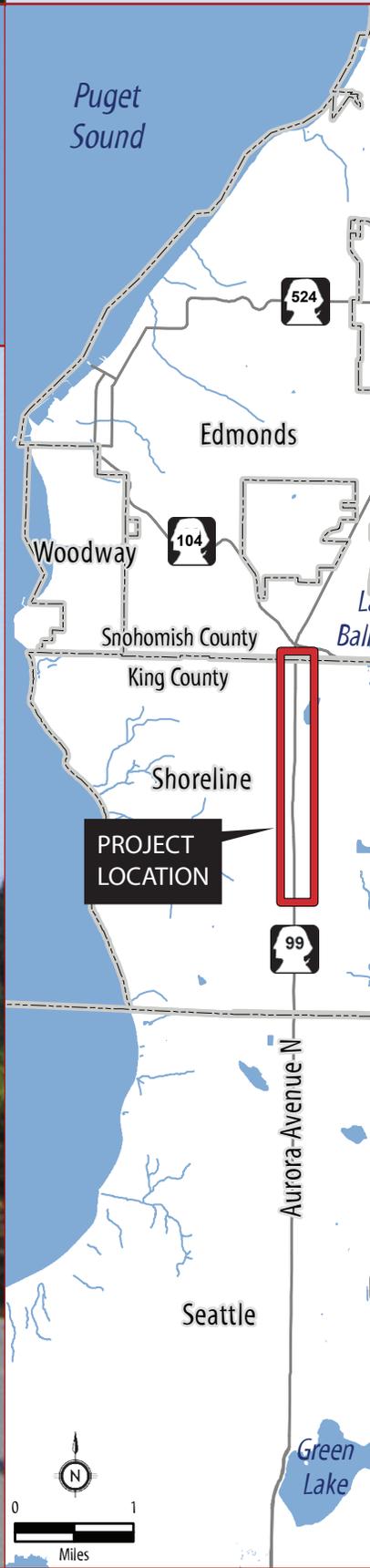




# Social Resources, Economics, and Relocation Discipline Report

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





# Social Resources, Economics, and Relocation Discipline Report

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

Prepared for:



17544 Midvale Avenue N.  
Shoreline, WA 98133  
Contact: Kris Overleese, P.E.  
206/546-0791

Prepared by:



**Jones & Stokes**

11820 Northup Way, Suite E300  
Bellevue, WA 98005  
Contact: Jennifer Barnes  
425/822-1077

October 2007

This document should be cited as:

Jones & Stokes. 2007. Social Resources, Economics, and Relocation Discipline Report. Aurora Corridor Improvement Project: N 165th Street – N 205th Street. October. (61001.06.) Bellevue, WA. Prepared for City of Shoreline.

# Table of Contents

---

<b>Chapter 1. Introduction .....</b>	<b>1-1</b>
What is the purpose of this report?.....	1-1
Where is the project located? .....	1-2
What are the existing characteristics of the Aurora Avenue N corridor? .....	1-2
Why improve Aurora Avenue N? .....	1-4
What are the major characteristics of the proposed Project? .....	1-4
Why are social resources, economic, and relocation factors considered for this Project? .....	1-5
What are the key points of this report? .....	1-5
<b>Chapter 2. Purpose and Need .....</b>	<b>2-1</b>
What is the purpose of the Project? .....	2-1
How were the needs of the Aurora Avenue N corridor identified? .	2-1
PSRC Metropolitan Transportation Plan.....	2-2
City Comprehensive Plan .....	2-2
Multimodal Pre-Design Study .....	2-3
What are the needs addressed by the Project?.....	2-6
System Linkage .....	2-6
Capacity .....	2-7
Regional Transportation Demand.....	2-8
Modal Interrelationships .....	2-9
Safety .....	2-10
Social and Economic Development .....	2-12
What is the legislative context for the Project? .....	2-13
City Resolution 156 .....	2-13
City Ordinance 326.....	2-13
Access Management RCW 47.50.....	2-14
<b>Chapter 3. Alternatives .....</b>	<b>3-1</b>
What alternatives are considered in this discipline report?.....	3-1
No Build Alternative .....	3-1
Build Alternatives.....	3-1
When will the Recommended Alternative be selected?.....	3-2

**Chapter 4. Affected Environment..... 4-1**

- What are the general features of the Project area? ..... 4-1
- Why are social resources, economic, and relocation factors important? ..... 4-2
  - Social ..... 4-2
  - Economic..... 4-2
  - Relocation ..... 4-2
- What regulations guide the assessment of social resources, economic, and relocation factors? ..... 4-3
- What social, economic, and relocation elements were considered?..... 4-4
  - Social ..... 4-4
  - Economic..... 4-5
  - Relocation ..... 4-5
- How was information collected? ..... 4-5
  - Social ..... 4-5
  - Economic..... 4-6
  - Relocation ..... 4-6
- What is the study area for social, economic, and relocation factors?..... 4-7
  - Social ..... 4-7
  - Economics..... 4-7
  - Relocation ..... 4-10
- What are the current and future population and housing characteristics of the City? ..... 4-10
- What are the demographic characteristics of the Project study area?..... 4-10
- What neighborhoods are located within the Project study area? ..... 4-19
  - Richmond Highlands ..... 4-19
  - Meridian Park ..... 4-20
  - Hillwood..... 4-22
  - Echo Lake ..... 4-22
- What City recreational facilities and clubs are located within the Project study area?..... 4-23
  - Interurban Trail ..... 4-24
  - Richmond Highlands Recreation Center and Park ..... 4-24
  - Meridian Park ..... 4-24
  - Ronald Bog Park ..... 4-24

Cromwell Park ..... 4-24

Echo Lake Park ..... 4-25

Youth Sports Clubs..... 4-25

What is the current economic condition of the study area? ..... 4-25

    Business and Shopping Patterns..... 4-25

    Property Values ..... 4-27

    Employment ..... 4-27

    Tax revenues..... 4-28

What residences are located within the Project area?..... 4-29

Why is public involvement important? ..... 4-30

What are the opportunities for public involvement for this  
Project? ..... 4-30

    Public Involvement Activities to Date..... 4-30

    Outreach to Potential Linguistically Isolated Households . 4-33

    Ongoing and Future Public Involvement Activities..... 4-34

**Chapter 5. Potential Effects..... 5-1**

How were potential social, economic, and relocation effects  
evaluated?..... 5-1

    Social ..... 5-1

    Economic..... 5-2

    Relocation ..... 5-3

How will the completed Project affect communities and  
neighborhoods?..... 5-4

    Build Alternatives..... 5-4

    No Build Alternative ..... 5-8

How would the Project affect properties within the study area? .... 5-9

    Build Alternatives..... 5-9

    No Build Alternative ..... 5-13

Will the Project require relocation of any residences or  
businesses? ..... 5-14

    Build Alternatives..... 5-14

    No Build Alternative ..... 5-15

What are the potential effects of the Project on economic  
elements?..... 5-15

    Build Alternatives..... 5-15

    No Build Alternative ..... 5-17

Will Project construction result in any temporary effects on  
properties? ..... 5-17

    Build Alternatives..... 5-17

No Build Alternative ..... 5-19  
What secondary cumulative effects could potentially occur as  
a result of the Project?..... 5-19

**Chapter 6. Measures Taken to Avoid or Minimize  
Project Effects ..... 6-1**

What mitigation measures are proposed to avoid and/or minimize  
operational impacts? ..... 6-1  
Property Acquisition and Relocation..... 6-1  
Context Sensitive Solutions ..... 6-2  
Other Measures ..... 6-3  
What mitigation measures are proposed to minimize temporary  
effects of construction?..... 6-3  
Communities and Neighborhoods ..... 6-3  
Economic Conditions ..... 6-4

**Chapter 7. References ..... 7-1**

# Figures

---

Figure 1.	Project Vicinity .....	1-3
Figure 2.	Alternative A .....	3-5
Figure 3.	Alternative B .....	3-6
Figure 4.	Alternative C .....	3-7
Figure 5.	Proposed Plan View for the Build Alternatives .....	3-8
Figure 6.	Census Block Groups Studied for Project .....	4-8
Figure 7.	Aurora Commercial District.....	4-9
Figure 8.	Neighborhoods and Public Services.....	4-21

# Tables

---

Table 1.	Summary of Potential Social Resources, Economics, and Relocation Effects and Mitigation .....	1-8
Table 2.	Common and Unique Features of the Aurora Corridor Improvement Project Build Alternatives.....	3-3
Table 3.	Race and Ethnicity.....	4-11
Table 4.	Age Characteristics .....	4-12
Table 5.	Household Characteristics.....	4-13
Table 6.	Income Characteristics .....	4-14
Table 7.	Households Receiving Public Assistance.....	4-15
Table 8.	Persons with Disabilities .....	4-16
Table 9.	Travel Characteristics.....	4-17
Table 10.	Housing Characteristics.....	4-18
Table 11.	Group Quarters.....	4-19
Table 12.	Employment in the City of Shoreline.....	4-28
Table 13.	Property Acquisition by Alternative .....	5-10
Table 14.	Estimated Parking Impacts.....	5-11
Table 15.	Projected Effect of Project on Land Values .....	5-16
Table 16.	Projected Effect of Project on Annual Property Tax Revenue .....	5-16

