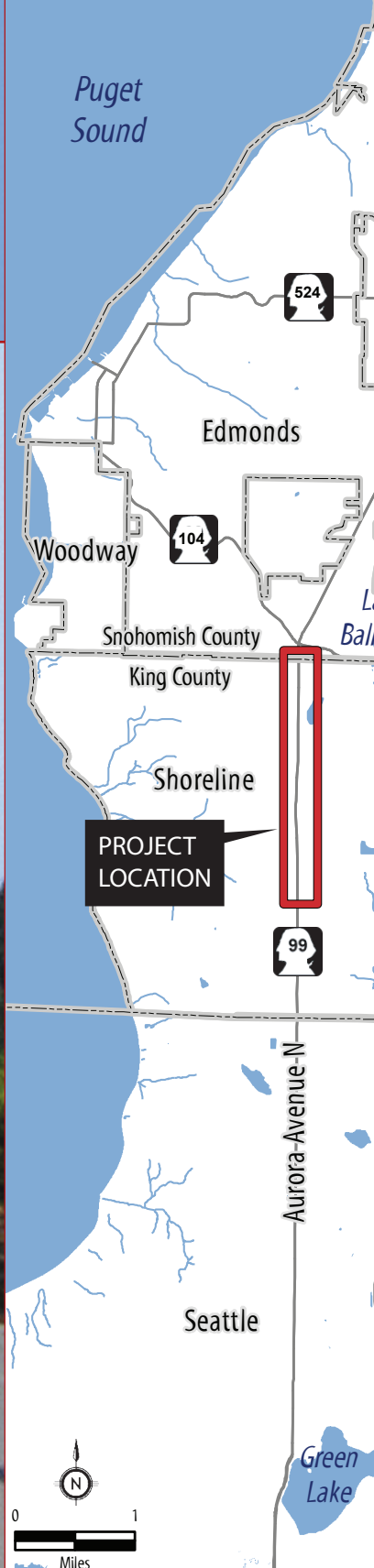


Environmental Justice Discipline Report

Aurora Corridor Improvement Project
N 165th Street to N 205th Street



Environmental Justice Discipline Report

Aurora Corridor Improvement Project: N 165th Street – N 205th Street

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Acronyms and Abbreviations

ABC	Aurora Business and Community
ADT	average daily traffic
BAT	Business Access and Transit
BMP	best management practice
CAA	Clean Air Act
City	City of Shoreline
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
GMA	Growth Management Act
HAC	high accident corridor
HAL	high accident location
HCM	Highway Capacity Manual
I	Interstate
LOS	level of service
N	North
NAC	noise abatement criteria
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NHS	National Highway System
PAL	pedestrian accident location
Project	Aurora Corridor Improvement Project: N 165th Street – N 205th Street
PSRC	Puget Sound Regional Council
RCW	Revised Code of Washington
RTP	Regional Transportation Plan
SAFETEA	Safe, Accountable, Flexible, Efficient Transportation Equity Act
SEPA	State Environmental Policy Act
SR	State Route
USDOT	U.S. Department of Transportation

V/C volume to capacity ratio
WSDOT Washington State Department of Transportation
HHS Health and Human Services

Glossary

acquisition	The purchasing of property, residences, or businesses for right-of-way necessary to construct or support a project.
adverse effects	<p>In the context of an environmental justice analysis, 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:</p> <ul style="list-style-type: none">▪ bodily impairment, infirmity, illness or death▪ air, noise, and water pollution and soil contamination▪ destruction or disruption of manmade 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▪ denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities.
amenity zone	The area between the roadway and sidewalk, which may include landscaping, signage, shelters, benches and other pedestrian-oriented elements, or some combination of these, which are provided to enliven the pedestrian experience.
best management practice (BMP)	Innovative and improved environmental protection tools, practices, and methods that have been determined to be the most effective, practical means of avoiding or reducing environmental impacts.
block group	A subdivision of a census tract, a block group is the smallest geographic unit for which the Census Bureau tabulates sample data. In urban areas, a Block Group typically encompasses 2 to 4 city blocks.
Business Access and Transit (BAT) Lane	Right-side lane that serves exclusively for bus travel, and for right-turn access in and out of driveways located along the corridor.
census tract	A small, fairly permanent subdivision of a county. Census tract delineations are determined by a local committee of users of census data in order to present such data. They are designed to contain somewhat homogeneous population and economic characteristics as well as living conditions. Census tracts average 4,000 inhabitants.
community and neighborhood cohesion	The ability of people to communicate and interact with each other in ways that lead to a sense of community, as reflected in the neighborhood's ability to function and be recognized as a singular unit.
compliant parking	Parking spaces completely contained upon private properties that do not require backing onto city right-of-way for access or egress.
context-sensitive solutions	A collaborative, interdisciplinary approach to develop a transportation facility that fits its physical surroundings and is responsive to the community's scenic, aesthetic, social, economic, historic, and environmental values and resources, while maintaining safety and mobility.
disproportionately high and adverse effect	An adverse effect that:(a) is predominantly borne by a minority and/or a low-income population; or(b) is suffered by the minority 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 and/or non-low-income population.
environmental justice	The provisions of Executive Order 12898 that require each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse health and/or environmental effects on minority and/or low-income populations.
gathering places	Locations where people congregate and spend time together, such as parks, community centers, churches, pubs, and stores.
linguistically isolated household	Household in which all members 14 years old and over have at least some difficulty with English.
low-income	A household income that is at or below the federally designated poverty level for a given household size.
minority	Individuals listed in the Census as Black or African American (a person having origins in any of the black racial groups of Africa); Hispanic (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, the Indian subcontinent, or the Pacific Islands); American Indian/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); or some other race.
noise abatement criteria (NAC)	The Federal Highway Administration (FHWA) noise abatement criteria specify exterior and interior noise levels for various land activity categories such as residential and commercial.
non-compliant parking	Parking spaces partially or fully located within public right-of-way, or spaces on private property for which backing onto city right-of-way is required for access or egress.
poverty	Having a money income that falls below the federally designated threshold for a given household size and composition. If the total income for a household or unrelated individual falls below the relevant poverty threshold, then the household or individual is classified as being below the poverty level.

Chapter 1. Introduction

This chapter introduces the proposed project, explains why environmental justice is analyzed in the environmental process, and summarizes key findings presented in this report.

What is the purpose of this report?

The City of Shoreline (City) proposes to construct the Aurora Corridor Improvement Project: N 165th Street to N 205th Street (Project), which will improve a 2-mile-long segment of State Route (SR) 99, named Aurora Avenue North (N) within the City. This Project must be developed in compliance with the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA).

This Environmental Justice Discipline Report was prepared in general accordance with Section 458 of the Washington State Department of Transportation (WSDOT) Environmental Procedures Manual (WSDOT 2006).

This report examines the potential for the Project to have a disproportionate high and adverse effect on minority and/or low-income populations. The report includes descriptions of the alternatives that were evaluated, a description of the existing conditions, a presentation of the methodology that was used to perform the analysis, anticipated future conditions that the Project is proposed to address, and the potential effects and benefits that would likely result from the Project alternatives. Potential mitigation measures are identified where appropriate.

Environmental Justice

The provisions of Executive Order 12898 that require each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse health and/or environmental effects on minority and/or low-income populations.

Disproportionate High and Adverse Effect

An adverse effect that: (a) is predominantly borne by a minority population and/or a low-income population; or (b) is 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.

Where is the Project located?

The Project is located within the city limits of the City of Shoreline on Aurora Avenue N between N 165th Street and N 205th Street (See Figure 1, *Project Vicinity*).

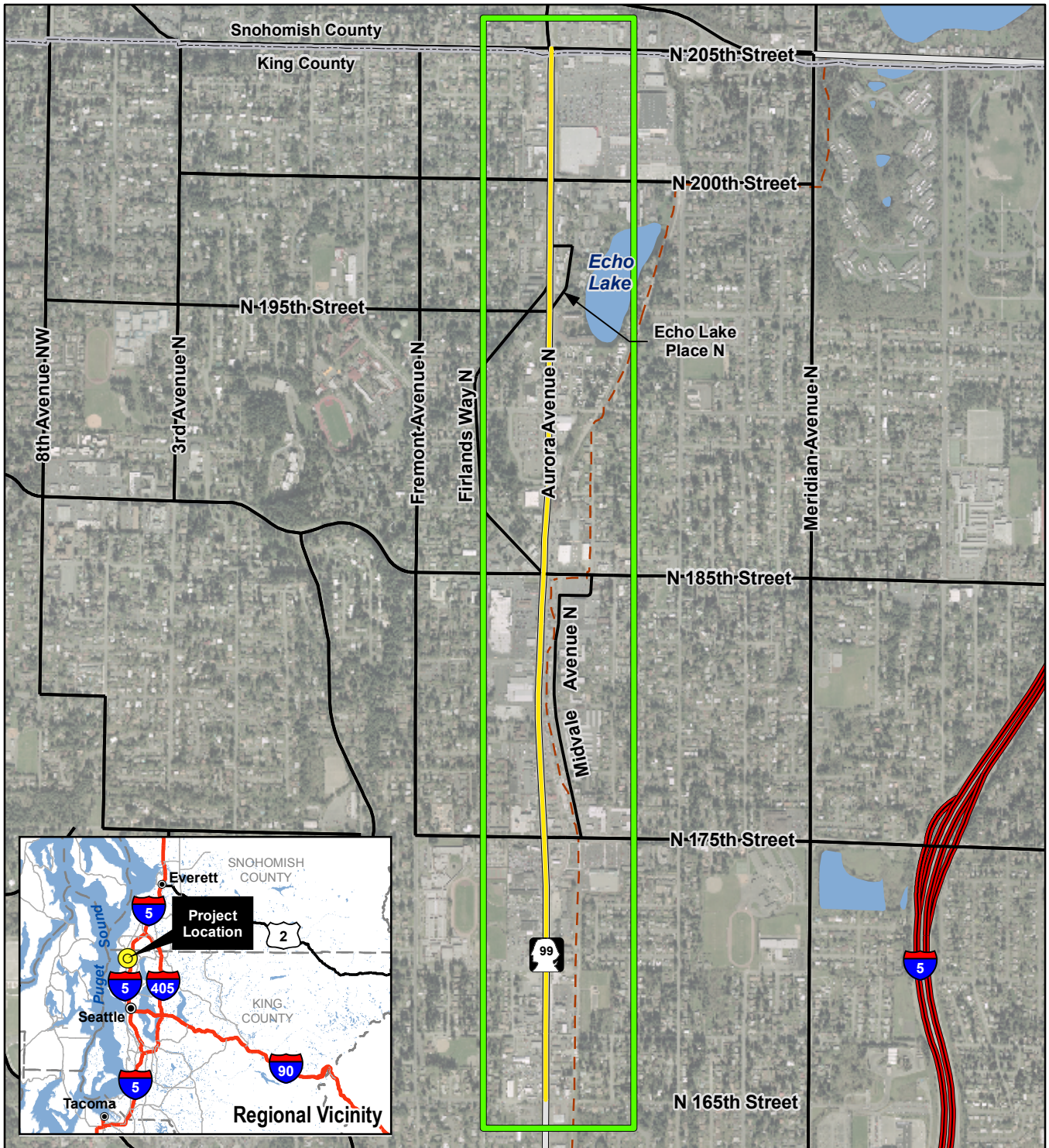
What are the existing characteristics of the Aurora Avenue N corridor?

Aurora Avenue N is a major north/south urban highway that serves both local and regional traffic within the City of Shoreline (see Figure 1, *Project Vicinity*). It is a key regional vehicular, transit, and truck corridor within the greater area of Puget Sound and serves as the City's primary arterial roadway, running approximately parallel to Interstate (I)-5 with connections at N 145th Street, N 175th Street, and N 205th Street. Development along the corridor is predominantly commercial, mixed with some multi-family housing. Echo Lake is located approximately 200 feet to the east of the roadway, north of N 192nd Street. The Interurban Trail, currently under construction, runs roughly parallel to Aurora Avenue N, to the east in the Project corridor (City of Shoreline 2007). Aurora Avenue N has two general-purpose lanes in each direction and a center two-way-left-turn lane, with shoulder and sidewalk of varying width located sporadically along the corridor, no curb or gutter, and little landscaping.








Under existing conditions, average daily traffic (ADT) on the roadway is 33,000 to 39,000 vehicles per day. A steady level of pedestrian and bicycle travel occurs along and across the roadway, but the corridor is heavily oriented to vehicle travel and is generally not conducive to non-motorized travel. WSDOT has designated several areas of Aurora Avenue N between N 165th Street and 205th Street with adverse safety ratings, which are described in Chapter 2. The corridor is served heavily by public transit provided by King County Metro, with additional service at the north end of the corridor provided by Community Transit.

Average Daily Traffic (ADT)

ADT represents the average number of vehicles that travel on a roadway on a typical day. Under existing conditions, ADT on Aurora Avenue N is 33,000 to 39,000 vehicles per day.



Sources: City of Shoreline (2006); Jones & Stokes (2007)

-  City Boundary
-  Project
-  Project Area
-  Interstate
-  State Route
-  Arterial
-  Interurban Trail

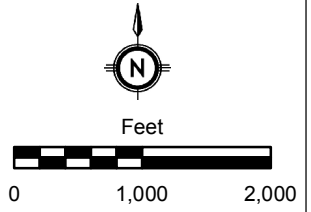


Figure 1. Project Vicinity
 Aurora Corridor Improvement Project
 October 2007

Why improve Aurora Avenue N?

The purpose of the Aurora Corridor Improvement Project, N 165th Street to N 205th Street, is to improve safety, circulation, and operations for vehicular and non-motorized users of the roadway corridor, to support multi-modal transportation within the corridor, and to support economic stability along the corridor. The Purpose and Need identified for this Project is described further in Chapter 2.

What are the major characteristics of the proposed project?

The Aurora Corridor Improvement Project, N 165th Street to N 205th Street, would include the following elements:

- Business Access and Transit (BAT) lanes in each direction;
- two general-purpose lanes in each direction;
- continuous sidewalk, curb, and gutter on each side of the roadway;
- landscaped center median with left-turn and u-turn pockets;
- interconnected, coordinated signal system with transit signal priority;
- improvements to intersections, including proposed new traffic signals at the intersections of Aurora Avenue N with Firlands Way N/N 196th Street and N 182nd Street;
- marked pedestrian crossings at signalized intersections;
- improvements to Midvale Avenue N, between N 175th Street and N 182nd Street;
- improvements to Echo Lake Place, north of N 195th Street;
- new street and sidewalk lighting;
- undergrounding of utilities; and
- stormwater facilities.

In addition to a No Build Alternative, three Build Alternatives, called Alternative A, B and C, respectively, are under consideration. In general,

Amenity Zone

The area between the roadway and sidewalk, which may include landscaping, signage, shelters, benches and other pedestrian-oriented elements, or some combination of these, which are provided to enliven the pedestrian experience.

Business Access and Transit (BAT) Lane

Right-side lane that serves exclusively for bus travel, and for right-turn access in and out of driveways located along the corridor.

they vary in centerline location, width of median, and presence or absence of an amenity zone between the curb and sidewalk. The three Build Alternatives are described in detail in Chapter 3 of this report.

How can transportation projects affect minority and low-income populations?

Transportation projects have the potential to improve mobility, and enhance access to jobs, services, schools, social opportunities, and recreational facilities. Conversely, if adverse effects are not avoided and/or minimized, transportation projects can negatively impact neighborhood cohesion, degrade air quality, increase noise, and reduce the overall quality of life. Transportation projects can also disrupt transit service, which many minority and low-income populations depend on daily. When these adverse effects are found where minority or low-income populations live or work, they can be affected and sometimes disproportionately.

Why is environmental justice considered for this Project?

Environmental justice is considered to identify and avoid disproportionate high and adverse effects of the Project on minority and/or low-income populations. Development and implementation of transportation projects can create both beneficial and adverse impacts on communities and their members. A number of federal regulations, statutes, policies, technical advisories, and Executive Orders dating back to the 1960s require the federal government (and state and local governments using federal highway funds) to identify and avoid disproportionate high and adverse effects on minority and/or low-income populations for projects or programs that affect human health or the environment. Important laws and policies relating to social, economic, and relocation factors are described in Chapter 4 of this report.

What are the key points of this report?

Following are the key points of this report:

- Minority populations are located throughout the Project study area. Based upon 2000 Census data, the percentage of minority populations (Hispanic/Latino, African American, Asian, and

American Indian/Alaska Native populations) in the study area are slightly higher (within 0.5%) than the citywide percentages. The Asian population has the highest representation among minority populations in the study area.

- Low-income populations are located throughout the Project study area. Based on 2000 Census data, 7.08% of the population within the study area is below the poverty level, which is slightly higher than the citywide 6.91%.
- Impacts to commercial buildings are expected as a result of the Project. Buildings would be impacted on up to nine properties under Alternative A, eleven properties under Alternative B, and thirteen properties under Alternative C. These include full acquisition of three commercial properties (17750, 17760, and 18551 Aurora Avenue N) that is expected under all three Build Alternatives. For the other impacted commercial buildings, building and/or business owners will have the option to redevelop upon the existing site, but they may also choose to relocate.
- Two churches, one market, one restaurant, and one thrift store were identified along the Project corridor as serving minority and/or low-income populations. No building impacts identified above are expected to affect any of these establishments.
- Under all three Build Alternatives, the Project could potentially require relocation of residents of rental units located on one parcel at 19522 Aurora Avenue N. One rental house and two apartment buildings are located on the property. Full acquisition of the house will be required under all three Build Alternatives. For the two apartment buildings, remodeling may be required for up to eight units. This could result in temporary relocation of the residents of these units during construction; or, the owner may opt not to remodel, which could result in the need for permanent relocation. The maximum potential permanent and temporary relocation would affect up to approximately 3% of the total residences within the block group and less than 1% of residences within the study area.
- Right-of-way acquisition is expected to affect parking under all three Build Alternatives. Under Alternatives A and B, the Vietnamese restaurant is one of 24 businesses along the corridor expected to lose 20% or more of its existing parking. It is expected that some parking spaces would be regained by converting the parking layout on the property. Parking effects are spread among 41 to 52 properties throughout the corridor (depending on alternative), located among eight census block groups that have varying proportions of minority

and low-income populations (some higher than the study area averages and some lower). Businesses that serve minority and/or low-income populations are not disproportionately affected.

- The City will compensate property owners for property acquisitions required by the Project. Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended. Relocation resources are available to all residential and business relocatees without discrimination.
- If implementation of any of the Build Alternatives results in new parking or setback nonconformities, these properties will be grandfathered in as legal nonconforming. Under Shoreline Municipal Code (SMC) 20.30.390(D) nonconformities triggered by a government action are exempt from the restrictions defined under SMC 20.30. Thus, no significant effects related to nonconformities are identified under the Build Alternatives.
- The Project would improve safety and mobility for pedestrians and transit users, which is notable with regard to minority and low-income populations, as many people within these populations rely on transit and non-motorized modes for their travel needs. The Project would improve transit operations and reliability through addition of the BAT lanes, providing a lane for bus operation outside the general-purpose traffic flow. Provision of continuous, even sidewalks under the three Build Alternatives would improve pedestrian connections, and provide a safe location for people waiting for transit. The addition of the pedestrian amenity zone under Alternatives B and C has additional safety benefit by providing increased separation of vehicular traffic from pedestrians on the sidewalk.
- The Project would improve vehicle mobility and safety under all three Build Alternatives.
- The No Build Alternative would result in degradation traffic operations, as traffic volumes increase over time. Increased traffic congestion will also result in potential degradation to transit travel times and reliability. Increasing levels of traffic without safety improvements will increase the potential for conflict between vehicles and pedestrians. The degradation of safety and mobility for pedestrians and transit users is notable with regard to minority and low-income populations, as many people within these populations rely on transit and non-motorized modes for their travel needs.

- Minority businesses located along the corridor would experience construction-related impacts similar to those experienced by other businesses along the corridor.
- Based on the benefits and effects discussed in this report, it is determined that none of the alternatives would have disproportionately high adverse effects on minority and/or low-income populations.
- Written community outreach materials (newsletters, project mailings, etc.) prepared for the environmental process, and subsequently for construction activities related to the Project, will include basic information Spanish, Chinese, and Korean languages (each identified as a language spoken by at least 3% of the population in the Project study area). The City has retained a translation service to be employed upon requests from citizens for any larger presentation or written material prepared for the Project.

Table 1 summarizes the potential environmental justice effects and mitigation that are identified in this report.

Table 1. Summary of Potential Environmental Justice Effects and Mitigation

Potential Effects and Mitigation	Alternatives			
	No Build	A	B	C
Potential Effects of Property Acquisition				
Minority businesses located along the corridor would experience loss of parking, similar to losses experienced by other business along the corridor. Under Alternatives A and B, a Vietnamese restaurant and an Ethiopian market located on one parcel that is one of 24 parcels identified as potentially losing 20% or more of existing parking.		X	X	X
<p>Mitigation: The City will compensate property owners for property acquisitions required by the Project. Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended.</p> <p>If implementation of any of the Build Alternatives results in new parking or setback nonconformities, these properties will be grandfathered in as legal nonconforming. Under SMC 20.30.390(D) nonconformities triggered by a government action are exempt from the restrictions defined under SMC 20.30. No additional mitigation is proposed.</p>				
Potential permanent relocation would be required of one residence, and temporary relocation of up to eight apartment residences.		X	X	X
<p>Mitigation: The City will compensate property owners for property acquisitions required by the Project. Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended.</p>				
Potential Construction Effects				
Some minority businesses located along the corridor would experience potential loss of business due to traffic, access, and visibility effects from Project construction, similar to other business along		X	X	X

Potential Effects and Mitigation	Alternatives			
	No Build	A	B	C
the corridor.				
<p>Mitigation: Coordinate with business owners, prior to construction, to educate them about the planned construction timing and phasing, and potential construction impacts. Assist business owners during Project construction, through development and implementation of construction management plan, communication plan, access plan, enhanced signage, and business promotion.</p>				
Construction impacts to community and neighborhoods include impacts associated with noise, traffic congestion, and modified business access to businesses and residences along Aurora Avenue N.		X	X	X
<p>Mitigation: Apply Best Management Practices to reduce or minimize effects on land uses related to construction. See the following discipline reports for mitigation associated with construction effects on land uses in the study area: Social Resources, Economics, and Relocation; Noise; Surface Water; Hazardous Materials; Public Utilities and Services; and Transportation.</p> <p>Communication measures will be implemented during project construction to provide construction-related information and to minimize construction effects on minority and low-income populations should include:</p> <ul style="list-style-type: none"> ▪ Informing the public, schools, and transit agencies of traffic changes ahead of time ▪ Posting informational flyers at key stores, park-and-ride lots, schools, nonprofits and religious institutions. <p>Public outreach related to Project will be conducted in Spanish, Korean and Chinese. City will provide translation service for all materials related to Project, upon request.</p>				
Potential Operational Effects				
Projected increase in vehicular, pedestrian, and bicycle traffic over time would result in increased potential for safety conflicts, without the improvements proposed under the Build Alternatives.	X			
No mitigation available.				

Chapter 2. Purpose and Need

This chapter describes the overall purpose of the proposed project and identifies the specific needs that the Project would address.

What is the purpose of the Project?

The purpose of the Aurora Corridor Improvement Project: N 165th Street to N 205th Street, is to improve safety, circulation, and operations for vehicular and non-motorized users of the roadway corridor, to support multi-modal transportation within the corridor, and to support economic stability along the corridor.

How were the needs of the Aurora Avenue N corridor identified?

The needs of the Aurora Avenue North corridor that would be addressed by this Project were identified through the:

- Regional Metropolitan Transportation Plan,
- City Comprehensive Plan, and
- City Multimodal Pre-Design Study.

Regional Metropolitan Transportation Plan

Improvement to Aurora Avenue N between N 165th Street and N 205th Street is identified in *Destination 2030*, which is the regional Metropolitan Transportation Plan that addresses long-range

transportation needs of a growing population (PSRC 2001). The plan includes a detailed set of projects and programs that recognize the link between transportation and growth planning. It identifies more than 2,000 specific projects that will improve roads, transit and ferry service, bicycle and pedestrian systems, freight mobility, and traffic management and operations. *Destination 2030* calls for the development of new state and regional funding mechanisms to provide sustained and flexible revenues that support plan strategies, and it outlines a monitoring and review process for ensuring that plans are current and that implementation stays on course.

City Comprehensive Plan

Improving Aurora has been a community goal since the City of Shoreline incorporated in 1995. However, regional and local governments recognized the need for improvements along Aurora Avenue N even prior to the City's incorporation. Before the City was incorporated, King County initiated a project to provide transit enhancements along Aurora Avenue N. After incorporation, the City requested that the project be postponed until the City could complete its comprehensive planning process to define improvements in the Aurora Avenue N corridor.

The City of Shoreline Comprehensive Plan was first adopted in November 1998 and most recently updated in June 2005. The Plan establishes the City's vision, and establishes Framework Goals intended to guide the City to meet that vision. The City's goals for Aurora Avenue N, as stated in its Comprehensive Plan, are to improve safety for all users on the roadway, to support economic stability along the corridor, and to improve mobility by supporting multimodal transportation services (City of Shoreline 2005). Assessment of the City's goals and policies, as established in the Comprehensive Plan, is provided in the Land Use, Plans, and Policies Discipline Report prepared as part of the environmental analysis for the Project.

Multimodal Pre-Design Study

In 1998, the City of Shoreline began the 1-year Aurora Corridor Multimodal Pre-Design Study (CH2M Hill 1999). The study included an extensive Community and Agency Involvement Program involving a variety of public and private stakeholders in the plan development. Multiple opportunities for community input were provided, and emphasis was placed on clearly articulating the technical elements of the plan. The Community and Agency Involvement Program included both the community and agencies because both are necessary for consensus

Multimodal Transportation

Multimodal transportation refers to multiple choices for travel, including driving alone, carpooling, walking, biking, or riding transit.

building. A key Community and Agency Involvement Program component was the participation of a Citizens' Advisory Task Force, made up of representatives from the business and residential communities and transit users. An Interagency Technical Advisory Committee also included public sector stakeholders. These advisory committees recommended a preferred design concept, described in the following section.

Community and Agency Involvement Program elements included:

- ongoing participation of the Citizens' Advisory Task Force, Interagency Advisory Committee, and Policy Advisory Committee;
- project briefings with City Council and Planning Commission;
- three public open houses;
- open house announcements mailed to 3,000 addresses each time an event was held;
- canvassing by the Citizen's Advisory Task Force;
- meetings with property owners within the study area;
- meetings with community interest groups;
- newsletters distributed to landowners, business owners, and other interested parties; and
- press releases distributed to neighborhood associations, community groups, and local media.

The main features of the adopted design concept include:

- the addition of BAT lanes in each direction on the roadway;
 - curbs, gutters, landscaping/street furnishing strip, and sidewalks on both sides; and
 - the creation of a landscaped center median safety lane with left and u-turn pockets.
-

Community Outreach

The City conducted a total of 23 meetings with the Citizens' Advisory Task Force, Interagency Technical Advisory Committee, and the general public. The City also conducted eight City Council briefings and two planning commission presentations. Three open houses were held during the course of the Pre-Design Study. Each meeting was designed to encourage interactive involvement through small group design workshops, informal ballots, prioritization exercises, and comment sheets.

32 Points

The corridor project design concept and the 32 Points (see exhibit on

following page) were approved unanimously by the Citizens' Advisory Task Force on July 8, 1999, and were adopted unanimously by the City Council as part of Resolution 156 on August 23, 1999. The 32 Points are to be used as guides during implementation and design of Aurora Avenue improvement projects, to ensure that concerns of the community and the vision of the City Council are fully addressed.

The main features of the adopted design concept include the addition of BAT lanes in each direction on the roadway; curbs, gutters, a landscaping/street furnishing strip and sidewalks on both sides; and a landscaped center median safety lane with left and u-turn pockets. The 32 Points also recommended four new signalized intersections and four new pedestrian-activated signalized crossings along the 3-mile length of Aurora Avenue N within the city limits.

Exhibit. The "32 Points"

1. The maximum number of lanes on an intersection leg shall not exceed eight lanes including turning lanes. Seven lanes is the desired width.
2. Provide ability at intersections for all pedestrians to safely cross (and include median refuge at intersections with pedestrian pushbuttons). New mid-block pedestrian crossings should include pedestrian activated signals. Bus stops and pedestrian crossings will complement each other.
3. Twelve foot sidewalks will be provided on both sides of Aurora the entire length. Consider reducing the initial sidewalk width to mitigate land impacts/acquisitions on existing businesses. Note: a minimum of four feet of a landscaping/street furnishing zone is included in the twelve foot width total above.
4. Utilize more landscaping or colored pavement in sidewalk areas to soften the look. The four foot landscaping/street furnishing strip behind the curb should utilize trees in tree grates/pits (consider a combination tree protector/bike rack), low growing ground cover/shrubs, and could utilize some special paving (or brick) between curb and sidewalk to strengthen the identity of an area.
5. Strive to design the project so that new sidewalks can link to existing recently constructed sidewalks (such as Seattle Restaurant Supply, Drift-on-Inn, Schucks, Hollywood Video, and Easley Cadillac).
6. Re-align the street where possible to avoid property takes.
7. As the final design is developed, work with WSDOT to obtain design approvals for lane width reductions, and look for opportunities to reduce (but not eliminate) the median width both to enable reduction of pavement widths, construction costs, and land impacts/acquisition on existing businesses.
8. Develop median breaks or intersections for business access and U-turns at least every 800-to-1000 feet (these details will be worked out during future design phases and will be based in part on the amount of traffic entering and exiting businesses).
9. Use low growing drought resistant ground-cover and space trees in the median to allow visibility across it.
10. Unify the corridor by adding art, special light fixtures, pavement patterns (and coloring at crosswalks), street furniture, banners, unique bus shelters, etc. to dramatically enhance image and uniqueness of the streetscape and develop it differently than the standard design that has been constructed for most streets.
11. Unify the entire corridor by the use of street trees, lighting, special paving, bus zone design, and other elements to visually connect the corridor along its length.
12. Provide elements in the Interurban/Aurora Junction area, between 175th and 185th that create a safe, pedestrian oriented streetscape. Elements can include special treatments of crossings, linkages to the Interurban Trail, etc.
13. Develop signature gateway designs at 145th and 205th with special interest landscaping, lighting, paving and public art to provide a visual cue to drivers that they have entered a special place.
14. Develop themes that reflect the character and uses of different sections of the street (such as the 150th to 160th area which has a concentration of international businesses, recall the historic significance of the Interurban or other historic elements, and Echo Lake).
15. Utilize the Arts Council and neighborhoods to solicit and select art along the corridor.
16. Strengthen connections to the Interurban Trail through signing and other urban design techniques.
17. Develop a design for closure of Westminster Road between 158th and 155th by developing a southbound right turn lane at 155th Street and converting the existing road section to a driveway entrance to Aurora Square. Also, develop an elevated Interurban trail crossing through "the Triangle" that is integrated with future development of the Triangle (reserve the option to build above Westminster should we not be successful in closing the roadway).
18. Pursue modifying the access to Firlands at 185th, closing Firlands north of 195th, and developing a new signal at 195th.
19. The preferred design shall include:
 - Stormwater management improvements to accompany the project that follow the city's policies;
 - Traffic signal control and coordination technology (including coordination with Seattle and Edmonds SR 99 signal systems);
 - Traffic signal technology to enable transit priority operations;
 - Continuous illumination for traffic safety and pedestrian scale lighting;
 - Undergrounding of overhead utility distribution lines.
20. Traffic signals will include audible elements for the sight-impaired, and wheelchair detection loops for wheelchair users.
21. The City should establish a right-of-way policy to retain or relocate existing businesses along the corridor, including those that do not own the land on which they are located. Consideration should be given to providing financial incentives to those businesses.
22. Work with property and business owners during the preliminary engineering phase to consolidate driveways, share driveways, and potentially to share parking and inter business access across parcel lines. Be creative and sensitive to the parking needs of businesses, including consideration for some potential clustered/shared parking lots (especially if remnant parcels are available).
23. Provide improvements that will not generate an increase in neighborhood spillover traffic.
24. Work with transit agencies to provide increased service and seek capital investments from them to support this project.
25. Develop partnerships with WSDOT and King County/Metro to jointly fund the project.
26. Provide curb bulbs where practical on side streets to reduce pedestrian crossing width and to discourage cut-through traffic.
27. Strengthen and preserve the heritage of the red brick road. If the design impacts the red brick road in its current configuration/location north of 175th, preserve its heritage by relocating it elsewhere.
28. Consider new signalized intersections at 152nd, 165th, 182nd, and 195th.
29. Consider new pedestrian only signalized crossings in the vicinity of 149th, 170th, 180th and 202nd.
30. Sign Ronald Place south of 175th as the route to I-5.
31. Pursue reducing the speed limit to 35 mph where appropriate recognizing the potential impacts of spillover traffic with a lower posted speed.
32. Seek funding to develop a program to assist and encourage businesses to improve their facades.