## 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
FAZ	Forecast Analysis Zone
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
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

## Glossary

---

<b>acquisition</b>	The purchasing of property, residences, or businesses for right-of-way necessary to construct or support a project.
<b>average daily traffic (ADT)</b>	The average number of vehicles that travel on a roadway on a typical day.
<b>amenity zone</b>	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.
<b>best management practice (BMP)</b>	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.
<b>block group</b>	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.
<b>business access and transit (BAT) lane</b>	Right-side lane that serves exclusively for bus travel, and for right-turn access in and out of all driveways that intersect it.
<b>census block group</b>	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
<b>census tract</b>	Small, fairly permanent subdivision of a county, designed to contain somewhat homogeneous population and economic characteristics as well as living conditions. Census tracts average about 4,000 inhabitants.
<b>community cohesion</b>	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.
<b>compliant parking</b>	Parking spaces completely contained upon private properties that do not require backing onto city right-of-way for access or egress
<b>context-sensitive solutions</b>	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.
<b>disproportionate high and adverse effect</b>	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.
<b>environmental justice</b>	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.
<b>forecast analysis zone (FAZ)</b>	Groups of census tracts defined by the PSRC, used to project the distribution of future population and employment.

<b>gathering places</b>	Locations where people congregate and spend time together, such as parks, community centers, churches, pubs, and stores.
<b>linguistically isolated household</b>	Household in which all members 14 years old and over have at least some difficulty with English
<b>low-income</b>	A household income that is at or below the federally designated poverty level for a given household size.
<b>Metropolitan Transportation Plan</b>	The official intermodal transportation plan that is developed and adopted through the transportation planning process for the urban planning area
<b>minority</b>	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.
<b>multimodal transportation</b>	Multimodal transportation refers to multiple choices for travel, including driving alone, carpooling, walking, biking, or riding transit.
<b>Neighborhood Watch</b>	Citizens' organization devoted to crime and vandalism prevention within a neighborhood, based on the principle that neighbors working together are the first and best line of defense against crime. Members are expected not to directly intervene in possible criminal activity. Instead, neighborhood watch members stay alert to unusual activity and contact the authorities when such activity occurs.
<b>noise abatement criteria (NAC)</b>	The Federal Highway Administration (FHWA) noise abatement criteria specify exterior and interior noise levels for various land activity categories such as residential and commercial.
<b>non-compliant parking</b>	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..
<b>sector</b>	Within the context of an economic analysis, a high-level grouping of specific industries with common characteristics based on the standard industrial classification system.
<b>u-turn pocket</b>	Left-turn lane that is designed and signed to allow vehicles to opt to make a u-turn on the roadway. If the roadway on the receiving side of the u-turn pocket is not wide enough to accommodate a u-turn, the roadway is widened at the u-turn pocket – this is referred to as a “bump-out”.

---

# Chapter 1. Introduction

This chapter introduces the proposed project, explains why social resources, economics, and relocation are 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 social resources, economics, and relocation discipline report was prepared in general accordance with Section 458 of the Washington State Department of Transportation (WSDOT) Environmental Procedures Manual. This report includes the findings of analysis of potential environmental impacts on social and economic elements of the environment from the construction and operation of the Project. This report provides detailed information about the social and economic context of the project corridor and potential effects that could result for each of the Project alternatives.

## 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 (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 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.

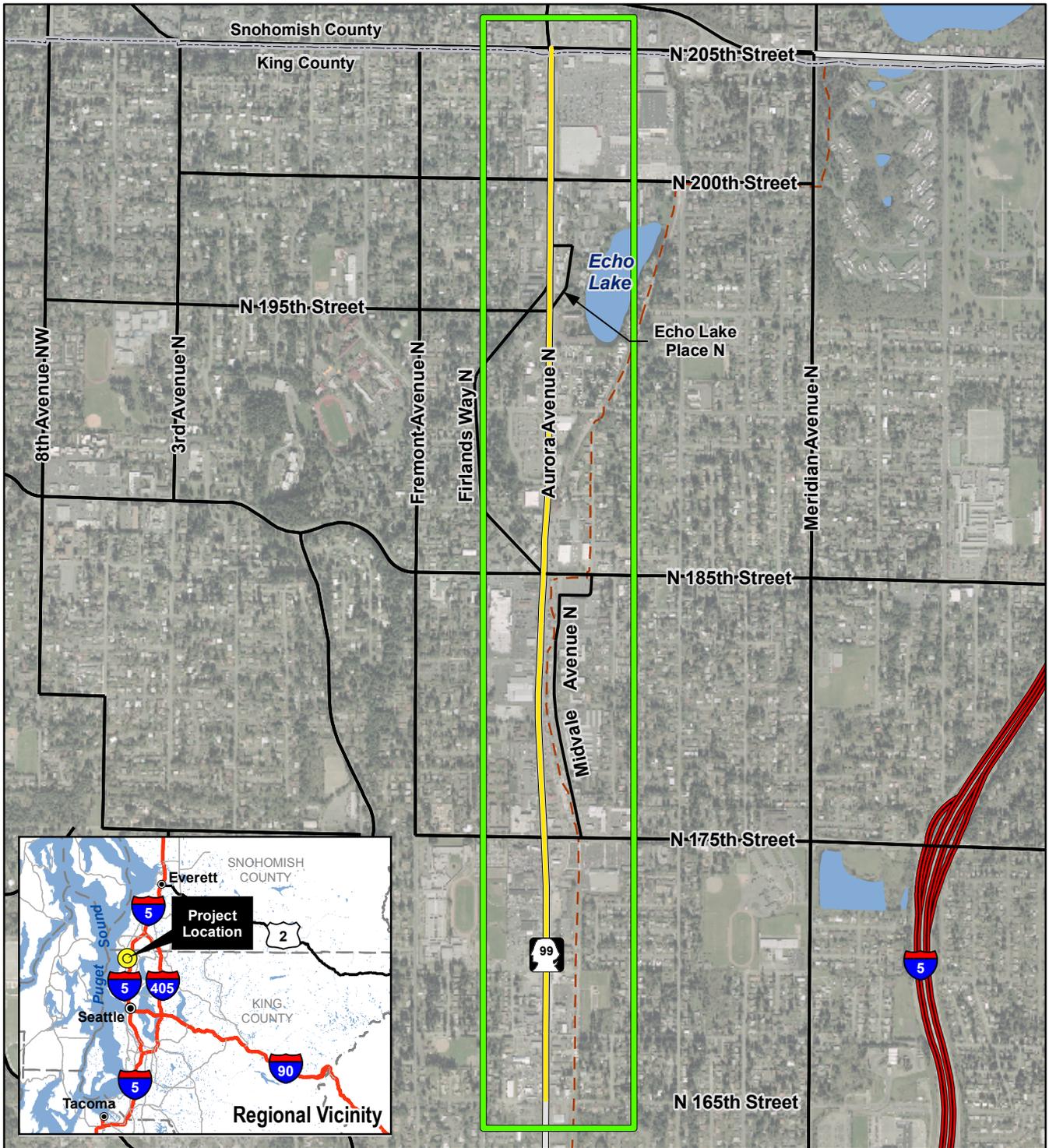
Under existing conditions, average daily traffic (ADT) on the roadway is 33,000 to 39,000 vehicles per day. Field observation indicates that pedestrian and bicycle travel steadily occurs along and across the roadway. However, the corridor is heavily oriented to vehicle travel and is generally not conducive to non-motorized travel. WSDOT has designated several areas of Aurora Avenue N between N 165th Street and 205th Street with poor safety ratings, which are described on page 2-10 of this report. 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

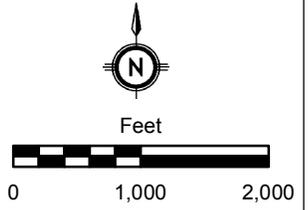


Figure 1. Project Vicinity  
 Aurora Corridor Improvement Project  
 October 2007

## 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, between N 195th Street and N 198th Street, including widening and conversion from a northbound one-way to a two-way roadway, and sidewalk installation;
- new street and sidewalk lighting;
- undergrounding of utilities; and
- stormwater facilities.

---

### 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 all driveways that intersect it.

---

---

### U-Turn Pocket

Left-turn lane that is designed and signed to allow vehicles to opt to make a u-turn on the roadway. If the roadway on the receiving side of the u-turn pocket is not wide enough to accommodate a u-turn, the roadway is widened at the u-turn pocket – this is referred to as a “bump-out”.

---

In addition to a No Build Alternative, three Build Alternatives, called Alternative A, B and C, respectively, are under consideration. In general, they vary in centerline location, width of median, and presence or absence of an amenity zone between the curb and sidewalk. Alternative A includes a slightly narrower median (12 feet) and no amenity zone. Alternatives B and C have the same cross section, which includes a wider median (16 feet) and an amenity zone. The difference between Alternatives B and C is that Alternative B is shifted more to the east at certain locations, and Alternative C is shifted more to the west. The three Build Alternatives are described in detail in Chapter 3 of this report. The different potential effects that could result from these alternatives are discussed in Chapter 5 of this report.