What are the needs addressed by the Project?

System Linkage

The proposed project would improve regional system linkage by providing additional lane capacity, improved intersection capacity, and improved signal coordination. It would also continue the improvements underway between N 145th Street and N 165th Street, creating a consistent continuous corridor throughout the City.

Aurora Avenue N is a major north/south arterial link that serves both local and regional traffic within the City of Shoreline. It is part of the National Highway System (NHS). The portion of Aurora Avenue N within the City connects SR 104 and SR 523. In addition to serving intra-city traffic, the route serves as a regional link between cities in the Puget Sound region, connecting to the City of Seattle to the south and Snohomish County to the north. It is the significant alternative to I-5 in providing north/south regional linkage. The portion of SR 99 located within the City has also been identified as a Highway of Statewide Significance (Washington State Transportation Commission 1998). Highways of Statewide Significance, identified under the Revised Code of Washington (RCW) 47.06.140, are those facilities deemed to provide and support transportation functions that promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant facilities should be planned from a statewide perspective (WSDOT 2002).

The timely delivery of goods is extremely important to business operations and economic vitality. Aurora Avenue N is identified by WSDOT as a truck freight route in the statewide Freight and Goods Transportation System (FGTS). It carries more than 5 million tons of freight annually, so is classified as a T-2 tonnage class roadway (WSDOT 2005). It has also been identified as part of the King County Regional Arterial Network, and the Puget Sound Regional Council (PSRC) Metropolitan Transportation and Freight and Goods Systems. Aurora Avenue N also provides a connection between other routes on the FGTS, including Westminster Way/Greenwood Avenue (class T-2), SR 523 (class T-3), N 185th Street (class T-2), and SR 104 (class T-3) (WSDOT 2005).

Aurora Avenue N provides a linkage for commuters and transit to two

National Highway System

Federally identified highways that are most important to interstate travel and national defense, connect other modes of transportation, and are essential for international commerce.

Highway of Statewide Significance

Highways identified by the Washington State Transportation Commission that provide significant statewide travel and economic linkages.

WSDOT Freight and Goods Transportation System (FGTS) Classifications

Roadways are classified according to the average volume of freight they carry each year:

- T-1 > 10 million tons per year
 - T-2 4 million – 10 million tons per year
 - T-3 300,000 – 4 million tons per year
 - T-4 100,000 – 300,000 tons per year
 - T-5 At least 20,000 tons in 60 days
-

regional Park-and-Ride facilities located at N 192nd Street and Aurora Avenue N; and on N 200th Street, two blocks east of Aurora Avenue N.

The City is currently completing improvements to Aurora Avenue N between N 145th Street and N 165th Street, which include similar elements to those proposed for this Project. Improvements include BAT lanes; curbs, gutters, landscaping/utility strip, and sidewalks on both sides; a landscaped center median with left and u-turn pockets, new signalized intersections, pedestrian-activated signalized crossings, undergrounding of utilities, and stormwater facilities.

Capacity

The proposed project would address capacity needs through improvements to intersection geometry and capacity, channelization, signal improvements, and additional lane capacity for business access and transit. By consolidating the number of access points according to WSDOT criteria, capacity in the corridor would be improved through the reduction of conflicts and traffic friction.

The capacity of the current facility is inadequate to accommodate projected traffic volumes. The corridor currently supports 33,000 to 39,000 vehicles per day. Traffic analysis completed for the Aurora Avenue N corridor assessed level of service (LOS) from now through the future planning year of 2030, under conditions both with and without the proposed project. Over the next 20 years, volumes along the corridor are expected to increase by 1.1% annually.

LOS is the primary measurement used to determine the operating quality of a roadway segment or intersection. LOS is generally measured by the ratio of traffic volume to capacity (V/C) or by the average delay experienced by vehicles on the facility. The quality of traffic operation is graded into one of six LOS designations: A, B, C, D, E, or F. LOS A represents the best range of operating conditions and LOS F represents the worst. LOS on transportation facilities is analyzed and measured according to procedures provided in the Highway Capacity Manual (Transportation Research Board 2000). In an urban corridor such as Aurora Avenue N, LOS at intersections controls the overall LOS of the roadway. LOS for signalized intersections is determined by the average amount of delay experienced by vehicles at the intersection. LOS standards are used to evaluate the transportation impacts of long-term growth. The Washington State Growth Management Act (GMA) (RCW 36.70A, 1990) requires that jurisdictions adopt standards by which the minimum acceptable roadway operating conditions are determined and

Level of Service (LOS) - Characteristics of Traffic Flow

LOS A	Free flow, little or no restriction on speed or maneuverability caused by the presence of other vehicles.
LOS B	Stable flow, operating speed is beginning to be restricted by other traffic.
LOS C	Stable flow, volume and density levels are beginning to restrict drivers in their maneuverability.
LOS D	Stable flow, speeds and maneuverability closely controlled due to higher volumes.
LOS E	Unstable flow, low speeds, considerable delay, volume at or near capacity, freedom to maneuver is difficult.
LOS F	Forced traffic flow, very low speeds, traffic volumes exceed capacity, long delays with stop and go traffic.

deficiencies may be identified. The City has adopted a standard of LOS E for intersections within the City (City of Shoreline 2005).

Detailed traffic analysis of Aurora Avenue N is presented in the Transportation Discipline Report prepared for this Project. The analysis shows that without improvements, average delay at key signalized intersections along Aurora Avenue N will fall to LOS F. These conditions are considered unacceptable by most drivers and fail to meet the City's adopted standard of LOS E. A lack of adequate capacity along Aurora Avenue N could encourage drivers to use parallel neighborhood routes.

Regional Transportation Demand

The proposed project would provide additional automobile and transit capacity to help meet the demand that is anticipated to occur in the Aurora Corridor over the next 20 years. The City's design concept for the Project satisfies the following regional policies:

- Optimize and manage the use of transportation facilities and services.
- Manage travel demand by addressing traffic congestion and environmental objectives.
- Focus transportation investments by supporting transit- and pedestrian-oriented land use patterns.
- Expand transportation capacity by offering greater mobility options.

The PSRC has adopted a Regional Transportation Plan (RTP), the Transportation Element of *Destination 2030* (PSRC 2001). The RTP provides the long-range strategy for future investments in the central Puget Sound region's transportation system. It responds to federal legislative mandates such as the federal Transportation Equity Act for the 21st Century and the Clean Air Act (CAA); and state mandates such as the Commute Trip Reduction Law RCW (70.94.521-551) and the GMA (RCW 36.70A). It also is intended to respond to regional concerns of pressing transportation problems. The basic building blocks for the RTP are state, city, county, and transit agency plans and policies.

Improvements to Aurora Avenue N through Shoreline are included in the list of capital projects identified by the RTP as critical, and as part of the Metropolitan Transportation System required to satisfy regional needs through 2030.

Regional Transportation Plan (RTP)

The RTP provides the long-range strategy for future investments in the central Puget Sound region's transportation system.

Modal Interrelationships

The proposed project would enhance mobility and safety for pedestrians by providing continuous sidewalk, curbs, and gutter along both sides of the roadway. Additional crosswalks would provide more safe crossings for pedestrians. Pedestrian links would also be provided to the adjacent Interurban Trail.

Bicyclists traveling along Aurora Avenue N would be allowed to travel on the sidewalks or in the BAT lanes, and would also benefit from connections provided to the Interurban Trail.

The Project would also improve transit operations and reliability through the addition of the BAT lanes, providing a lane for bus operation outside the general-purpose traffic flow.

The portion of Aurora Avenue N within the City is heavily automobile-oriented, and lacking in pedestrian or bicycle facilities. Driveway access along the corridor is largely undefined and sidewalk facilities are discontinuous and do not meet City standards. The only areas where sidewalks meet City standards are areas along developments that have been built within the last 10 years.

Buses on Aurora Avenue N travel in the general-purpose lanes and are subject to congestion. When traffic is congested, the buses are likely to be delayed. When buses stop to pick up and drop off passengers, they block traffic in one of the two general-purpose lanes that currently exist in each direction. Discontinuous sidewalks make access to transit difficult, especially for those with disabilities. The absence of even, wide, continuous pedestrian facilities can dissuade potential transit patrons from using the bus system. Bicyclists currently have to travel either on shoulders, where they exist, or in the general-purpose traffic lanes, discouraging most bicyclists.

The Interurban Trail is a pedestrian and bicycle facility that runs roughly parallel to Aurora Avenue N, providing regional connection from Everett through Seattle. Construction within the City is currently underway, with completion planned for July 2007. After construction is complete, the Interurban Trail will run throughout the entire City length, between N 145th Street and N 205th Street. In the Project area, the trail is located approximately one block east of Aurora Avenue N between N 165th Street and N 192nd Street; runs to the east of Echo Lake; runs east-west along N 200th Street to Meridian Avenue; and then runs north-south on the east side of Meridian Avenue through Ballinger Commons (City of Shoreline 2007). Existing sidewalks are inadequate to provide pedestrian

The Interurban Trail

The Interurban Trail is a regional pedestrian and bicycle facility that runs roughly parallel to Aurora Avenue N. Construction is currently underway, with completion planned for July 2007. After construction is complete, the Interurban Trail will run throughout the entire City length, between N 145th Street and N 205th Street.

connectivity along Aurora Avenue N and to the Interurban Trail.

Safety

Project elements would improve channelization; separate pedestrians from vehicular traffic; and reduce potential conflicts between vehicles, pedestrians, and bicyclists. The City is working with businesses and property owners to develop appropriate solutions that address access and parking issues, while still maintaining Project goals.

WSDOT collects and compiles historical collision data for state highways, including Aurora Avenue N (SR 99). Several areas of Aurora Avenue N, between N 165th Street and N 205th Street, have been given poor safety designations by WSDOT. WSDOT has identified one high accident corridor (HAC), three high accident locations (HALs), and two pedestrian accident locations (PALs) on Aurora Avenue N, between N 165th Street and N 205th Street, for the 2007–2009 biennium. Between 2003 and 2005, the average annual collision rate for the entire Aurora Avenue N corridor within Shoreline was calculated to be 5.5 accidents per million vehicle miles traveled. This greatly exceeds the most recently compiled (2005) statewide average for urban principal arterials of 2.6 accidents per million vehicle miles. There is strong public concern for general traffic safety and pedestrian safety along the corridor. Collision history and WSDOT safety designations are discussed in further in the Transportation Discipline Report prepared as part of the environmental analysis for this Project.

Aurora Avenue N currently lacks adequate access management. Land use along Aurora Avenue N is predominantly commercial/retail. Most of the businesses are freestanding, with defined and undefined individual driveways, or continuous shoulder access. Numerous driveways, limited curbs and sidewalks, and erratic parking all contribute to a general lack of safe passage for pedestrians, bicyclists, and vehicles. This type of development has resulted in a very high number of individual access points that increase conflict and impact safety along the corridor. In total, there are 154 access points along the 2-mile length within the Project corridor. National Cooperative Highway Research Program (NCHRP) Report 420 indicates that the ideal number of access points is fewer than 30 per mile (Gluck et al. 1999).

Much of the existing business parking along the corridor is directly adjacent to the roadway shoulders and is angled or perpendicular to the street. Many existing parking spaces require motorists to back onto the roadway to exit. Parking within the Aurora Avenue N roadway right-of-

High Accident Corridor (HAC)

A highway corridor 1 mile or greater in length where a 5-year analysis of collision history indicates that the section has higher than average collision and severity factors.

High Accident Location (HAL)

A highway section typically less than 0.25 mile in length where a 2-year analysis of collision history indicates that the section has a significantly higher than average collision and severity rate.

Pedestrian Accident Location (PAL)

A highway section typically less than 0.25 mile in length where a 6-year analysis of collision history indicates that the section has had four pedestrian accidents in a 0.1-mile segment.

way occurs primarily near retail and commercial land uses within the Project area. Several businesses along the roadway between N 165th Street and N 205th Street use the shoulder for parking in areas where there is no curb, effectively blocking pedestrians and people in wheelchairs.

The Project elements that would improve safety conditions along Aurora Avenue N include:

- addition of curbs and gutters and consolidated driveway locations;
- even, wide, continuous sidewalks that would be safer for pedestrians and transit patrons;
- application of driveway width and spacing standards;
- provision of traffic signals and pedestrian crosswalks;
- conversion of the existing two-way left-turn lane into a median with channelized left-turn and u-turns;
- restriction of driveways to right-turn-in and right-turn-out only;
- elimination of motorists ability to back onto the roadway to exit; and
- provision of the BAT lanes that would allow traffic to safely enter and exit the roadway with fewer conflicting movements and lower risk of crashes.

Social and Economic Development

The Project would address the need to continue to enhance the movement of people and goods within the SR 99 commercial corridor, as identified in the Comprehensive Plan, by improving person and freight mobility; pedestrian, bicycle, and transit linkages; and overall safety for vehicular and non-vehicular travelers.

The City Comprehensive Plan provides forecasts of job growth within the Aurora Avenue N corridor. This growth depends on a revitalized roadway corridor along all of Aurora Avenue N, including the area between N 165th Street and N 205th Street.

The Comprehensive Plan sets forth a vision that concentrated activity centers will develop at several locations along the corridor. These are located between N 175th Street and N 185th Street, and between N 200th Street and N 205th Street (Aurora Village). To support the economic

The City Comprehensive Plan provides forecasts of job growth within the Aurora Avenue N corridor. This growth depends on a revitalized roadway corridor along all of Aurora Avenue N, including the area between N 165th Street and N 205th Street.

development goals of the Comprehensive Plan, improvements are needed for pedestrian and transit access to and between these locations. The City's objective for Aurora Avenue N is to install improvements that would lead people to the community and its businesses (City of Shoreline 2005).

What is the legislative context for the Project?

There are three articles of legislation that provide specific direction for the Project. City Resolution 156, City Ordinance 326, and RCW 47.50 are discussed below.

City Resolution 156

Resolution 156 was adopted unanimously by the Shoreline City Council on August 23, 1999, at an open meeting that included opportunities for public testimony. This resolution accepted the recommendation of the CATF for the 3-mile Aurora Avenue N corridor within the city limits; found the recommendation to be in conformance with the City Comprehensive Plan (2005); initiated an amendment to the Capital Improvement Program; and directed staff to pursue environmental analysis for the corridor improvement. Resolution 156 included the 32 Points directive described earlier in this chapter.

City Ordinance 326

Ordinance 326, which consists of revisions to the City's Comprehensive Plan, was passed 5 to 1 by the Shoreline City Council on July 14, 2003. This ordinance amended the text of Land Use Policy LU48 and added a new Transportation Policy 5.1 for the purpose of identifying future right-of-way needs of Aurora Avenue N, between N 172nd Street and N 192nd Street. The ordinance also added a right-of-way map for this area to the Transportation Element. In general, this ordinance identifies any widening that occurs along this segment of the roadway, and resulting right-of-way acquisition needed, as occurring to the east of the existing roadway. SEPA review was completed for Ordinance 326, prior to adoption. The ordinance was not subject to NEPA. However, for the purposes of the NEPA and SEPA evaluation of the Project, the separate Build Alternatives were defined to reflect widening to both the east and the west, so that the potential impacts under the full possible range of build options would be evaluated. If the Recommended Alternative that is ultimately selected requires right-of-way outside of the boundaries

defined in the ordinance, Policy T5.1 in the Comprehensive Plan, which specifically defines the boundaries, would need to be amended.

Access Management RCW 47.50

To preserve the safety and operational characteristics of state highways, RCW 47.50 was enacted in 1991, designating all highways in Washington as controlled-access facilities. Aurora Avenue N, part of SR 99, is a class 4 facility according to the WSDOT access control classification system and standards. Within this class, access management measures are identified, such as minimum driveway spacing of 250 feet and installation of medians to mitigate turning, weaving, and crossing conflicts that affect safe travel. Based on the urban environment served by Aurora Avenue N and the high traffic volumes it carries, the street's design is deficient in terms of access management for the preservation of safety and traffic operations. Any improvement to Aurora Avenue N would have to comply with access management standards defined under this law.

Chapter 3. Alternatives

This chapter describes the alternatives that are being evaluated for the proposed project.

What alternatives are considered in this discipline report?

This report evaluates the potential effects of a No Build Alternative and three Build Alternatives, described in the following sections.

No Build Alternative

Under the No Build Alternative, Aurora Avenue N would remain exactly as it is today. The roadway has two general-purpose lanes in each direction with a center two-way left-turn lane. Shoulder and sidewalk of varying widths are located sporadically along the corridor with no curb or gutter and little landscaping. The corridor is served heavily by public transit provided by King County Metro, with additional service at the north end of the corridor provided by Community Transit. Buses on Aurora Avenue N would continue to travel and stop in the general-purpose lanes.

Build Alternatives

The City has proposed three Build Alternatives: Alternative A, Alternative B, and Alternative C. Table 2 provides an overview of Project features unique in an individual Build Alternative and features common among them.

Table 2. Common and Unique Features of the Build Alternatives

Features Common among Build Alternatives A, B, and C	
General-purposes lanes	Project design includes two general-purpose lanes in each direction.
BAT lane	Each Build Alternative would include one Business Access and Transit (BAT) lane in each direction.
Sidewalk	7-foot sidewalks would be constructed along both sides of the corridor.
Curb and Gutter	Curb and gutter would be constructed along both sides of the corridor. Curb ramps would be constructed at all intersections in accordance with ADA requirements.
Underground utilities	Utilities would be placed underground for each of the three Build Alternatives.
Vegetation	Each of the alternatives includes vegetative plantings. Extent and location vary as described below.
Center median	A center median would be added, with left-turn and u-turn pockets (width of the center median varies by alternative, as described below).
Traffic signals	New traffic signals proposed at Aurora Avenue N/N 182nd Street and Aurora Avenue N/Firlands Way N (north of N 195th Street). Signalized intersections will be widened to improve east-west capacity and traffic flow.
Road improvements	Improvements would be made to: <ul style="list-style-type: none"> - Echo Lake Place (north of N 195th Street), including realignment and a connection to Aurora Avenue N at Firlands Way N; and - Midvale Ave N (N 175th Street – N 183rd Street), including realignment, addition of a center turn lane, curb and gutter, and sidewalk on the east side of the roadway. The new Interurban Trail will serve as the walking path on the west side of the roadway.
Features that vary among Alternatives A, B, and C	
	Alternative A
Cross Section	Typically 98 feet from back-of-sidewalk to back-of-sidewalk. The cross section will be wider where utility vaults, light/signal poles, and bump outs are located, as described below. This dimension is 12 feet narrower than the cross sections proposed under Alternatives B and C, due to a narrower median (12 feet instead of 16 feet) and the absence of the 4-foot amenity zone on each side of the roadway. The City would also acquire a continuous 3-foot-wide easement behind the sidewalk on each side of the roadway for placement of utilities.
Median Width	Center median would be 12 feet wide.
Amenity Zone	No amenity zone provided. Utility vaults and light/signal poles would be located behind the sidewalks in the 3-foot easement area.
Bump Outs	Bump outs approximately 4 feet in additional width would be needed at u-turn and left-turn locations to achieve the turning radii needed to accommodate u-turns.
Placement of Alignment	Required widening would be shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.
Vegetation	Limited vegetation would be provided in the median.
	Alternative B
	110 feet from back-of-sidewalk to back-of-sidewalk.
Median Width	Center median would be 16 feet wide.
Amenity Zone	A 4-foot amenity zone would be located between the curb and sidewalk on each side of the street. Utility vaults, light/signal poles, bus stop signs, hydrants, and other pedestrian amenities would be located in this area.
Bump Outs	None needed. U-turns would be sufficiently accommodated within the standard roadway width.
Placement of Alignment	Required widening would be shifted to the east of the existing right-of-way in the vicinity of N 175th Street, N 185th Street, and N 200th Street.
Vegetation	More vegetation accommodated by wider median. Vegetation could also be planted in areas within the amenity zone.
	Alternative C

All three Build Alternatives are similar in traffic operations and safety benefits with one small exception. Alternative B includes an additional westbound right-turn pocket at Aurora Avenue N and N 175th Street. Figures 2, 3, and 4 present plan views of the three Build Alternatives, respectively. Figure 5 presents more detailed schematic drawings of the proposed roadway configurations under each of the three alternatives. The drawing shows one direction of travel of the proposed roadway alternatives, which is typical of both directions.

When will the Recommended Alternative be selected?

The Recommended Alternative will be selected after all of the environmental analysis has been completed for the No Build Alternative and three Build Alternatives. The discipline reports that summarize the environmental analysis will be available for public review after they are finalized.

The boundaries of the three Build Alternatives encompass the maximum possible footprint of the Project. The Recommended Alternative ultimately selected for the Project may combine different elements from the different Build Alternatives. However, no part of the Project will occur outside of the study area analyzed in this report.