## Why are social resources, economic, and relocation factors considered for this Project?

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 consider the effects of a transportation project on neighborhoods, communities, and the individuals who live in them. 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?

- In addition to serving as the primary commercial corridor in the City, four distinct neighborhoods are located directly adjacent to the Project corridor: Richmond Highlands and Hillwood to the west, and Meridian Park and Echo Lake to the east. The roadway serves as a boundary between the western and eastern neighborhoods.
- The proposed sidewalks under all of the Build Alternatives will result in a beneficial effect for community cohesion, by providing a safe, pedestrian-friendly environment along Aurora Avenue N, and improving connections to the surrounding neighborhoods, parks, recreational facilities, and the Interurban Trail. Access to nearby parks, trails and other recreational facilities will remain unchanged and none of these facilities will be negatively affected by any of the proposed alternatives.

- The Project will improve traffic mobility and safety for vehicles, pedestrians, and transit users under all three Build Alternatives. The Project will result in a beneficial effect on vehicle travel times, including improved conditions for the movement of freight and goods.
- Adverse operational effects are identified for the No Build Alternative, in the areas of traffic mobility and safety. Expected increase in traffic congestion would also adversely affect the ability to move freight and goods through the corridor.
- 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. The amount of property acquisition would be greatest under Alternative C and least under Alternative A. Under all three alternatives, one parcel with over 15% of its property acquired is zoned as multi-family residential. Aside from this parcel, almost all of the land that would be acquired, and converted to transportation use, is zoned commercial.
- Right-of-way acquisition is expected to affect parking under all three Build Alternatives. Impacts on parking are expected to be greatest under Alternative C and least under Alternative A. Under all three alternatives, a substantial number of the affected parking spaces are currently non-compliant: over 50% for Alternatives A and B, and just under 40% for Alternative C. In addition, on many properties the affected compliant parking can be reconfigured so that the number of impacted compliant spaces may exceed actual loss.
- 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.
- 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 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.
- The Project would result in no disproportionate significant 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.
- The Project is consistent with adopted land use plans and policies; and is expected to improve water quality and improve the overall visual quality of the corridor, under all three Build Alternatives. The Project is not expected to have negative effects on air quality, noise, cultural resources, public services, or utilities. Improvements are expected to result for water quality and visual quality.
- 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. Public involvement activities specifically related to this Project began in 2005 and are ongoing.
- Property acquired for the Project would result in a reduction of property tax. However, projected losses are expected to be offset in part by an increase in property values that are projected to occur after project completion.
- Potential beneficial economic effects of Project construction include sales tax on construction and construction employment.
- Under all three Build Alternatives, the City would acquire an approximate temporary 10-foot construction easement along all properties that abut the Project. Construction activities within the Project right-of-way and construction easement could potentially affect traffic circulation within the corridor, access to and from

properties, and visibility along the corridor. 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. Mitigation measures have been identified to minimize all potential construction impacts to properties, businesses, and residents.

- Measures identified to minimize potential adverse effects due to construction include communication plans, construction contract management, signage, access strategies, promotional activities, and business assistance.
- Project elements and related activities that could be developed to minimize potential effects of parking and building impacts on businesses include: reduction of roadway cross section in some areas to reduce building acquisitions and parking impacts; combination of driveways to maximize parking; coordination of all upcoming public improvements to assure business stability at completion of highway improvements; use of completed improvements as centerpiece of new promotion of the district; and increase in corridor-wide economic development activities to promote the area, expand existing businesses, and attract new development to district.

Table 1 summarizes the potential effects and mitigation identified in this report, related to social, economic, and relocation factors.

**Table 1. Summary of Potential Social Resources, Economics, and Relocation Effects and Mitigation**

Potential Effects and Mitigation	Alternatives			
	No Build	A	B	C
<b>Potential Effects of Right-of-Way Acquisition</b>				
Full acquisition and demolition of 3 commercial land uses (17750, 17760 and 18551 Aurora Avenue N) would be required.		X	X	X
<b>Mitigation:</b> 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.				
Acquisition and demolition of rental residences located on one property (19522 Aurora Avenue N) may be needed. Full acquisition and demolition will be required for one house located on this parcel. Partial acquisition and demolition may be required for two apartment buildings located on this property. Relocation will be required for residents of the house, and may be required for residents of up to eight		X	X	X

Potential Effects and Mitigation	Alternatives			
	No Build	A	B	C
units in the two apartment buildings (2 units in one building, 6 units in the other).				
<b>Mitigation:</b> 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.				
Major or partial acquisition and demolition of commercial buildings would be necessary to construct Project. (On 9 properties under Alternative A, 11 properties under Alternative B, and 13 properties under Alternative C.)		X	X	X
<b>Mitigation:</b> 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.				
<b>Potential Construction Effects</b>				
Potential loss of business due to traffic, access, and visibility effects from Project construction		X	X	X
<b>Mitigation:</b> 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.				
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
<b>Mitigation:</b> 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.				
<b>Potential Operational Effects</b>				
Intersection operations at N 170th Street, N 182nd Street, and N 195th Street are projected to fail under existing and projected 2030 conditions, and fail to meet the City's adopted traffic operational standards.	X			
<b>No mitigation available.</b>				
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			
<b>No mitigation available.</b>				
Potential for parking and building impacts to affect some businesses.		X	X	X
<b>Mitigation:</b> Reduction of roadway cross section in some areas to reduce building acquisitions and parking impacts; combination of driveways to maximize parking; coordination of all upcoming public improvements to assure business stability at completion of highway improvements; use of completed improvements as centerpiece of new promotion of the district; and increase in corridor-wide economic development activities to promote the area, expand existing businesses, and attract new development to district.				
<b>Plans and Regulations</b>				
Project is consistent with the 32 Points, which are design guidelines adopted by the City for the Aurora Avenue N corridor in 1999, with four exceptions.		X	X	X
<b>Mitigation:</b> The City is currently working with business and community members to update the strategies to satisfy current community priorities for the corridor. It is expected that the updated strategies will be adopted in conjunction with the City's selection of a Recommended				

Potential Effects and Mitigation	Alternatives			
	No Build	A	B	C
Alternative.				
Project boundaries exceed boundaries defined under City Ordinance 326.				X
<b>Mitigation:</b> If the boundaries of the alternative adopted for this project fall outside the boundaries defined, the Comprehensive Plan would need to be amended.				

## 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 N corridor that would be addressed by this Project were identified through the:

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

## PSRC 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 urban transportation needs of a growing population (PSRC 2007). 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. Improvements to Aurora Avenue N through Shoreline are included in the list of capital projects identified in the Metropolitan Transportation Plan. The Project is listed under identification number 3569.

---

### Metropolitan Transportation Plan

The official intermodal transportation plan that is developed and adopted through the transportation planning process for the urban planning area.

---

## 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 development along the corridor, and to improve mobility by supporting multimodal transportation services. The City's economic development goals explicitly recognize the Aurora corridor as the economic core of the City, and call for reliable infrastructure and ensuring adequate transportation capacity to serve commercial areas. Economic development goals also call support of business districts through improvement of appearance and function of streets, sidewalks, utilities, access, lighting, signage, and

landscaping (City of Shoreline 2005). The Comprehensive Plan also includes land use, transportation, capital facilities, and community development goals that call for creating a sense of place in the Aurora corridor, balancing vehicular, transit, and pedestrian needs, and supporting businesses (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, such as transportation planning and design, of the plan. The Community and Agency Involvement Program included both the community and agencies because both are necessary for consensus 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 Citizens' Advisory Task Force;
- meetings with property owners within the study area;
- meetings with community interest groups;

---

### Multimodal Transportation

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

---

- newsletters distributed to landowners, business owners, and other interested parties; and
- press releases distributed to neighborhood associations, community groups, and local media.

The result of this process was a preferred project design concept that reflected community priorities, described below.

## 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 preferred project design concept was named the 32 Points (see exhibit on following page) and was approved unanimously by the Citizens' Advisory Task Force on July 8, 1999. The 32 Points 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 design concept that resulted from the Pre-Design study include the addition of BAT lanes in each direction on the roadway; curbs, gutters, a landscaping/street furnishing strip (called the amenity zone for this Project) and sidewalks on both sides; and a landscaped center median safety lane with left and u-turn pockets. Consistency of the Project with the 32 Points is assessed in the Land Use discipline report prepared for this project, and summarized in Chapter 5 of this report.

---

The main features of the design concept developed in collaboration with community members in the Multimodal Pre-Design Study 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.
-

## 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. Peak hour traffic counts showed a range of truck percentages between 3% and 9% during the AM peak hour and between 2% and 3% during the PM peak hour. Daily truck percentage is estimated to be between 5% and 6% (CH2M Hill 2007, pers. comm.). Traffic analysis presented in the Transportation discipline report prepared for this Project assumes that truck traffic in the corridor will grow in proportion to the overall growth in traffic.