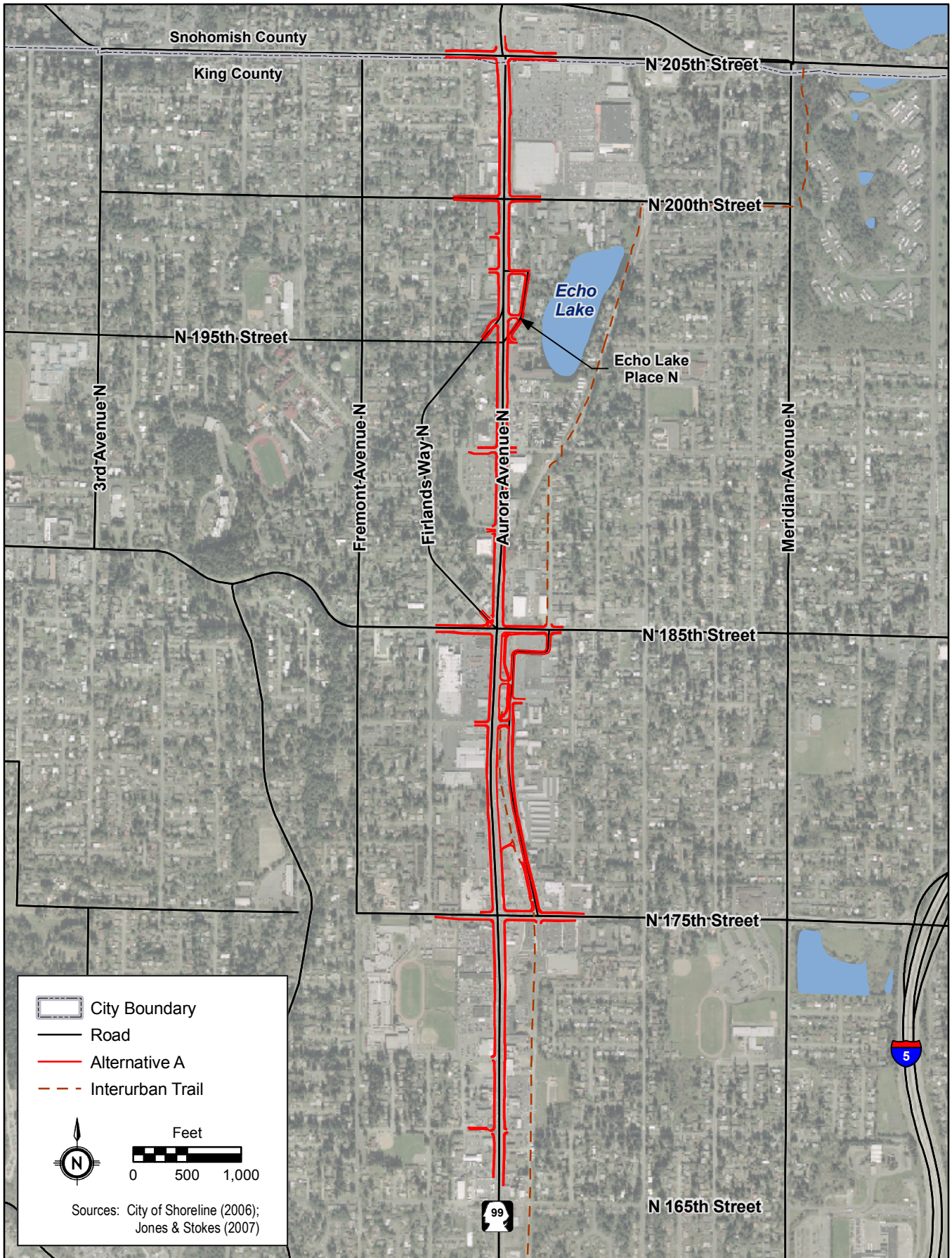


Figure 2. Alternative A
Aurora Corridor Improvement Project
October 2007

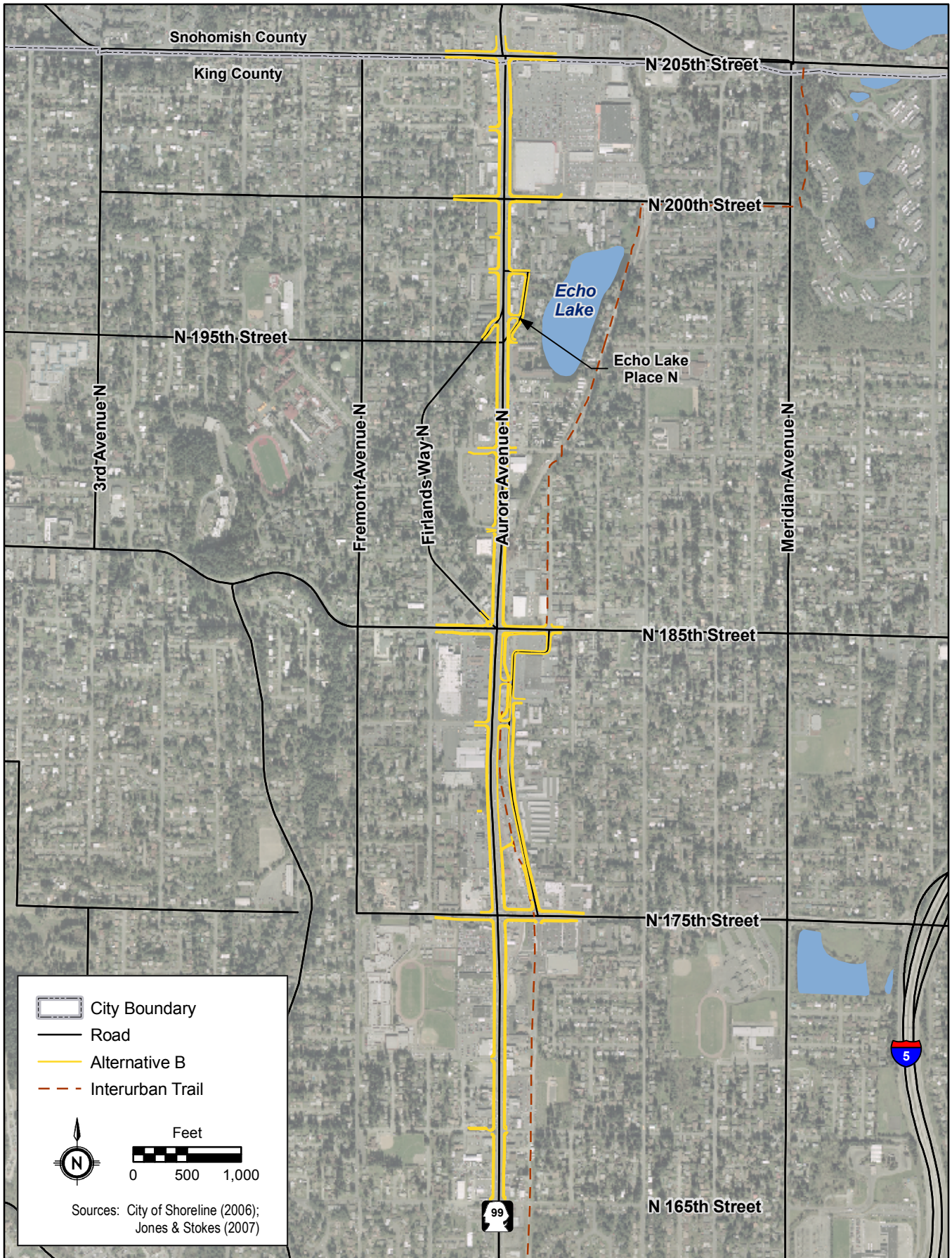


Figure 3. Alternative B
Aurora Corridor Improvement Project
October 2007

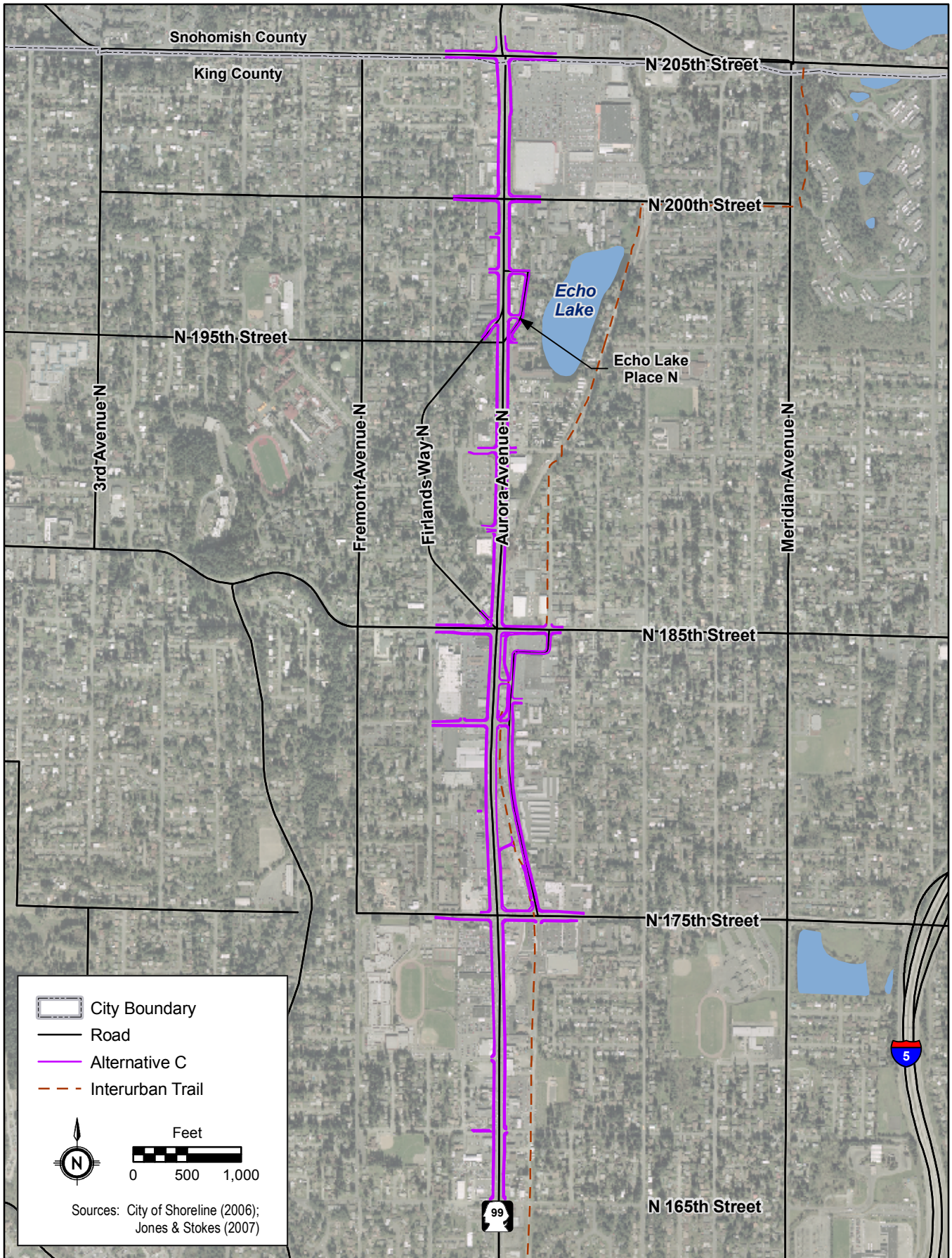
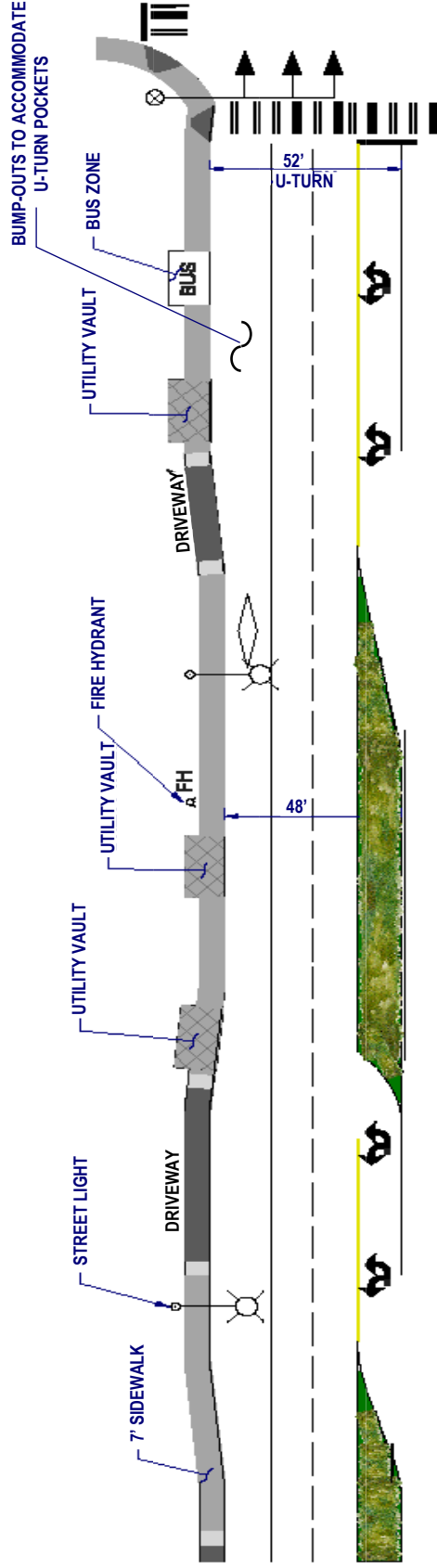


Figure 4. Alternative C
Aurora Corridor Improvement Project
October 2007

Alternative A



Alternatives B and C

Note: Drawing shows one direction of travel of the proposed roadway alternatives, which is typical of both directions

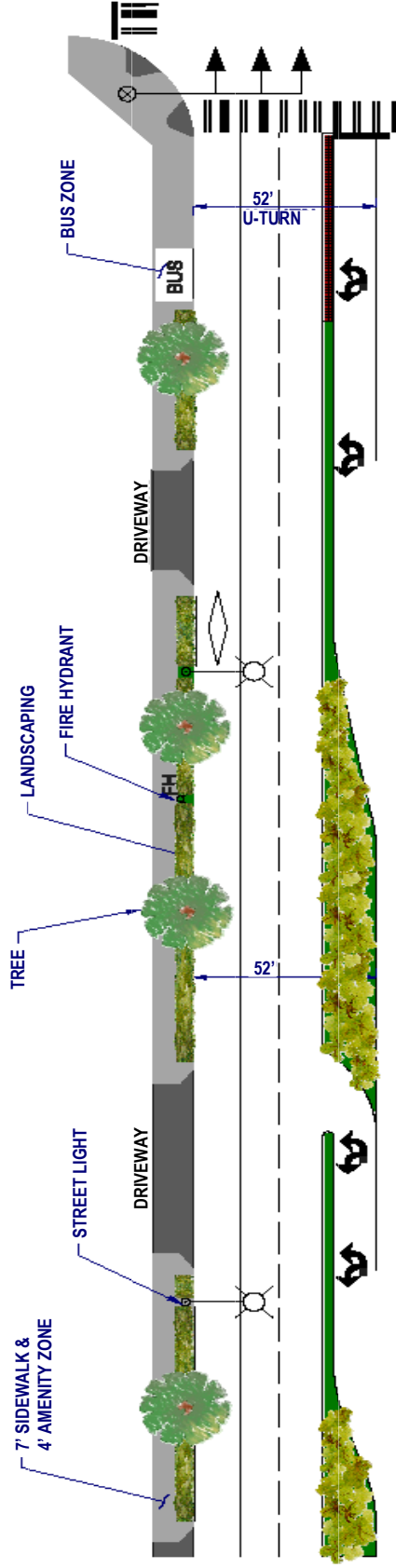


Figure 5. Proposed Plan Detail for Build Alternatives
Aurora Corridor Improvement Project
October 2007

Chapter 4. Affected Environment

This chapter describes existing regulations and conditions of the environment as they relate to environmental justice. It also describes public involvement efforts for the Project. The purpose of the environmental justice analysis is to report whether high and adverse human health or environmental effects from the proposed action are likely to fall disproportionately on minority or low-income populations.

Why is environmental justice important to consider?

Development and implementation of transportation projects can create both beneficial and adverse impacts on communities and their members. In 1994, President Bill Clinton signed Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, requiring federal agencies to identify and avoid “disproportionately high and adverse” effects on minority and/or low-income populations for federal programs that affect human health or the environment. U.S. Department of Transportation (USDOT) Order 56102.2 presents the USDOT policy to promote the principles of environmental justice through the incorporation of those principles in all USDOT programs, policies and activities. Considering environmental justice throughout the decision-making process implements the principles set forth in NEPA, Title VI of the Civil Rights Act of 1964 as amended; the Uniform Relocation and Real Policies Act of 1970 as amended; the Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU); and other related USDOT statutes, regulations, and guidance (WSDOT 2006).

What is the study area for environmental justice and how was it defined?

The study area for environmental justice includes the area within 0.5 mile east and west of Aurora Avenue N, between N 165th Street and N 205th Street, and the three census blocks immediately north of this area.

This area was selected because potential direct and indirect effects will be concentrated along the corridor and are not likely to extend further than ½ mile from the project limits. The study area fully or partially encompasses 19 census block groups. Eight of these census block groups immediately abut Aurora Avenue N between N 165th Street and N 205th Street. The census block groups used in this analysis and their relationship to the Project corridor are shown in Figures 6 and 7, later in this chapter.

Minority and low-income populations residing south of N 165th Street were analyzed in the Aurora Avenue N Multimodal Corridor Project: N 145th Street to N 165th Street, Social Discipline Report. The N 145th Street to N 165th Street report concluded that since no substantial adverse impacts were expected as a result of the proposed project, no high and adverse human health or environmental effects were expected to fall disproportionately on minority or low-income populations. (CH2M Hill 2001)

How are minority and low-income populations defined?

Environmental justice analysis looks specifically at minority and low-income populations. For the purposes of this analysis, a minority is defined as a person who is Black or African American, Hispanic or Latino, Asian, American Indian or Alaskan Native. The term low-income defines a person whose household income is at or below the U.S.

Department of Health and Human Services (HHS) poverty guidelines for that household size. HHS poverty guidelines are a simplified version of the U.S. Census Bureau poverty thresholds. Neither the U.S. Census Bureau nor the HHS prepares tabulations of the number of people below HHS poverty guidelines. The best approximation for the number of people below HHS poverty guidelines in a particular area is the number of persons below the U.S. Census Bureau poverty thresholds in that area.¹

¹ U.S. Census data on poverty status are derived in part from the Census 2000 long-form questionnaire (items 31 and 32), which provides information on the amount of income people received from various sources. The total number of people below the poverty level is the sum of

SAFETEA-LU

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005-2009

Census Block Group

A subdivision of a census tract, a block group is the smallest geographic unit for which the Census Bureau tabulates sample data. In urban areas, a block group typically encompasses 2 to 4 city blocks.

The 1999 U.S. Census poverty threshold (weighted average) for one person was \$8,501; for a family unit with two people the threshold was \$10,869; and for a three-person family unit the threshold was \$13,290.

How was information collected?

Information on minority and low-income populations was collected from a variety of sources. Data from the 2000 U.S. Census were used to characterize race, ethnicity, poverty status, and English proficiency in the study area and in the City. Block group-level census data were used to identify minority and low-income populations, and their location within the environmental justice study area.

This analysis also reflects more recent demographic data obtained from the National Center for Education Statistics (U.S. Department of Education 2007). Ethnicity and income-related data were gathered from the following three schools, all located in the study area during the 2004-2005 school year:

- Shorewood High School – 17300 Fremont Avenue N, Shoreline, WA 98133
- Meridian Park Elementary School – 17077 Meridian Avenue N., Shoreline, WA 98133
- Echo Lake Elementary School – 19345 Wallingford Avenue N., Shoreline, WA 98133

The data were compiled in order to supplement and verify the census data; however, it should be noted that student populations are not an exact reflection of the environmental justice study area, since the school boundary extents vary from that of the study area. However, since nearly half of the high school boundary and approximately two-thirds of both elementary school boundaries are within the Project study area, the student populations should be considered generally representative of the population residing within the study area.

Field investigations and windshield surveys were also conducted in the Project study area to verify the information collected from these sources.

the number of people in poor families and the number of unrelated individuals with incomes below the poverty threshold. The poverty threshold is not adjusted for regional, state, or local variation in the cost of living; however, poverty thresholds are updated annually for inflation with the Consumer Price Indexes.

What minority and low-income populations reside in the study area?

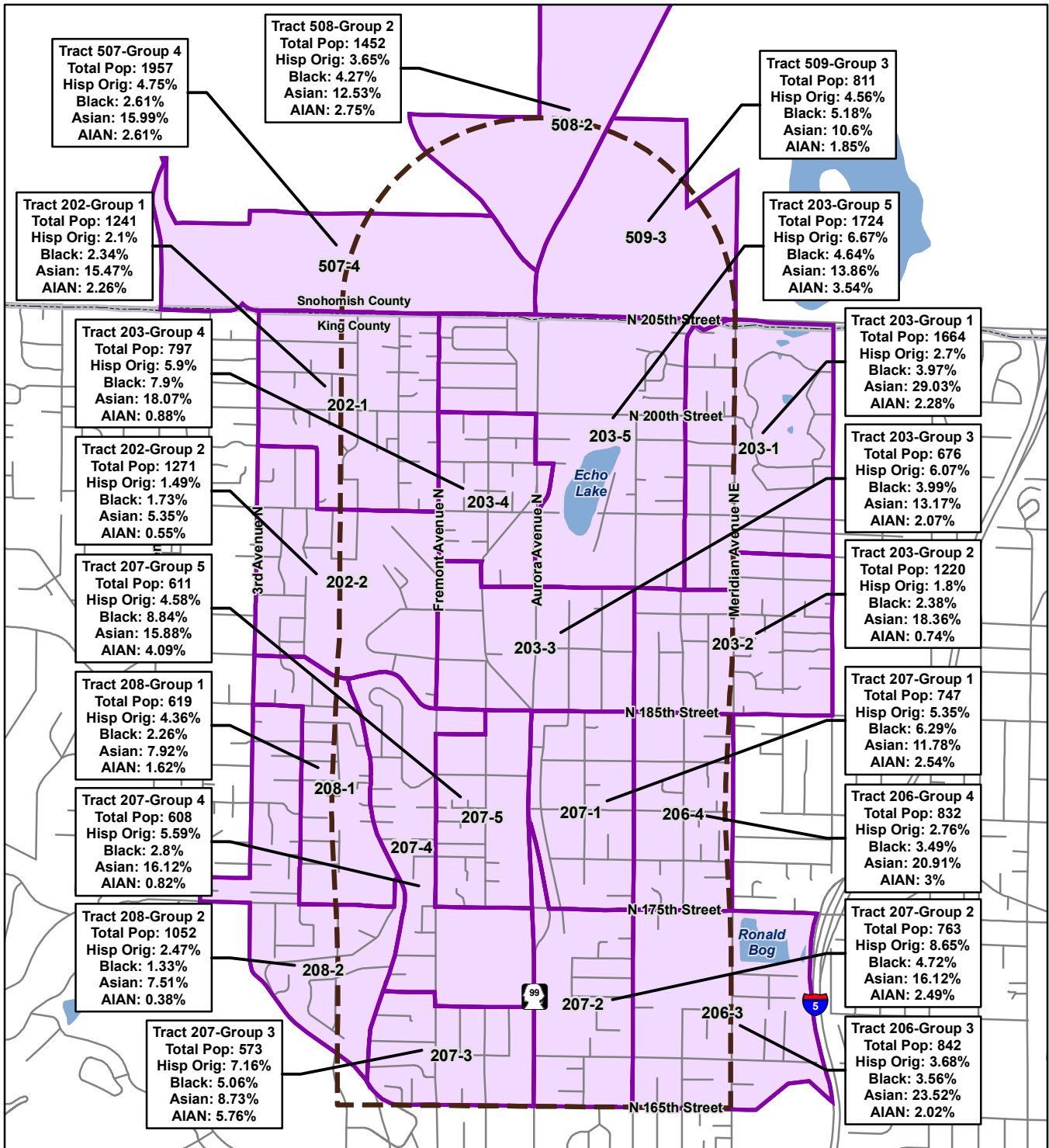
According to analysis of 2000 Census data, minority and low-income populations residing in the study area identified themselves as follows:

- Hispanic or Latino: 4%
- Black or African American: 4%
- Asian: 15%
- American Indian or Alaskan Native: 2%
- Living below poverty level: 7%

Demographic information for each census block group in the study area is provided in Figure 6. Income information for each census block group in the study area is provided in Figure 7.

Race and Ethnicity

Overall the minority composition of the study area population is very similar to that found citywide. Table 3 contains data relating to the minority composition of the population in the study area. The largest minority group in the study area identified themselves as Asian, accounting for accounting for 15% of the study area population. This is comparable to the proportion of Asians in the citywide population.



AIAN = American Indian and Alaska Native

Sources: City of Shoreline (2006); Jones & Stokes (2007); U.S. Census (2000)

- City Boundary
- Road
- Census Tract-Block Group Analyzed
- Study Area

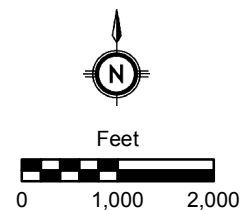
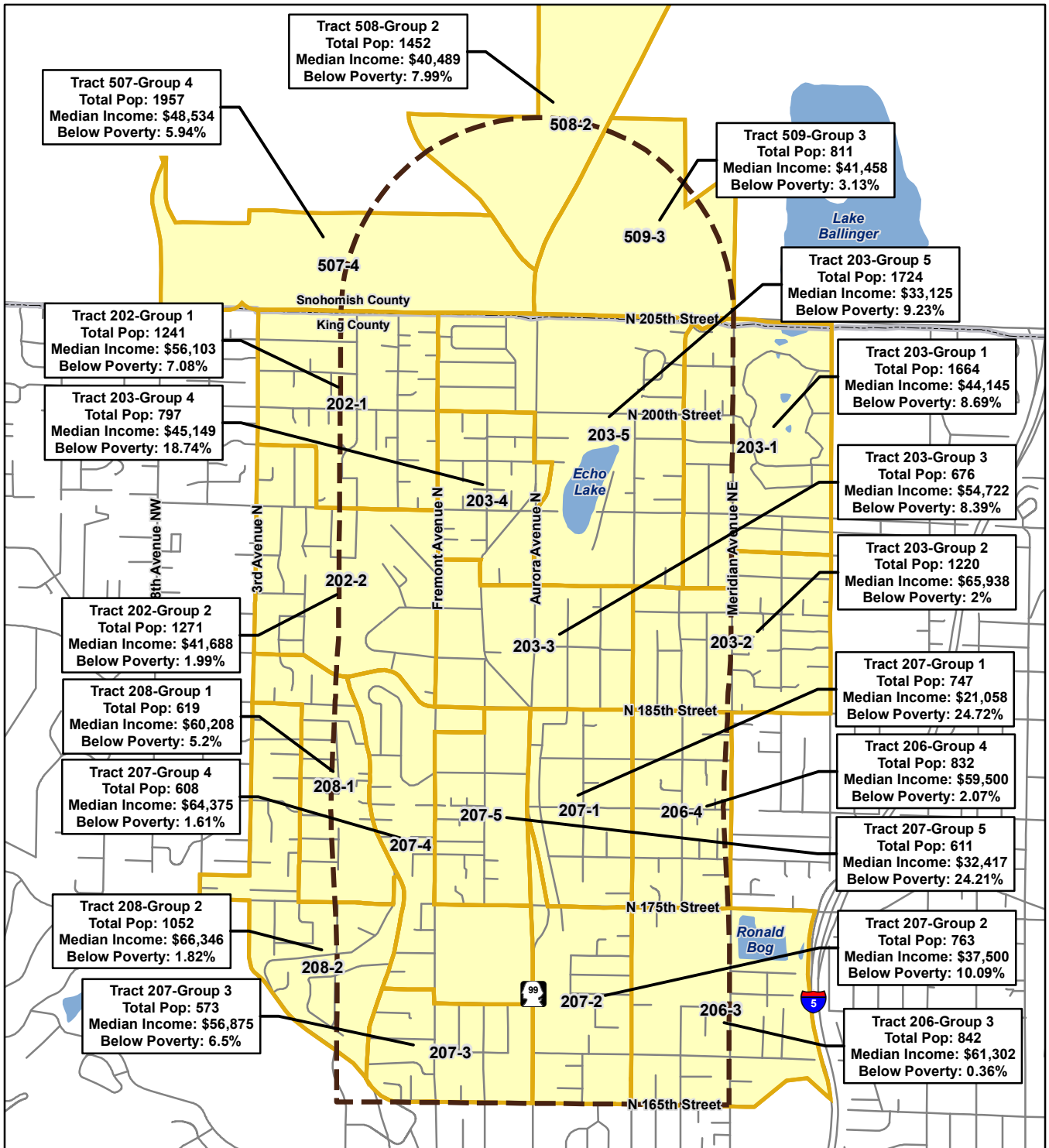


Figure 6. Demographics
Aurora Corridor Improvement Project
October 2007



Sources: City of Shoreline (2006); Jones & Stokes (2007); U.S. Census (2000)

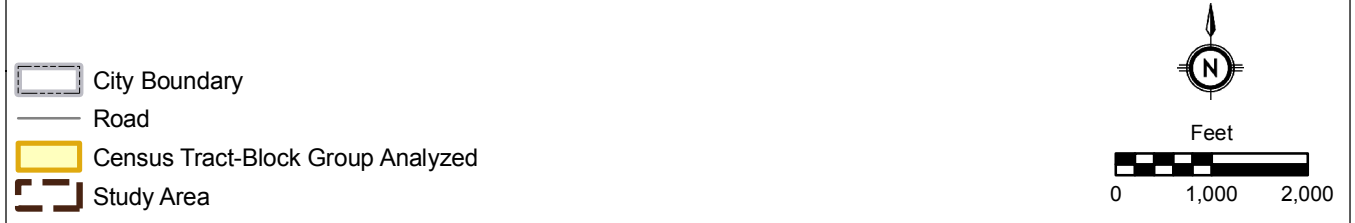


Figure 7. Income
Aurora Corridor Improvement Project
October 2007

Table 3. Study Area Race and Ethnicity Data

Direction, Relative to Study Area ^{1,2}	Block Groups in Study Area	Total Population	Percent Hispanic or Latino (any Race) ³	Percent Black / African American ⁴	Percent Asian ⁴	Percent American Indian and Alaska Native ⁴
W	Census Tract 202, Block Group 1	1,241	2.10	2.34	15.47	2.26
W	Census Tract 202, Block Group 2	1,271	1.49	1.73	5.35	0.55
E	Census Tract 203, Block Group 1	1,664	2.70	3.97	29.03	2.28
E	Census Tract 203, Block Group 2	1,220	1.80	2.38	18.36	0.74
✓ W & E	Census Tract 203, Block Group 3	676	6.07	3.99	13.17	2.07
✓ W	Census Tract 203, Block Group 4	797	5.90	7.90	18.07	0.88
✓ W & E	Census Tract 203, Block Group 5	1,724	6.67	4.64	13.86	3.54
E	Census Tract 206, Block Group 3	842	3.68	3.56	23.52	2.02
E	Census Tract 206, Block Group 4	832	2.76	3.49	20.91	3.00
✓ E	Census Tract 207, Block Group 1	747	5.35	6.29	11.78	2.54
✓ E	Census Tract 207, Block Group 2	763	8.65	4.72	16.12	2.49
✓ W	Census Tract 207, Block Group 3	573	7.16	5.06	8.73	5.76
✓ W	Census Tract 207, Block Group 4	608	5.59	2.80	16.12	0.82
✓ W	Census Tract 207, Block Group 5	611	4.58	8.84	15.88	4.09
W	Census Tract 208, Block Group 1	619	4.36	2.26	7.92	1.62
W	Census Tract 208, Block Group 2	1052	2.47	1.33	7.51	0.38
N	Census Tract 507, Block Group 4	1,957	4.75	2.61	15.99	2.61
N	Census Tract 508, Block Group 2	1452	3.65	4.27	12.53	2.75
N	Census Tract 509, Block Group 3	811	4.56	5.18	10.60	1.85
	Total Study Area	19,460	4.18	3.90	15.29	2.19
	City of Shoreline, WA	53,025	3.87	3.64	15.23	1.96

Notes:

- ✓ indicates that the Block Group abuts Aurora Avenue N.
- E = Block Group located to the east of Aurora Avenue N; W = Block Group located to the west of Aurora Avenue N; N = Block Group located to the north of 205th Street.
- The U.S. Census Bureau defines Hispanic origin as an ethnicity and not a race. Consequently, a person of Hispanic origin may be of any race and, as such the U.S. Census Bureau reports these characteristics separately.
- Ethnicity is identified alone or in combination with one or more of the other races. The 2000 Census question on race included 15 separate response categories and three areas where respondents could write in more specific race group categories. People who responded to the question on race by indicating only one race are referred to as the race-alone population, or the group that reported only one race category. In the 2000 Census, nearly 98% of all respondents reported only one race.

Source: U.S. Census 2000 Summary File 1 (SF 1) 100-Percent Data, Tables P1, P9 and P11.

Limited English Proficiency

Information on race, ethnicity, and language spoken is useful in identifying populations with limited ability to understand English and the potential need for translation services. The U.S. Department of Justice recommends that agencies consider providing language translation services if a group with a primary language other than English accounts for 5% or more of a target population. (Healy 2007) For example, if 5% or more of the study area population is Hispanic, there is a possibility that individuals may be limited in their understanding of English, thereby limiting their ability to participate in the Project decision-making process; and provide input or request assistance during project construction.

Table 4 summarizes the number of households in the study area that speak Spanish or an Asian/Pacific language. The Asian population in the study area is greater than 5% of the total population, suggesting the potential for limited English understanding. The Hispanic and Latino population in the study area is less than 5%. However, of the eight block groups immediately abutting Aurora Avenue N, seven have Hispanic or Latino populations of 5% or more.

To further confirm the presence of Asian language-speaking or Spanish-speaking populations with limited understanding of English, 2000 Census data were also used to identify households classified as linguistically isolated, which means that all members 14 years old and over have at least some difficulty with English. Table 4 indicates that there are 329 Spanish-speaking households in the study area, and 51 of those Spanish-speaking households are linguistically isolated. Likewise, there are a total of 795 Asian or Pacific Island language-speaking households in the study area, of which 348 are linguistically isolated.

The Project is located in two census tracts, which are defined at the county level for the purposes of summarizing census data. Data from the 2000 Census collected at the census tract level also record the languages spoken at home by people 18 years or older. While this is not a direct indication of whether English is spoken in these households, it does indicate what Asian and Pacific Islander languages might be spoken in the study area. Among those 18 years and over, 5% speak Korean, 3% speak Chinese, 2% speak Vietnamese, and 2% speak Tagalog (one of the major languages of the Republic of the Philippines) at home.

Linguistically Isolated Household

Household in which all members 14 years old and over have at least some difficulty with English.

Census Tract

Census tracts are small, fairly permanent subdivisions of a county. They are designed to contain somewhat homogeneous population and economic characteristics as well as living conditions. Census tracts average 4,000 inhabitants.

Table 4. Household Language and Linguistic Isolation

Direction, Relative to Study Area ^{1,2}	Block Group in Study Area	Total Households	Spanish- Speaking Households	Percentage of Spanish- Speaking Households that are Linguistically Isolated	Asian and Pacific Island Language- Speaking Households*	Percentage of Asian and Pacific Island Language - Speaking Households that are Linguistically Isolated
W	Census Tract 202, Block Group 1	459	49	0	20	0
W	Census Tract 202, Block Group 2	475	8	0	24	100.00
E	Census Tract 203, Block Group 1	709	13	0	160	45.63
E	Census Tract 203, Block Group 2	462	17	0	61	54.10
✓ W & E	Census Tract 203, Block Group 3	300	12	0	27	33.33
✓ W	Census Tract 203, Block Group 4	369	6	0	34	67.65
✓ W & E	Census Tract 203, Block Group 5	677	47	31.91	62	58.06
E	Census Tract 206, Block Group 3	287	0	0	36	5.56
E	Census Tract 206, Block Group 4	284	12	0	11	54.55
✓ E	Census Tract 207, Block Group 1	381	28	32.14	16	56.25
✓ E	Census Tract 207, Block Group 2	318	23	82.61	20	65.00
✓ W	Census Tract 207, Block Group 3	222	11	0	32	28.13
✓ W	Census Tract 207, Block Group 4	223	0	0	26	0
✓ W	Census Tract 207, Block Group 5	265	0	0	49	51.02

Direction, Relative to Study Area ^{1,2}	Block Group in Study Area	Total Households	Spanish-Speaking Households	Percentage of Spanish-Speaking Households that are Linguistically Isolated	Asian and Pacific Island Language-Speaking Households*	Percentage of Asian and Pacific Island Language - Speaking Households that are Linguistically Isolated
W	Census Tract 208, Block Group 1	188	0	0	13	0
W	Census Tract 208, Block Group 2	384	0	0	34	17.65
N	Census Tract 507, Block Group 4	852	78	10.26	62	46.77
N	Census Tract 508, Block Group 2	551	12	0	67	41.79
N	Census Tract 509, Block Group 3	326	13	0	41	56.10
Total Study Area		7732	329	15.50	795	43.77
City of Shoreline, WA		20746	835	11.62	1944	29.27

Notes:

1. E = east; W = west; N = north; ✓ indicates that the Block Group abuts Aurora Avenue N.
2. E-Block Group located to the east of Aurora Avenue N; W-Block Group located to the west of Aurora Avenue N; N-Block Group located to the north of 205th Street.
3. A linguistically isolated household is one in which all members 14 years old and over have at least some difficulty with English.
4. Based on 2000 Census data Chinese, Korean, Tagalog, and Vietnamese are the Asian languages most likely to be spoken by individuals in Census Tracts 203 and 207.

Source: US Census 2000 Summary File 3 (SF 3) - Sample Data, Table P20

Low-income Populations

Census block group-level data on the percentage of people living below poverty level in the study area indicate that 7% of the population in the study area lived below the poverty level in 1999, a proportion that is very similar to the city as a whole (Table 5). Six of the eight block groups located adjacent to Aurora Avenue N had a higher percentage of low-income population than found within the overall study area, ranging from 8% to 25% of the population. Block Group 4 of Census Tract 203, and Block Groups 1 and 5 of Census Tract 207 contained the highest percentage of low-income population (all over 18%); these areas are located along both sides of Aurora Avenue N between N 175th Street and N 185th Street, and along the west side of Aurora Avenue N between N 192nd Street and N 200th Street, across from Echo Lake.