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

---

#### 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 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 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 recently completed 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

---

### 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.

---

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 deficiencies may be identified. The City has adopted a goal 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 goal of LOS E. A high level of traffic congestion along Aurora Avenue N could encourage drivers to use less congested 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 PSRC has adopted its *Destination 2030* Metropolitan Transportation Plan as the transportation element of *Vision 2020*, the region's growth management, economic, and transportation strategy. The City's design concept for the Project satisfies the following regional policies as discussed in *Destination 2030* (PSRC 2007):

- 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 Metropolitan Transportation Plan 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 Metropolitan Transportation Plan 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 in the Metropolitan Transportation Plan. The Project is listed under identification number 3569. It is listed as having “Candidate” status, meaning that it is subject to PSRC approval but has not yet been approved. Once NEPA and SEPA environmental review is completed, the City will apply for upgrade to “Approved” status in the Metropolitan Transportation Plan, after which right-of-way acquisition for the Project may begin.

## Modal Interrelationships

The proposed project would enhance mobility and safety for automobile, transit, and non-motorized modes, and improve the relationship between them. Improvements would include a better separation between modes where potential conflicts currently exist, as well as better connections between modes.

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. As a result, pedestrians and bicyclists travel in close proximity or mixed with vehicular traffic, which interferes with mobility of the non-motorized modes and increase potential for safety conflict with vehicles.

In addition to improving pedestrian mobility, the Project would provide separation of pedestrians from vehicular traffic through installation of continuous sidewalks, curbs, and gutters along both sides of the roadway. Additional separation would be provided under Alternatives B and C through installation of an amenity zone between the sidewalk and the roadway. Bicyclists traveling along Aurora Avenue N would be allowed to travel on the sidewalks or in the BAT lanes, providing greater separation from vehicular traffic.

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 people with disabilities. The absence of even, wide, continuous pedestrian facilities can dissuade potential transit patrons from using the bus system.

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 provision of sidewalks would provide reliable pedestrian connections to transit.

The Interurban Trail is a pedestrian and bicycle facility that runs roughly parallel to Aurora Avenue N, providing regional connection from Everett through Seattle. The Interurban Trail runs 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 connectivity along Aurora Avenue N and to the Interurban Trail. The Project would result in direct connections between Aurora Avenue N and the Interurban Trail for pedestrians and bicyclists.

## Safety

Project elements would improve channelization; separate pedestrians from vehicular traffic; and reduce potential conflicts between vehicles, pedestrians, and bicyclists.

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

---

### The Interurban Trail

The Interurban Trail is a regional pedestrian and bicycle facility that runs throughout the entire City roughly parallel to Aurora Avenue N.

---

---

### 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.

---

most recently compiled (2005) statewide average for urban principal arterials of 2.6 accidents per million vehicle miles. Comments provided during the scoping phase of this project (described in Chapter 4) indicate that 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.

Numerous driveways, limited curbs and sidewalks, and erratic parking all contribute to the safety issues identified for pedestrians, bicyclists, and vehicles, and reflected in the HAL, HAC, and PAL designations described in the previous paragraph. 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. Development along Aurora Avenue N is characterized by a 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). Investigation of the area reveals that a portion of the existing business parking along the corridor is located on city right-of-way 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. In addition to being non-compliant with city code, the parking spaces that require backing into the general traffic flow create potential for conflict between the forward moving vehicles along the roadway and backward moving vehicles onto the roadway. Parking within the Aurora Avenue N roadway right-of-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, which may then require that they move into the traffic lanes to navigate around parked vehicles.

The Project elements that would improve channelization; separate pedestrians from vehicular traffic; and reduce potential conflicts between vehicles, pedestrians, and bicyclists include:

- addition of curbs and gutters provide physical separation between vehicular and non-motorized modes, and improve vehicle channelization;
- consolidated driveway locations reduce vehicle conflict points;
- even, wide, continuous sidewalks provide separation of pedestrians and bicyclists from vehicular traffic;
- application of driveway width and spacing standards improve vehicle channelization;
- provision of traffic signals and pedestrian crosswalks provide safer crossings for pedestrians and bicyclists across the roadway;
- conversion of the existing two-way left-turn lane into a median with channelized left-turn and u-turns improve vehicle channelization and reduce the number of vehicle conflict points;
- restriction of driveways to right-turn-in and right-turn-out only reduces the number of vehicle conflict points (mobility effects of the project are discussed in Chapter 5 of this report);
- elimination of parking that requires motorists 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 population and job growth, and identifies future land use needed to support projected growth. The Washington State Growth Management Act requires that adequate transportation infrastructure be provided to support future land use.

The Comprehensive Plan sets forth a vision that concentrated activity centers will develop at several locations along the Aurora Avenue N 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 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 Citizens' Advisory Task Force 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. Alternatives A and B are located within this boundary, and Alternative C is not. 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.

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. Note that 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 Project footprint analyzed in this report.

**Table 2. Common and Unique Features of the Aurora Corridor Improvement Project Build Alternatives**

Features Common among Build Alternatives A, B, and C	
<b>General Purposes lanes</b>	Project design includes two general-purpose lanes in each direction.
<b>BAT lane</b>	Each Build Alternative would include one Business Access and Transit (BAT) lane in each direction.
<b>Sidewalk</b>	7-foot sidewalks would be constructed along both sides of the corridor.
<b>Curb and Gutter</b>	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.
<b>Underground utilities</b>	Utilities would be placed underground for each of the three Build Alternatives.
<b>Vegetation</b>	Each of the Build Alternatives includes vegetative plantings. Extent and location vary as described below.
<b>Center median</b>	A center median would be added, with left-turn and u-turn pockets (width of the center median varies by alternative, as described below).
<b>Traffic signals</b>	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.
<b>Road improvements</b>	Improvements would be made to: <ul style="list-style-type: none"> <li>Echo Lake Place (north of N 195th Street), including realignment and a connection to Aurora Avenue N at Firlands Way N; and</li> <li>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.</li> </ul>
Features that vary among Alternatives A, B, and C	
	<b>Alternative A</b>
<b>Cross Section</b>	<p>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.</p> <p>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.</p>
<b>Median Width</b>	Center median would be 12 feet wide.
<b>Amenity Zone</b>	No amenity zone provided. Utility vaults and light/signal poles would be located behind the sidewalks in the 3-foot easement area.
<b>Bump Outs</b>	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.
<b>Placement of Alignment</b>	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.
<b>Vegetation</b>	Limited vegetation would be provided in the median.
	<b>Alternative B</b>
<b>Cross Section</b>	110 feet from back-of-sidewalk to back-of-sidewalk.
<b>Median Width</b>	Center median would be 16 feet wide.
<b>Amenity Zone</b>	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.
<b>Bump Outs</b>	None needed. U-turns would be sufficiently accommodated within the standard roadway width.
<b>Placement of Alignment</b>	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.
<b>Vegetation</b>	More vegetation accommodated by wider median. Vegetation could also be planted in areas within the amenity zone.
	<b>Alternative C</b>