Table 5. Low-Income Population Data

	Block Groups in Study Area	Population	Median Household Income (\$)	Population with Income Below Poverty Level in 1999	Percent of Population Below Poverty Level
W	Census Tract 202, Block Group 1	1,214	56,103	86	7.08
W	Census Tract 202, Block Group 2	1,004	41,688	20	1.99
E	Census Tract 203, Block Group 1	1,645	44,145	143	8.69
E	Census Tract 203, Block Group 2	1,301	65,938	26	2.00
✓ W & E	Census Tract 203, Block Group 3	644	54,722	54	8.39
✓ W	Census Tract 203, Block Group 4	763	45,149	143	18.74
✓ W & E	Census Tract 203, Block Group 5	1,722	33,125	159	9.23
E	Census Tract 206, Block Group 3	826	61,302	3	0.36
E	Census Tract 206, Block Group 4	820	59,500	17	2.07
✓ E	Census Tract 207, Block Group 1	712	21,058	176	24.72
✓ E	Census Tract 207, Block Group 2	753	37,500	76	10.09
✓ E	Census Tract 207, Block Group 3	615	56,875	40	6.50
✓ W	Census Tract 207, Block Group 4	623	64,375	10	1.61
✓ W	Census Tract 207, Block Group 5	599	32,417	145	24.21
W	Census Tract 208, Block Group 1	577	60,208	30	5.20
W	Census Tract 208, Block Group 2	988	66,346	18	1.82
W	Census Tract 507, Block Group 4	1,937	48,534	115	5.94
N	Census Tract 508, Block Group 2	1,427	40,489	114	7.99

	Block Groups in Study Area	Population	Median Household Income (\$)	Population with Income Below Poverty Level in 1999	Percent of Population Below Poverty Level
N	Census Tract 509, Block Group 3	768	41,458	24	3.13
	Total Study Area	18,938	48,966	1399	7.39
	City of Shoreline, WA	52,274	51,658	3,614	6.91

Notes:

1. E = east; W = west; N = north; ✓ indicates that the Block Group abuts the project.
2. E-Block Group located to the east of Aurora Avenue N; W-Block Group located to the west of Aurora Avenue N; N-Block Group located to the north of 205th Street.
3. When calculating the percentage of people below poverty level, the U.S. Census Bureau does not include unrelated individuals under the age of 15, individuals residing in institutional group quarters (e.g. nursing homes, prisons), dormitories, or living situations without conventional housing.

Source: US Census 2000 Summary File 3 (SF 3) - Sample Data, Table P87

Shoreline School District Demographics

Shoreline school district demographic data from the 2004-2005 confirm the continued presence of minority and low-income populations in this area since the 2000 Census. Table 6 shows data on the student body ethnicity and racial composition for the three public schools located within 0.5 mile of Aurora Avenue N. Echo Lake Elementary School has the most diverse school population: 25% of students are Asian, 13% are Hispanic, 7% are African American and 1% are American Indian. Meridian Park Elementary School has nearly as diverse a school population with 23% Asian students, 10% African American students, 8% Hispanic students and 2% are American Indian students. Shorewood High School has a lower percentage of minority students: 19% are Asian, 5% are African American, 5% are Hispanic and 2% are American Indian.

Information on the percentage of children receiving free or reduced-price lunches is also provided. Echo Lake Elementary school reported that 29% of students qualified to receive free or reduced-price lunches.

Table 6. Demographics of Public Schools in the Study Area, 2004-2005

School	Students	Percent Hispanic or Latino	Percent African American	Percent Asian	Percent American Indian and Alaska Native	Percent Receiving Free or reduced Price Lunch
Echo Lake Elementary School	408	13	7	25	1	29
Meridian Park Elementary School	679	8	10	23	2	8
Shorewood High School	1,837	5	5	19	2	13

Source: U.S. Department of Education's National Center for Education Statistics, Common Core of Data, public school data 2004-2005 school year (<http://nces.ed.gov/>)

The census and school district data clearly indicate the presence of minority and low-income residents in the study area. The potential effects of the Project on these populations are discussed in Chapter 5.

What gathering places, businesses, or services important to minority or low-income populations are in or near the study area?

Knowledge of gathering places, businesses, or services for minority and low-income populations can help identify places where the Project should avoid or minimize effects and identify avenues for reaching out to minority and low-income populations. Gathering places were identified during field visits.

The following churches serve minorities:

- Korean Zion Presbyterian Church – 17920 Meridian Avenue N
- Chinese Seattle Christian Assembly – 1616 N 192nd Street

None of these churches are located on Aurora Avenue N. The Korean First Christian Church on N 175th Street is located the closest to Aurora Avenue N, just east of Midvale Avenue N.

The following businesses serve minority populations:

- Lideta Market – 19824 Aurora Avenue N – Ethiopian groceries
- Pho 99 – 19828 Aurora Avenue N – Vietnamese restaurant

A thrift store run by Deseret Industries is located at 17935 Aurora Avenue N. This thrift store likely provides a source of affordable

clothing and household items to low-income populations. Deseret Industries is a non-profit division of the Welfare Services of the Church of Jesus Christ of Latter-Day Saints.

Why is public involvement important?

The overall goal of public involvement for this Project is to establish productive two-way communication between the community and the City in order to help city officials make better decisions that are supported by the citizens. Public involvement improves the quality of planning and decision-making, thereby reducing the risk of project failure or delays. By bringing a diverse range of values and opinions to the table, public involvement can improve decision-making and alternative selection.

Through public involvement, members of the community can have a say in how public funds are spent. This provides the public with an opportunity to let city staff know what they would like to see happen along Aurora Avenue N and what concerns they may have about construction, safety, business access, and traffic.

What are the opportunities for public involvement for this Project?

Public Involvement Activities to Date

Public involvement related to the improvement of Aurora Avenue N in the City dates back to activities associated with the development of the Multimodal Pre-Design Study beginning in 1998 (see Chapter 2 for more detailed description). Public involvement activities specifically related to this Project began in 2005 and are ongoing.

Aurora Business Team

Approximately one year prior to the start of the environmental process for the Project, the Aurora Business Team was created to advise City staff as the Project moved forward.

The Aurora Business Team was composed of large and small business and property owners from the corridor and members of Forward Shoreline, the Shoreline Chamber of Commerce, and the Shoreline Merchants Association. The team met with City staff eight times between November 2005 and July 2006. Team members provided input

to staff on a range of design and review issues including signage, elements of environmental review, and project alignment.

Project Kick-off Notice and Meetings

The City kicked off the environmental process in November 2006. Legal notice of two public meetings was provided in the *Seattle Times* on November 19, 2006 and in the *Shoreline Enterprise* on November 17, 2006. The public notice described the proposed project, its purpose and need, and the alternatives under consideration, and invited the public to come to the public meetings to learn more about the project and to provide feedback. The public notice also informed the public that the City would receive comments through January 2, 2007. In late December 2006, in response to requests from community members, the City decided to extend the public comment period until January 16, 2007. Notice of the extension of the scoping period was published in the *Seattle Times* on November December 31, 2006 and in the *Shoreline Enterprise* on December 29, 2006.

In addition to publishing the legal notice, the City notified the community in the following ways:

- additional press releases in the *Seattle Times* and *Shoreline Enterprise*;
- notice in the City newsletter, *Currents*, sent to all businesses and residences in the City;
- postcards mailed to the following community members:
 - businesses located in the City,
 - property owners for businesses in the City,
 - residences located within 700 feet of the Aurora Avenue N centerline, and
 - all people on the City's interested party list;
- notice on City website (<http://www.cityofshoreline.com>);
- notice on government access channel (Channel 21); and
- four notice boards set up along Aurora Avenue N.

The City also announced the public scoping meetings on an Aurora Corridor webpage on the City website (<http://www.cityofshoreline.com/cityhall/projects/aurora/165-205/>).

Public Meetings

The City conducted the public meetings to solicit input from the public and agencies. The first meeting was held at Meridian Park Elementary School on November 30, 2006 (6:30 p.m. to 9:00 p.m.). The second meeting was held at Shorewood High School on December 6, 2006 (6:30 p.m. to 9:00 p.m.). These meetings provided an opportunity to inform the public of the three Build Alternatives under consideration, solicit public input on the environmental process and the alternatives under consideration, and answer questions.

The two public meetings were conducted in an open house format. In the first half hour, attendees signed in and examined different stations set up with display boards and handouts. The display boards provided information on the history of the Project, the environmental review process, stormwater options, and large-scale aerial photographs that showed the alignment of each of the proposed three Build Alternatives. The second half hour included a formal presentation of the following information:

- introduction of the Project team members,
- outline of the purpose of the meeting,
- description of the overall NEPA and SEPA processes,
- Project background,
- description of the Build Alternatives,
- description of the Aurora Business and Community (ABC) public outreach team that was being organized to participate throughout the environmental process (described later in this section) and explanation of how interested community members could apply, and
- invitation to the community members to provide input on the Project or on the environmental process.

Meeting attendees were invited to provide comments on a Project comment card. Completed cards could be deposited in a comment box at the meetings, or were pre-addressed so they could also be mailed to the City at a later date. In addition, attendees were provided the option of recording their oral comments with a court reporter available at each public meeting. The City's webpage for the Project also allowed for the submission of electronic comments.

77 community members signed in at the meeting on November 30, 2006, and 74 signed in on December 6, 2006.

During the public scoping period, November 17, 2006 to January 16, 2007, the City received comments from a total of 208 commenters, of whom 199 provided comments in written form, and nine of whom provided comments verbally. Copies of the comments received during the scoping period are provided in the Scoping Report prepared for this Project, which also includes responses to the submitted comments.

Agency Outreach Meeting

A separate outreach meeting for the utilities and federal, state, and local agencies was held on January 17, 2007. Agencies were also invited to the public meetings. The City presented an overview of the Project to meeting attendees. After the agency outreach meeting Seattle City Light provided a scoping comment letter for this Project. No other agency comments were submitted.

Ongoing and Future Public Involvement Activities

City Website

The City maintains the webpage for the Project, providing information to the public on all aspects of the Project such as public meetings, meeting materials, fact sheets, alternative alignments, and other Project-related information. The address for the website is:

<http://www.cityofshoreline.com/cityhall/projects/aurora/165-205/>

City Newsletter

Updates on the status of the Project are also provided in the City newsletter, *Currents*, which is mailed ten times per year to all businesses and residences in the City.

Aurora Business and Community Team

The City Manager appointed 23 community members who applied to serve on the Aurora Business and Community Team. This group consists of volunteers representing a broad spectrum of viewpoints. Eleven meetings were held from January through June 2007 and were open to the public.

The Project team provided regular briefings to the ABC team throughout the preparation of the environmental technical reports for this Project. The role of the Aurora Business and Community Team was to monitor the progress of the overall environmental process, to provide input on key topics as appropriate, to represent the issues and concerns of the community at large, and to disseminate information on the Project and

the environmental process back to the community.

Ongoing Community Outreach

City staff continues to meet one-on-one with business owners, homeowner associations, and other community organizations, to provide information on the proposed alternatives, answer questions, and address concerns.

Open Houses

The City has implemented two additional public meetings as part of the environmental process for this Project. A meeting was held in June 2007 to provide the public an opportunity to review the preliminary environmental analysis of the No Build and three Build Alternatives, and to review and comment on the design elements of a draft Recommended Alternative. A public meeting was also held in October 2007, prior to issuance of the draft NEPA and SEPA environmental documents on the Recommended Alternative.

The public was notified through mailings, newspaper display ads, and other publicity similar to the outreach conducted for the scoping meetings. Notifications included:

- press releases to the *Shoreline Enterprise*;
- notice in the City newsletter, *Currents*, sent to every City resident;
- notice on City website (<http://www.cityofshoreline.com>) and the Aurora Corridor website;
- notice on government access channel (Channel 21); and
- notice boards set up along Aurora Avenue N.

Outreach to Limited English Proficient Populations

Outreach efforts for the two public meetings and other written community outreach materials (newsletters, mailings, etc.) prepared for the environmental process, and subsequently for construction activities related to the Project, include basic information in Spanish, Chinese, and Korean languages – each identified as a language spoken by at least 3% of the population in the Project study area. The City has retained a translation service to be employed upon requests from citizens for any larger presentation or written material prepared for the Project.

Chapter 5. Potential Effects

This chapter describes potential environmental justice effects identified under the No Build and three Build Alternatives.

How were effects on minority or low-income populations evaluated?

Several factors were considered to determine whether this Project complies with Executive Order 12898. First, demographics of the study area were analyzed to see who would be affected by the Project and to determine whether minority or low-income populations reside near the Project. Next, the potential effects from the Project were identified, and a determination of whether minority or low-income populations would be disproportionately affected by adverse impacts was made.

The following types of effects were evaluated for the Build and No Build Alternatives:

- Effects due to acquisition of property needed to build the Project
- Effects due to Project construction
- Effects due to Project operations

Potential effects of the Project on minority or low-income populations were assessed by reviewing the following technical memos or discipline reports prepared for this Project:

- Air Quality
- Cultural Resources

- Land Use Patterns, Plans, and Policies
- Hazardous Materials
- Noise
- Public Services and Utilities
- Social Resources, Economics, and Relocation
- Transportation
- Visual Quality
- Water Quality

Both beneficial and adverse effects to minority or low-income populations were identified. After identifying potential effects, an assessment was made of whether or not adverse effects would affect populations differently or disproportionately.

A disproportionately high and adverse effect on minority and low-income populations means an adverse effect has been identified that:

- is predominately borne by a minority population and/or low-income population; or
- will be suffered by the minority population and/or low-income populations 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.

How would property acquisition affect minority and low-income populations?

Build Alternatives

All three Build Alternatives would require the acquisition of property along Aurora Avenue N, to accommodate Project improvements. A total of 140 parcels are adjacent to the Project, covering approximately 128 acres. Some properties would be directly affected by the loss of existing parking and/or impacts to buildings. Right-of-way acquisition would also result in some relocation. These effects are discussed in the following sections.

Effects on Parking

The estimated effects on parking supply for each of the Build Alternatives are shown in Table 7. Parking effects were assessed for both

compliant and non-compliant parking. Compliant parking spaces are those completely contained on private property. Non-compliant parking spaces are partially or fully located within public right-of-way, or require backing onto city right-of-way for access or egress. Additional information about parking effects is provided in the *Land Use* discipline report that was prepared for this Project.

Of the properties identified in Table 7, one has been identified as important to low income and/or minority populations. Under Alternatives A and B, parking spaces associated with the Vietnamese restaurant and Ethiopian market at 19828 Aurora Avenue N would be eliminated or require reconfiguration.

All existing parking stalls on this property are non-compliant; and as they are located partially on city right-of-way, all would be impacted by the Project under their existing configuration. It is expected that some parking spaces would be regained by converting the layout on the property to fewer compliant spaces. This is one of 24 properties expected to lose greater than 20% of existing parking under Alternatives A and B.

Parking effects are spread among 41 to 52 properties throughout the corridor (depending on alternative), located among eight census block groups that have varying proportions of minority and low-income populations (Census Tract 203, Block Groups 3 – 5; and Census Tract 207, Block Groups 1 – 5; see Figures 6 and 7). Some minority and low-income averages in these block groups are higher than the study area averages and some are lower. Parking effects do not disproportionately impact businesses that serve minority and/or low-income populations.

If implementation of any of the Build Alternatives results in new parking or setback nonconformities, these properties will be grandfathered in as legal nonconforming. Under Shoreline Municipal Code (SMC) 20.30.390(D) nonconformities triggered by a government action are exempt from the restrictions defined under SMC 20.30. Thus, no significant effects related to nonconformities are identified under the Build Alternatives.

Compliant Parking

Parking spaces completely contained upon private properties that do not require backing onto city right-of-way for access or egress.

Non-Compliant Parking

Parking spaces partially or fully located within public right-of-way, or spaces on private property for which backing onto city right-of-way is required for access or egress.

Table 7. Estimated Parking Effects

	Alternative A	Alternative B	Alternative C
Existing Spaces			
Compliant ¹	4,292	4,292	4,292
Non-Compliant ¹	193	193	193
Total	4,485	4,485	4,485
Spaces Lost^{2,3}			
Compliant ¹	130	151	242
Non-Compliant ¹	167	168	150
Total	297	319	392
Resulting Available Spaces	4,188 ⁶	4,166	4,093
Available Spaces as % of Existing	93.4%	92.9%	91.3%
Number of Parcels Losing Parking	41	41	52
Number of Parcels Losing More than 20% ⁴	24	24	25

1. Compliant parking spaces are those completely contained on private property. Non-compliant parking spaces are partially or fully located within public right-of-way, or require backing onto city right-of-way for access or egress.

2. The analysis presented for effects on parking due to the Build Alternatives is based on conservative assumptions, and represents "worst-case" conditions. The City is working with community members to develop Implementation Strategies for the final Recommended Alternative, developed in part to minimize impacts to buildings and parking.

3. It is expected that some parking spaces would be regained by converting the parking layout on the property to fewer conforming spaces.

4. 20% represents a level at which it is expected that parking loss can be offset by providing employee parking behind the building or off site.

Source: CH2M Hill 2007 and Property Counselors 2007

Effects to Buildings

The Project could require major or partial acquisition of several buildings. *Partial* acquisition is indicated if less than 10% of the building would be impacted; *major* acquisition is indicated if greater than 10% of the building would be impacted; *full* acquisition is indicated if the expected impact is at a level that would not allow any remodeling of the building to occur.

Under Alternative A, partial acquisition would be needed of four buildings, major acquisition would be needed of two buildings, and full acquisition would be required of three commercial buildings and one residence. Under Alternative B, partial acquisition would be needed of four buildings, major acquisition would be needed of four buildings, and full acquisition would be required of three commercial buildings and one residence. Under Alternative C, partial acquisition would be needed of six buildings, major acquisition would be needed of five buildings, and full acquisition would be required of three commercial buildings and one residence.

None of the buildings impacted by the Project have been identified as important to minority and/or low-income businesses. Potential relocation associated with building acquisitions is discussed in the following section.

Relocation

Residences

Under all three Build Alternatives, the Project could potentially require relocation of residents of rental units located on one parcel at 19522 Aurora Avenue N. This parcel is located within a block group containing a higher percentage of minority and low-income populations than the study area (Block Group 4, Census Tract 203, see Figures 6 and 7). One rental house and two apartment buildings are located on the property, and would be potentially affected as follows:

- The proposed improvement to the intersection of Aurora Avenue N and N 196th Street would require full acquisition of the rental house, which is the southernmost building on the parcel.
- The more southern of the two apartment buildings has six apartments that are accessed off of the Aurora Avenue N side of the building. The proposed widening could result in the edge of sidewalk moving so close to the building that access to the apartments could be affected, and remodeling may be required. The Project will also result in loss of street-side parking for this building, though additional parking is available in the back of the building. Remodeling could result in temporary relocation of the residents of these units during construction; or, the owner may opt not to remodel, which could result in the need for permanent relocation.
- The more northern of the two apartment buildings has basement units that may be located directly adjacent to or under the existing sidewalk. The proposed widening could occur directly over these basement units, so remodeling may be required. The proposed widening could result in the edge of sidewalk moving so close to the building that access to the apartments could be affected, and remodeling may be required. The Project will also result in loss of street-side parking for this building, though additional parking is available in the back of the building. Remodeling could result in temporary relocation of the residents of these units during construction; or, the owner may opt not to remodel, which could result in the need for permanent relocation.

This parcel is located within Block Group 4, Census Tract 203, King

County, Washington. As can be seen in Table 3, the affected block group has a higher than average minority population for all groups except American Indian/Alaska native compared with the study area as a whole. The percentage of households living below poverty level within the affected block group is also higher than the percentage for the study area as a whole (Table 5), and is the third highest of all block groups. With approximately 3% of total households within the block group affected, however, and less than 1% of total households within the study area affected, the potential effect to minority or low-income populations would not be disproportionately high.

Businesses

Full acquisition is expected of two properties located at 17550 and 17560 Aurora Avenue N (Block Group 2, Census Tract 207) and one property at 18551 Aurora Avenue N (Block Group 3, Census Tract 203). Relocation will be required for two used automobile dealerships and one salon that are currently located on these parcels (see Figures 6 and 7).

For the impacted commercial buildings described earlier in this section, building and/or business owners will have the option to redevelop on the existing site, but they may also choose to relocate. These properties are spread along the 2-mile project length, and located in one of eight block groups shown abutting the corridor in Figures 6 and 7.

No Build Alternative

Under the No Build Alternative, no construction would take place, and land in the Aurora Corridor would continue in its current uses. No property acquisition would be required, and no building or parking impacts would occur. No relocations would be required.

How would Project construction affect minority and low-income populations?

Build Alternatives

Project construction has the potential to be disruptive to residents and businesses located along the Project corridor. Construction of any of the Build Alternatives is expected to begin in early 2009, and take 2 to 4 years depending on funding.

It is expected that minority and/or low-income populations would experience temporary construction impacts under all three Build

Alternatives, similar to those experienced by the general population in the study area. Minority and/or low-income populations would not bear these effects predominately, nor would they bear these effects more severely than other residents in the study area and the general public. The following temporary construction effects are expected:

- Disruption of traffic under all of the Build Alternatives would be one of the most evident impacts of the roadway improvements along Aurora Avenue N. Construction activities would result in reduced capacity on the roadway, causing traffic delays and frequent lane shifts and access changes. To avoid delays and inconveniences, drivers may seek alternate routes of travel, may shift their times of travel when possible, and may seek alternate travel modes. Drivers and transit riders may experience increases in travel time due to detours and construction delays.
- Temporary access changes to local business, motels, and multifamily structures would be necessary during construction of any of the Build Alternatives. Changes may disrupt travel patterns to and from businesses and community facilities. These impacts would be of limited duration, only occurring during the reconstruction of a particular section of Aurora Avenue N. While points of access may have to be modified, access to all properties would be maintained throughout project construction.
- Construction equipment and activities are expected to generate noise, dust, odors, and vehicle and equipment emissions. Temporary changes to the visual environment would include views of construction equipment, construction activities, staging areas, and nighttime lighting.

No Build Alternative

Under the No Build Alternative, no construction would be undertaken; therefore, no construction effects would occur.

How would Project operations affect minority and low-income populations?

Build Alternatives

The potential effects of the all three of the Build Alternatives would be very similar for populations living in the study area, and are summarized below.

Social, economic, and land use analyses and conclusions are presented in the *Social Resources, Economics, and Relocation* and *Land Use Patterns, Plans, and Policies* discipline reports prepared for this Project. Key points that are pertinent to minority and low-income populations are as follows:

- Long-term, adverse economic effects are not expected. None of the businesses identified as important to minority and low-income populations would be displaced. Some driveways may be consolidated as part of access management, but this will not result in a limitation of access, just a reconfiguration. No adverse effects to businesses are identified as a result of driveway consolidation, including those of importance to minority and low-income populations.
- No long term, adverse effects on community or neighborhood cohesion are expected. No adverse effects to recreational uses within the study area are expected to result from the Project. The Project supports local adopted land use plans and policies.

Transportation analyses and conclusions are presented in detail in the *Transportation* discipline report prepared for this Project. Key points that are pertinent to minority and low-income populations are as follows:

- The Project would improve vehicle mobility and safety under all three Build Alternatives.
- The Project would improve safety and mobility for pedestrians and transit users. The Project would improve transit operations and reliability through addition of the BAT lanes, providing a lane for bus operation outside the general-purpose traffic flow. Provision of continuous, even sidewalks under the three Build Alternatives would improve pedestrian connections, and provide a safe location for people waiting for transit. The addition of the pedestrian amenity zone under Alternatives B and C has additional safety benefit by providing increased separation of vehicular traffic from pedestrians on the sidewalk.
- The improvements for pedestrians and transit users are notable with regard to minority and low-income populations, as many people within these populations rely on transit and non-motorized modes for their travel needs.

Pertinent findings from other reports prepared for this Project are as follows:

- The Project would not cause any significant regional air quality

impacts and would not cause or contribute to any localized air quality violations. The air quality analysis and conclusions are presented in detail in the *Air Quality* technical memorandum prepared for this Project.

- For the design year 2030, noise levels would exceed Noise Abatement Criteria (NAC) for the No Build and all three Build Alternatives at five locations (two houses, two apartment buildings, and one commercial establishment). No noise abatement measures satisfy the WSDOT feasibility and reasonableness criteria. The affected buildings do not include any of the establishments identified in this report as potentially important to minority and low-income populations. Noise analysis and conclusions are presented in detail in the *Noise* discipline report prepared for this Project.
- The Project is expected to improve the overall visual quality of the corridor under all three Build Alternatives. Visual quality analysis and conclusions are presented in detail in the *Visual Quality* discipline report prepared for this Project.
- The Project is expected to improve water quality under all three Build Alternatives. Water quality analysis and conclusions are presented in detail in the *Water Quality* discipline report prepared for this Project.

No Build Alternative

The No Build Alternative would result in degradation traffic operations, as traffic volumes increase over time. Increased traffic congestion will also result in potential degradation to transit travel times and reliability. Increasing levels of traffic without associated safety improvements will increase the potential for conflict between vehicles and pedestrians. The degradation of safety and mobility for pedestrians and transit users is notable with regard to minority and low-income populations, as many people within these populations rely on transit and non-motorized modes for their travel needs.

Will this Project have disproportionately high adverse effects on minority or low-income populations?

Based on the findings presented in this report, the Project would not result in disproportionately high adverse effects to minority or low-income populations.

Partial acquisitions of properties abutting the existing right-of-way would be necessary to accommodate the roadway improvements. Partial acquisitions would occur along the 2-mile length of the Project corridor, and would not result in a disproportionately high or adverse property take for minority or low-income populations.

Potential relocation could be needed of nine residences: one house due to full acquisition, and up to eight apartments due to partial acquisition. These residences are located within a block group containing a higher than average minority and low-income population compared to the study area as a whole, however only a small portion of the total block group (3%) would be affected.

It is expected that minority and low-income populations would experience temporary construction impacts, including noise, dust, odors, vehicle and equipment emissions, and minor visual effects similar to those experienced by the general population in the study area. Minority and/or low-income populations would not bear these effects predominately, nor would they bear these effects more severely or at a greater magnitude than other residents in the study area and the general public. Minority and low-income populations, along with the general public, would experience some benefits due primarily to improved mobility and safety along Aurora Avenue N.

The Project would not result disproportionately high adverse impacts to minority or low-income persons; therefore, no activities to avoid or minimize adverse effects related to Executive Order 12898, Environmental Justice, would be necessary.

Chapter 6. Measures to Avoid or Minimize Project Effects

This chapter identifies mitigation measures intended to avoid or minimize the potential effects described in Chapter 6.

What mitigation measures are proposed to avoid or minimize effects due to right-of-way acquisition?

The City will compensate property owners for property acquisitions required by the Project. Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended. Relocation resources are available to all residential and business relocates without discrimination. If building impacts occur, the City will compensate the owners per federal regulations.

What mitigation measures are proposed to avoid or minimize effects due to Project construction?

Communities and Neighborhoods

The following mitigation measures and Best Management Practices

(BMPs) have been identified under other disciplines evaluated for this Project. These measures would help minimize construction effects on community members.

- Develop and implement a construction management plan to minimize adverse economic effects of Project construction, including but not limited to a communication plan, signage, and marketing strategies.
- Develop and implement a construction traffic control plan to minimize adverse transportation effects of Project construction, including but not limited to signage, bus stop relocation, and a construction communication plan for local businesses, residents, and emergency service providers.
- Locate storage and staging in areas that are not visually prominent; shield or screen construction related lighting.
- Implement air quality BMPs to minimize dust emissions and prevent soil trackout, which can include standard dust control measures and emission control technologies.
- Develop and implement a construction noise reduction plan to minimize adverse noise effects of Project construction.
- Implement stormwater BMPs and measures that could include silt fences, straw bales, covering exposed soil, temporary storm drain filter inserts, and street sweeping.
- Construction phase traffic effects would be minimized by limiting closures to nights and weekends when possible.

Communication measures will be implemented during project construction to provide construction-related information and to minimize construction effects on community member should include:

- Informing the public, schools, and transit agencies of traffic changes ahead of time.
- Posting informational flyers at key stores, park-and-ride lots, schools, nonprofits and religious institutions.

Written community outreach materials prepared for the environmental process, and subsequently for construction activities related to the Project, will include basic information Spanish, Chinese, and Korean languages (each identified as a language spoken by at least 3% of the population in the Project study area). The City has retained a translation service to be employed upon requests from citizens for any larger presentation or written material prepared for the Project.

Best Management Practice (BMP)

Innovative and improved environmental protection tools, practices, and methods that have been determined to be the most effective, practical means of avoiding or reducing environmental impacts.

Businesses

The following measures have been identified to minimize potential adverse effects to businesses that could occur as a result of Project construction.

Communication

- Establish a single point of contact to communicate with business and property owners.
- Communicate construction progress through web sites, newsletters, designated business liaisons, and regular meetings.

Construction Contract Management

- Provide incentives/disincentives to expedite construction.
- Stagger construction along Corridor to reduce periods of intense impact to individual businesses, when possible.
- Avoid scheduling construction activities during peak shopping periods, particularly Christmas, when weather is often not advantageous to construction anyway.
- Consider scheduling construction for after business hours in areas where there are no adverse impacts to adjacent residential areas.

Signage

- Provide signage outside districts to direct potential customers to and through business district.
- Provide signage identifying individual businesses, indicating they are open for business, and identifying how to access them.
- Provide maps showing how to access businesses and parking during construction.

Access

- Provide at least one access point to any individual business at all times except during street paving.
- Provide alternative parking, and maintain access to existing parking spaces.
- Avoid blocking business entrances with construction equipment and barriers.

Promotion

- Publicize the fact that the district is open for business, and how to access it.
- Promote events related to construction, either tied to historical activities or construction tours.
- Promote sales and services to construction workers, either through discounts or special products or services.

Business Assistance

- Work with affected businesses owners prior to initiation of Project construction to educate them about potential impacts and develop strategies for mitigation.
- Provide technical assistance and funding programs for affected businesses.

No construction mitigation measures specific to environmental justice have been identified because no disproportionately high and adverse effects have been identified for construction of the Project.

What mitigation measures are proposed to avoid or minimize operational effects on minority and low-income populations?

Mitigation for Project effects has been made an inherent part of Project design from its inception through the use of context-sensitive solutions. Using this approach, development and implementation of a roadway project begin with outreach to the public and stakeholders, and incorporates the community's values into the overall design of the improvements. The objective is a finished design sensitive to the surrounding context that creates a safe, efficient, and effective roadway system for the movement of people and goods.

For this Project, public involvement started early with the process of defining the Project purpose and need and continued as the Build Alternatives were developed. The corridor design concept, as defined in the 32 Points adopted by the City Council (described in Chapter 2) was the culmination of this extensive public process. The input of all users and stakeholders was considered consistently and on many levels including aesthetic, social, economic and environmental values, needs, and constraints.

Context-Sensitive Solutions

A collaborative, interdisciplinary approach to develop a transportation facility that fits its physical surroundings and is responsive to the community's scenic, aesthetic, social, economic, historic, and environmental values and resources, while maintaining safety and mobility.

No operational mitigation measures specific to environmental justice have been identified because no disproportionately high and adverse effects have been identified for the operation of the Project.

Chapter 7. References

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