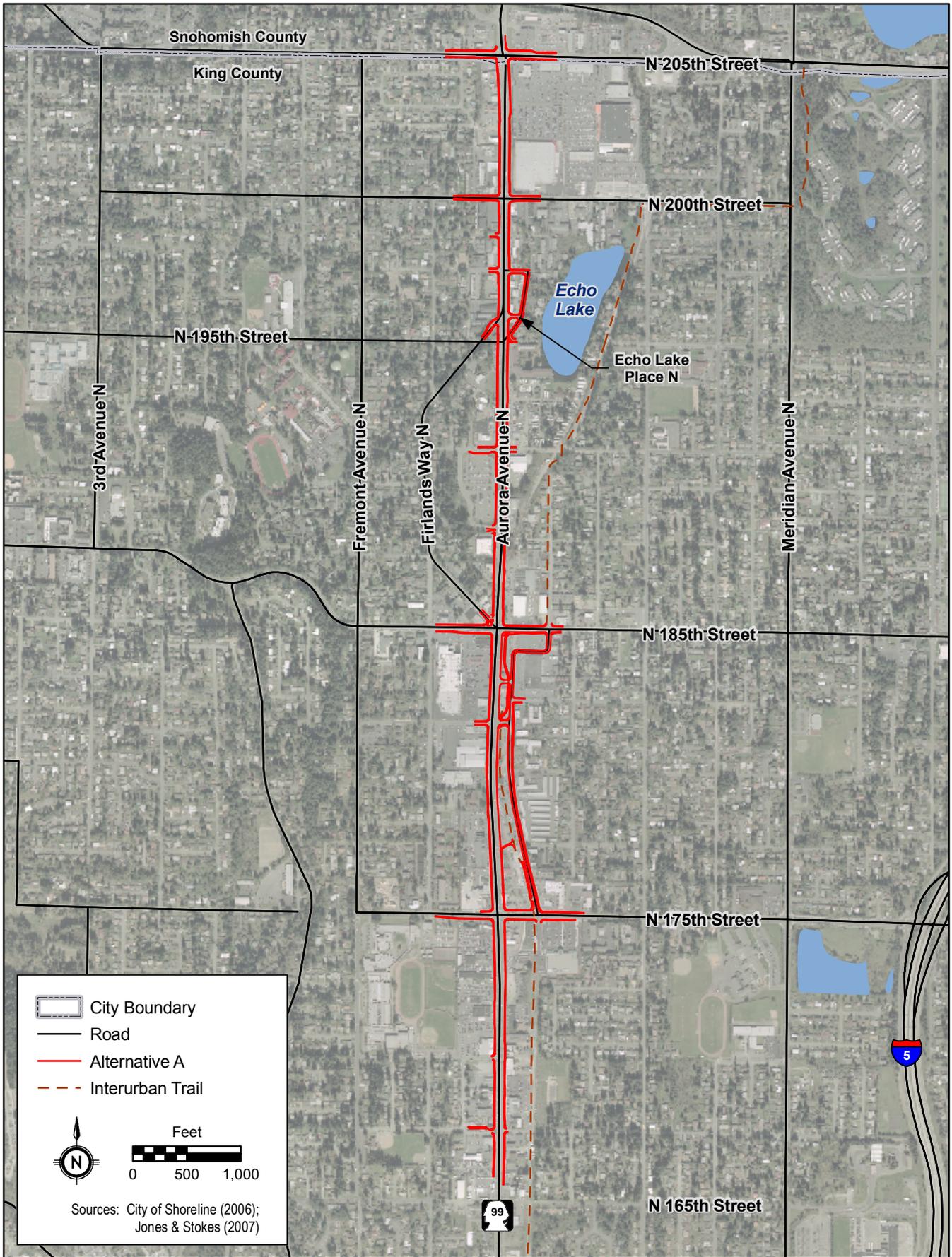


Figure 2. Alternative A  
 Aurora Corridor Improvement Project  
 October 2007

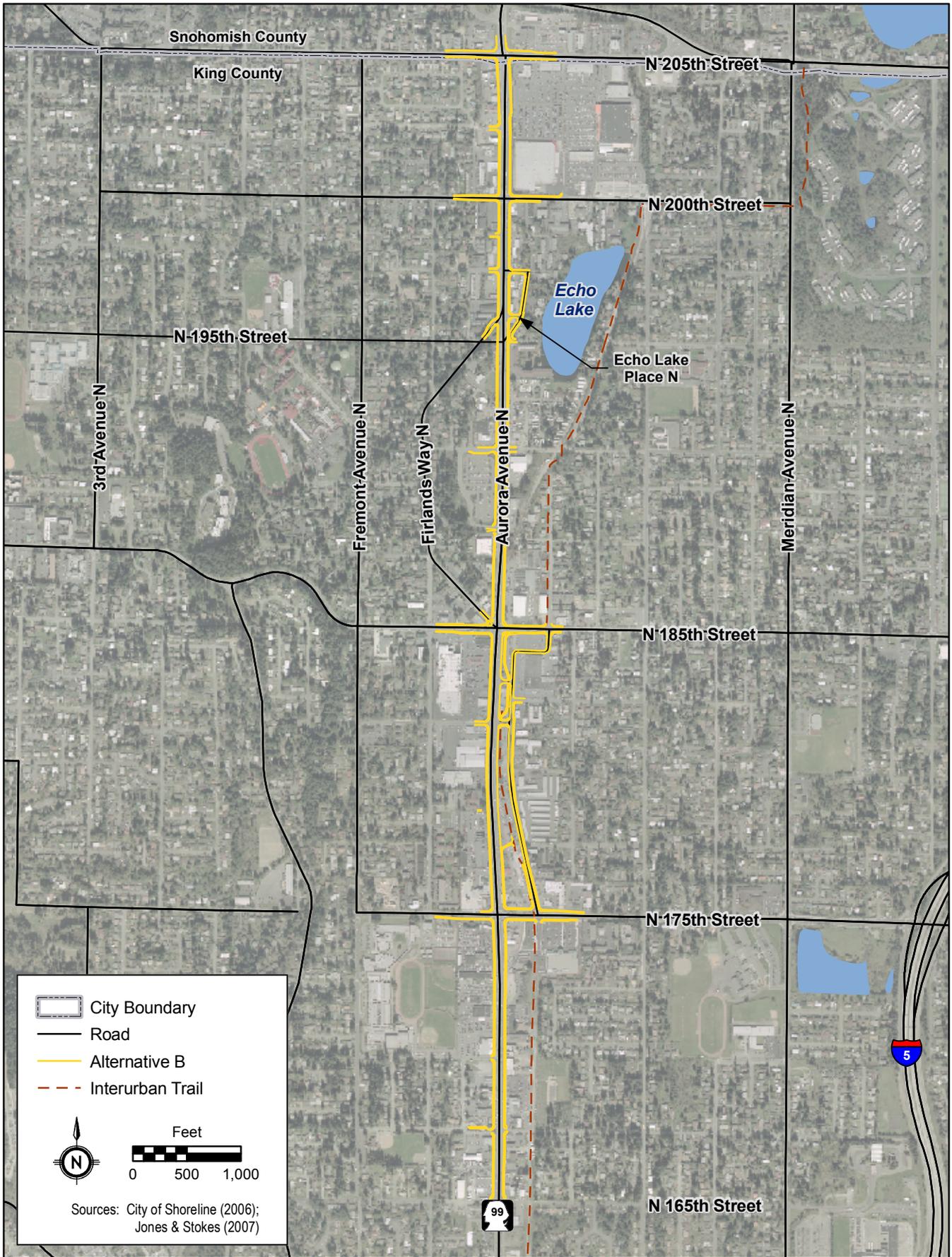


Figure 3. Alternative B  
 Aurora Corridor Improvement Project  
 October 2007

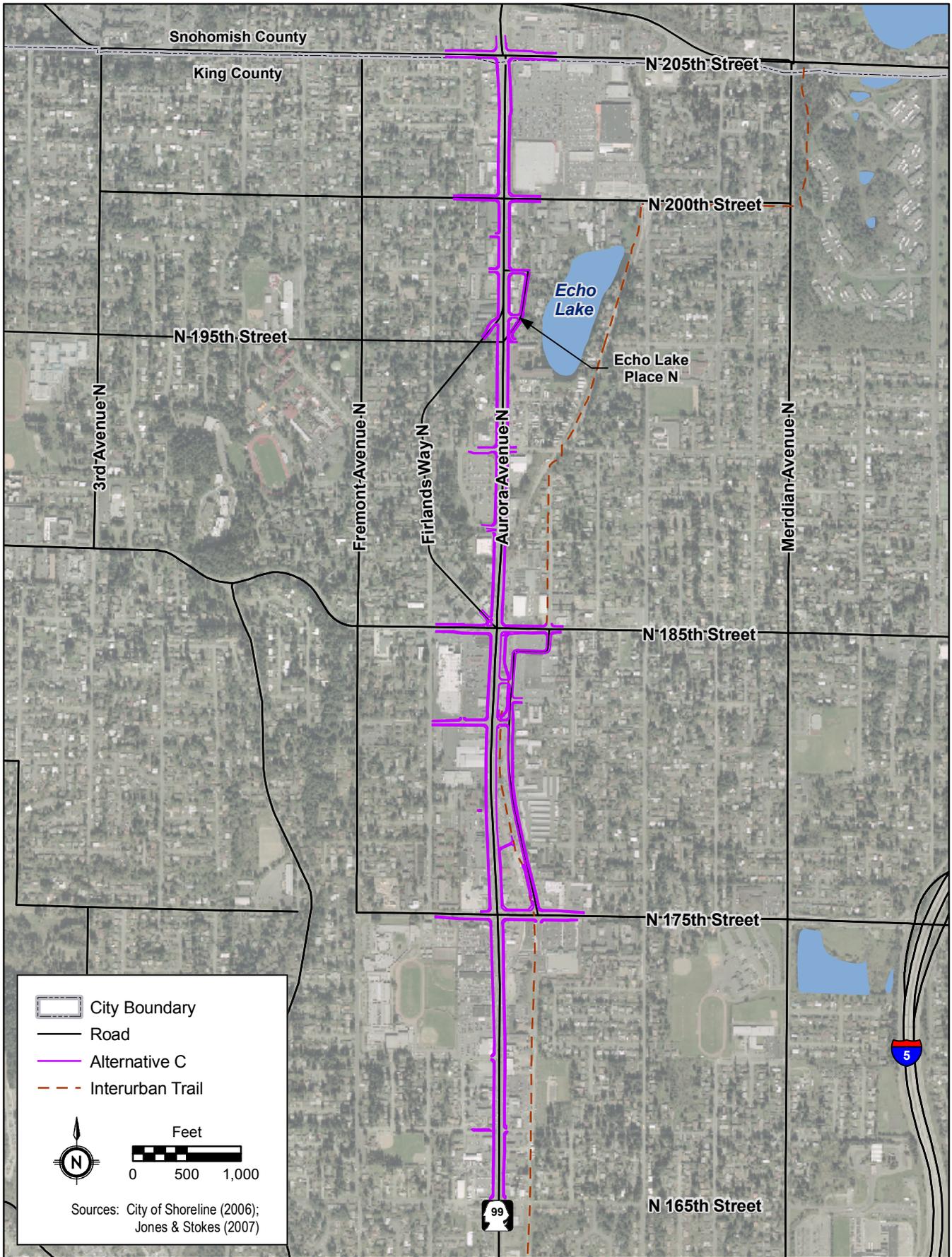
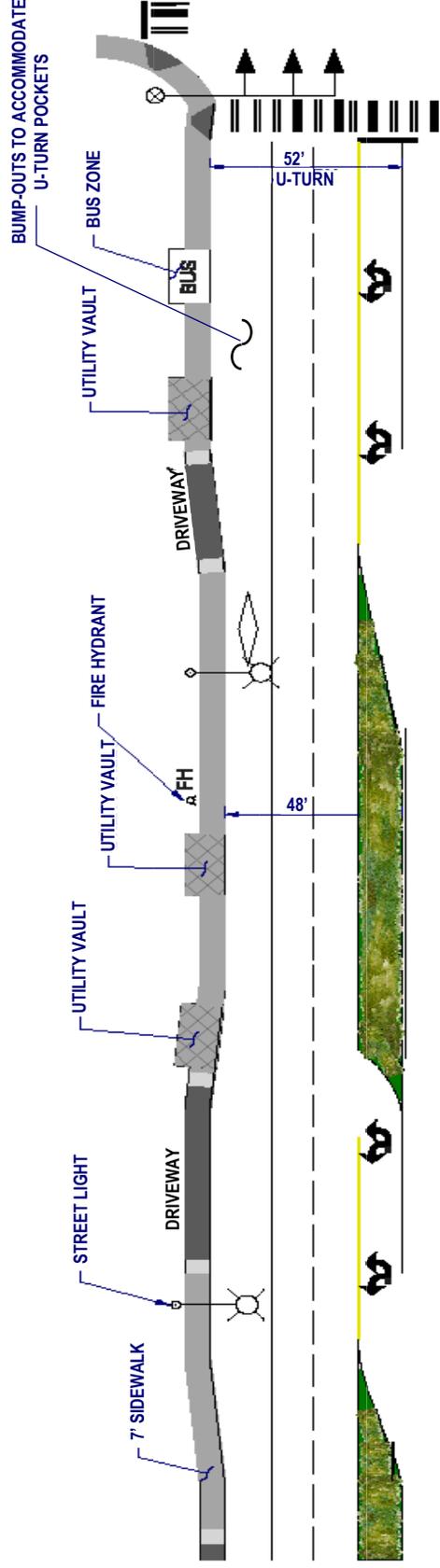
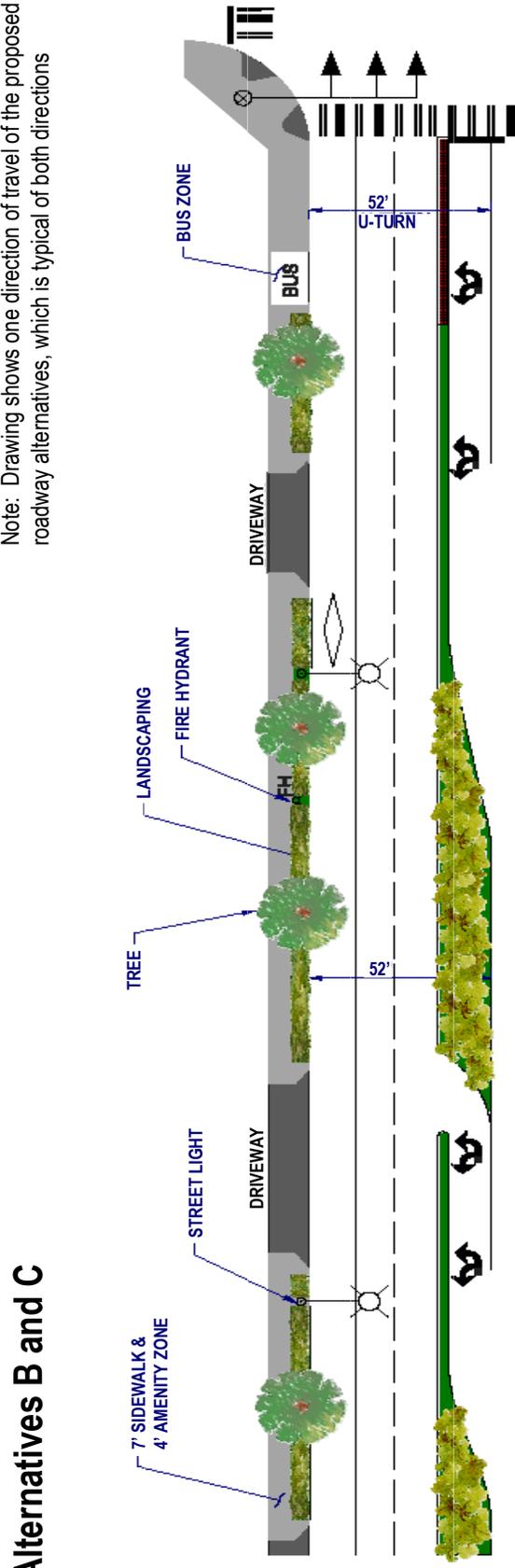


Figure 4. Alternative C  
Aurora Corridor Improvement Project  
October 2007

### 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 social resources, economics, and relocation.

### What are the general features of the Project area?

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 runs roughly parallel to Aurora Avenue N, to the east in the Project corridor (City of Shoreline 2007). Shoulder and sidewalk of varying widths are located sporadically along the corridor, with no curb or gutter, and little landscaping.

Before the existence of the Interstate Highway System, SR 99 (Aurora Avenue N) served as the primary north-south transportation corridor for the region, attracting a large amount of commercial development. Many of the businesses, including motels, motor courts, restaurants, and drive-ins, catered to travel and automobile use. Today, Aurora Avenue N maintains much of this commercial character, and many examples of this early type of “strip” development remain.

Four quiet, mature residential neighborhoods abut the commercial development along Aurora Avenue N. Single-family, duplex and townhouse development characterize these neighborhoods.

## Why are social resources, economic, and relocation factors important?

In addition to recognizing the beneficial effects that a transportation project can have on accessibility and mobility within a community, it is important to identify the potential negative effects that a project can have on community cohesion and livability, and minimize adverse impacts to the greatest extent possible. Transportation projects can affect social, economic, and relocation elements in the following ways.

### Social

Transportation projects can improve mobility and enhance the livability of communities by improving public safety and providing better access to jobs, schools, and recreational opportunities. Improved mobility means that there are better connections between home and work and other facilities and services that residents depend on in their daily lives. However, they can also have a negative effect on nearby neighborhoods and the people living within them, because they can disrupt or divide stable and cohesive neighborhoods, increase noise levels, lower air quality, and/or lower visual quality.

### Economic

Transportation projects can have a positive effect on the ability to do business by reducing congestion and improving mobility for people and goods; improving safety conditions; and improving connections for vehicular, pedestrian, and bicycle traffic. However, they can also have a negative effect on nearby businesses because project construction can cause increases in traffic congestion that may lead to traffic delays, and may affect the ability of customers to access businesses. People may also avoid shopping in the area because of construction activities, reducing the sales receipts for affected businesses in the short and potentially the long run.

### Relocation

Transportation projects may result in temporary relocation if residences must be remodeled as a result of the Project; and permanent relocation if residences must be removed to allow construction of the Project.

Transportation projects may include property acquisition that requires businesses to remodel or relocate. They may also reduce the amount of

parking space available to businesses, thereby potentially limiting customer access, and may also result in a reduction in the square footage of building space or outdoor display space available for businesses.

## What regulations guide the assessment of social resources, economic, and relocation factors?

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 consider the effects of a transportation project on neighborhoods, communities, and the individuals who live in them. The most important of these are described below:

- NEPA requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as social and economic impacts are given due weight in decision-making.
- SEPA requires that social and economic factors be taken into account in weighing and balancing alternatives and making final decisions.
- Title VI of the Civil Rights Act of 1964 was signed into law to ensure that no person shall, on the grounds of race, color, national origin, age, sex, or disability be subjected to discrimination under any program or activity receiving federal financial assistance. Title VI applies to all persons residing in the United States, not just citizens.
- The Federal Aid Highway Act of 1970, 23 USC, requires the Federal Highway Administration (FHWA) to consider the possible adverse effects of proposed highway projects on a variety of environmental factors including community cohesion, public facilities and services, and local and regional growth.
- Section 23 USC 128 (“Highways”) established a minimum requirement for investigating social, economic, and environmental effects of highway projects and the consistency of highway plans with local comprehensive planning.

- The Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, requires FHWA to ensure that owners of real property acquired for, and persons displaced by, federal aid projects are treated fairly, consistently, and equitably, so that they will not be disproportionately affected.
- Executive Order 12898 (Environmental Justice) requires the federal government to avoid actions that cause disproportionate high and adverse effects on minority and low-income populations with respect to human health and the environment. An *Environmental Justice* discipline report was prepared for this Project under a separate cover.
- Executive Order 13166 (Limited English Proficiency) requires the federal government to implement its programs in a manner that does not disadvantage those who are not fluent in the English language.
- Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 protects the rights of disabled individuals. The Age Discrimination Act of 1975 protects the rights of persons age 65 and over.
- Tribal considerations are addressed under Section 4(f) 49 USC. 303 and Section 106 of the National Historic Preservation Act, 16 USC. 470f. A Cultural Resources discipline report was prepared for this Project under a separate cover.

---

#### 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.

---

This report is consistent with the regulations, statutes, policies, technical advisories, and Executive Orders described above.

## What social, economic, and relocation elements were considered?

### Social

In order to analyze the potential effects on social elements of the Project, the following topics were identified:

- Neighborhood population characteristics, including residents who are minorities, low-income, living with disabilities, limited English proficiency and elderly.

- Social resources, including parks and recreational activities and facilities, religious institutions, social services and community gathering places.
- Community cohesion, ability for people to walk to work and community activities, and linkages that people in a neighborhood have with social resources.

Distinct neighborhoods within the study area were identified, as were the individual population characteristics of each neighborhood, and the social connections within the neighborhoods and between the neighborhoods and the broader community. Neighborhood Watch groups, neighborhood associations and community participation in local sport team competitions are examples of activities and organizations that demonstrate patterns of community networking and cohesion. Demographics of the study area were also researched and evaluated in order to determine the potential of the project to affect community and regional growth.

## Economic

Potential effects of the project on economic activity along the corridor were also studied. Economic analysis presented in this report focuses on how the Project would affect business activity, taxable property, and property value trends.

## Relocation

Potential effects from relocation were studied by identifying businesses and residences that may be affected by the Project to the extent that relocation could be required. The potential impact of relocation on the ability to do business was also assessed. Demographic data from the areas containing properties where relocation may be needed were analyzed to identify the portion of the population that is likely to be affected.

## How was information collected?

### Social

Population characteristics within the Project study area and City were gathered from the US Census, which provides information for the year

---

### Gathering Place

Location where people congregate and spend time together, such as parks, community centers, churches, pubs, and stores

---

### Community Cohesion

The ability of people to communicate and interact with each other in ways that lead to a sense of community, as reflected in a neighborhood's ability to function and be recognized as a single unit.

---

### Neighborhood Watch

Citizens' organization devoted to crime and vandalism prevention within a neighborhood, based on the principle that neighbors working together are the first and best line of defense against crime. Members are expected not to directly intervene in possible criminal activity. Instead, neighborhood watch members stay alert to unusual activity and contact the authorities when such activity occurs.

---

2000 statistics on race, poverty status, disabilities, English proficiency, housing and age of residents. Results of the census data analysis were checked against more recent demographic data obtained from the National Center for Education Statistics (U.S. Department of Education 2007) for school districts within or near the Project study area.

A visual survey of the study area was also conducted to identify social resources, including community gathering places, parks, nonprofit service providers, religious institutions and community centers.

To collect information on community cohesion, neighborhoods and organizations such as Neighborhood Watch groups and local youth sport organizations in the study area were identified.

Prior to initiation of the environmental analysis for this Project, city staff met individually with all property owners with property that abuts the project corridor, as well as some business owners, and recorded their issues and concerns. Public involvement activities related to the Project have been ongoing, and are described later in this chapter. Community outreach activities have served to inform the community members of the Project and environmental process; to inform community members about potential effects of the Project on the community; and to gather and proactively address issues and concerns provided by community members.

## Economic

Information on the economic elements of the Project was collected from the City, U.S. Census data, and from the Aurora Corridor Economic Analysis Technical Report (Property Counselors 2007). The City contracted with Property Counselors to prepare a separate Economic Analysis Technical Report that assessed in detail the potential business and property related economic impacts of the project. Property Counselors compiled information about the existing economic environment by evaluating tax assessor records, property sales records, taxable sales data, interviews with business owners, and field investigation.

## Relocation

Potential relocation information was collected by evaluating conceptual plans for the Build Alternatives overlaid on aerial photographs, and

conducting field reconnaissance at the Project site, to identify business and residences with buildings potentially impacted by the Project.

## What is the study area for social, economic, and relocation factors?

### Social

Existing social elements (such as neighborhoods, community gathering places and religious institutions) located within ½ mile east and west of the project limits were examined. This area was selected because it is expected that direct and indirect effects will be concentrated along the corridor and are not likely to extend further than ½ mile from the project limits.

Year 2000 Census block groups located within ½ mile of the project corridor were analyzed to characterize the demographics of the study area. This included a total of 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 Figure 6.

### Economics

Economic evaluation presented in this report looks at characteristics of the Aurora Commercial District (see Figure 7), which is located between N 145th Street and N 205th Street, and includes 288 businesses and provides the primary economic base for the City. Of these, 213 are located in the Project area (between N 165th Street and N 205th Street)

---

#### 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

---

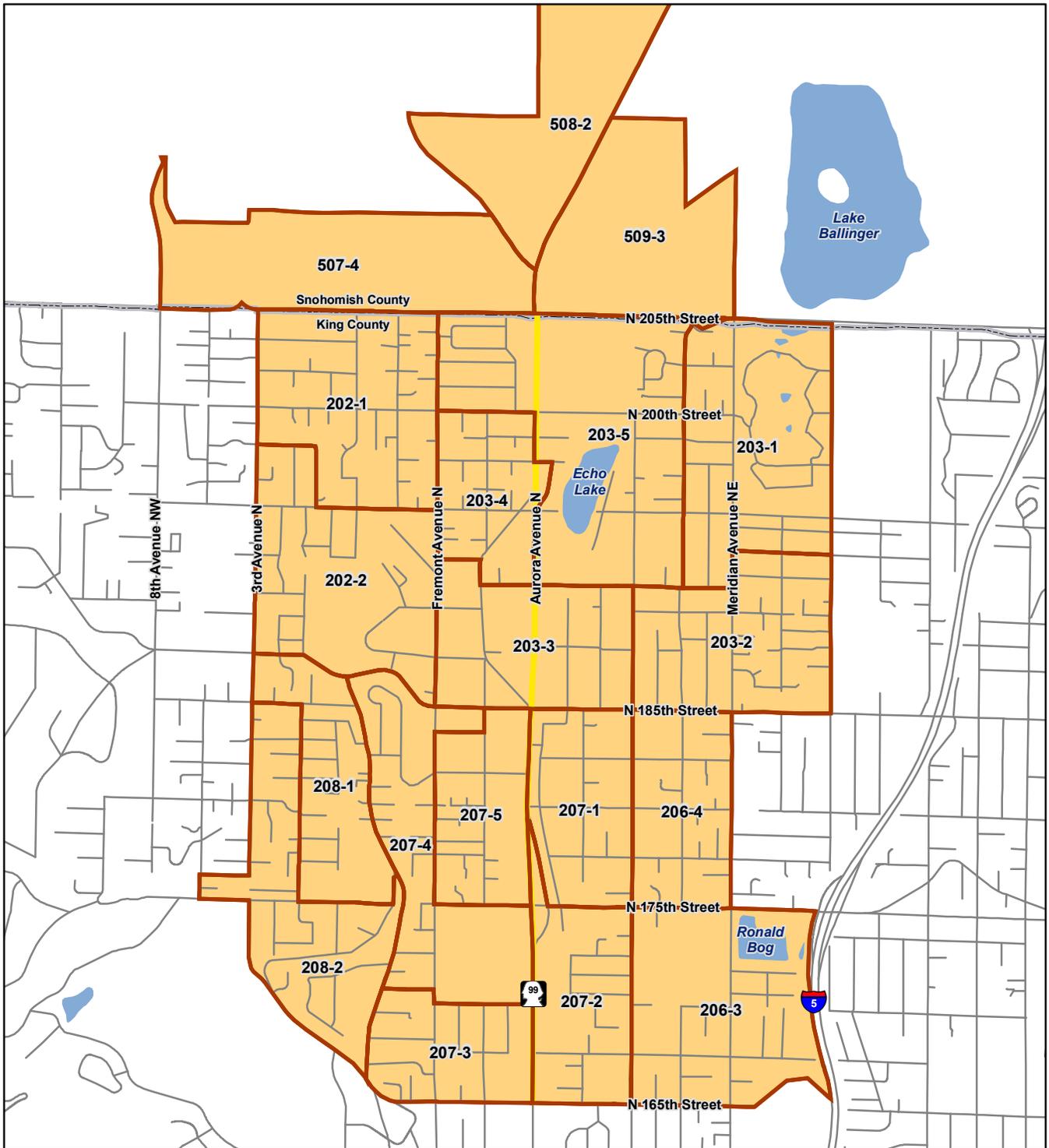


---

#### Census Tract

Small, fairly permanent subdivision of a county, designed to contain somewhat homogeneous population and economic characteristics as well as living conditions. Census tracts average about 4,000 inhabitants.

---



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

-  City Boundary
-  Road
-  Project
-  Census Tract-Block Group

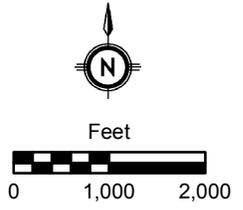
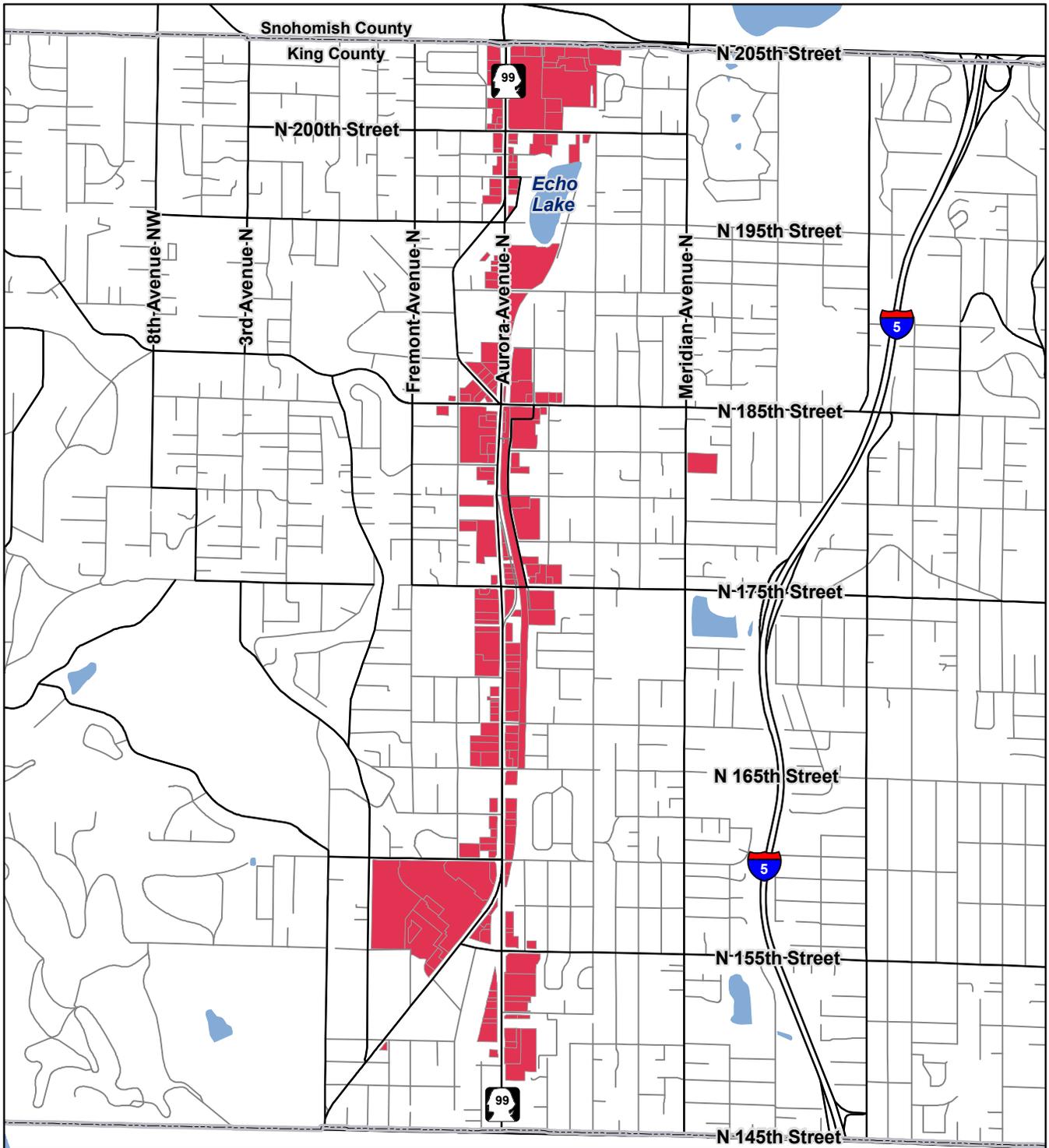


Figure 6. Census Tract-Block Groups Studied for the Project Aurora Corridor Improvement Project October 2007



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

-  City Boundary
-  Aurora Commercial District
-  Arterial
-  Local Street

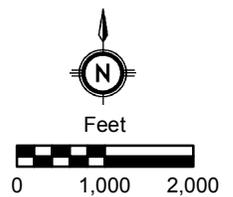


Figure 7. Aurora Commercial District  
Aurora Corridor Improvement Project  
October 2007

## Relocation

The study area for relocation consists of the nineteen census block groups within ½-mile of the project, described above under the study area for social factors, and shown in Figure 6.

## What are the current and future population and housing characteristics of the City?

The proposed Project is located in the north central portion of the City. In 2006, the City had an estimated population of 52,830, which is slightly lower than the 2000 Census recorded population of 53,025 (Office of Financial Management 2007). The King County Planning Policies establish growth targets for all of the jurisdictions within King County. The targets established for the City are 2,651 new housing units and 2,618 new jobs over the planning period from 2001 to 2022. This housing target averages 121 new housing units per year (City of Shoreline 2005).

## What are the demographic characteristics of the Project study area?

The following sections present demographic data for the Project study area, compared to citywide data.

### Race and Ethnicity

Table 3 presents the race and ethnicity characteristics within the Project study area, as compared to citywide characteristics. The table shows that in every category (Hispanic, African American, Asian and American Indian/Alaskan Native) the percentage of minority populations living within the study area was slightly higher than the minority percentage of residents within the entire city.

**Table 3. Race and Ethnicity**

Block Groups	Total Population	% Hispanic or Latino (any Race) <sup>1</sup>	% African American <sup>2</sup>	% Asian <sup>2</sup>	% American Indian and Alaska Native <sup>2</sup>
Project 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%

1. The US 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 US Census Bureau reports these characteristics separately.

2. 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 percent of all respondents reported only one race.

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

The *Environmental Justice* discipline report prepared for this Project presents detailed information (organized by block groups) on race and ethnicity, and limited English proficiency in the study area. 2000 Census data compiled for the Environmental Justice report was verified using Shoreline school district demographic data (U.S. Department of Education 2007).

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.

Analysis presented in that report shows that in 2000, the Asian population in the study area was 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. 329 Spanish-speaking households were identified in the study area, with 51 of those Spanish-speaking households identified as linguistically isolated. A total of 795 Asian or Pacific Island language-speaking households were identified in the study area, of which 348 were identified as linguistically isolated.

---

**Linguistically Isolated Household**

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

---

The 2000 Census also recorded at the Census Tract level the languages spoken at home by people aged 18 years or older. While this data is not directly related to English-speaking ability, it does provide an idea of which Asian and Pacific Islander languages may be spoken in a linguistically isolated household in the study area. The two census tracts within the study area are characterized by the following Asian/Pacific Islander languages spoken at home by population 18 years and over: 5% Korean, 3% Chinese, 2% Vietnamese, and 2% Tagalog (one of the major languages of the Republic of the Philippines).

Outreach efforts to population of limited English proficiency, based on these findings, is described in the “Public Involvement” discussion at the end of this chapter.

## Age Characteristics

Table 4 summarizes the age characteristics within the Project study area, as compared to citywide characteristics. The table shows that the age characteristics of the study area are comparable to those found citywide. 2000 census data indicated that 72.8% of the population within the study area is 18 years or older, 1 percent higher than what is found citywide (71.8%).

**Table 4. Age Characteristics**

Block Groups	Total Population	0-4 years	5-17 years	18-64 years	65 years and older
Project Study Area	19,460	1,026 (5%)	3,171 (16%)	12,373 (64%)	2,890 (15%)
City of Shoreline, WA	53,025	2,769 (5%)	9,151 (17%)	33,391 (63%)	7,714 (15%)

Note: Percentages may not sum to 100 due to rounding

Source: US Census 2000 Summary File 1 (SF 1) 100-Percent Data, Table P12

## Household Composition

Table 5 presents the household characteristics within the Project study area, as compared to citywide characteristics. The table shows that as of 2000, 29% of the households in the study area were one-person households and 21% were families with children. In contrast, citywide Shoreline households were approximately 26% one-person households and 23% families with children. Households with elderly members in the

study area made up 22% of the households, just slightly higher than the 21% found citywide.

**Table 5. Household Characteristics**

Block Groups	Households	One-Person Households	Family Households <sup>1</sup>	Families with Children under 18 <sup>2</sup>	Single Parent Families with Children under 18 <sup>2</sup>	Elderly Households <sup>3</sup>
Project Study Area	7,937	2,337 (29%)	4,883 (62%)	1,674 (21%)	576 (7%)	1,716 (22%)
City of Shoreline, WA	20,716	5,459 (26%)	13,485 (65%)	4,813 (23%)	1,528 (7%)	4,423 (21%)

1. Families are defined as households with more than one person related by blood or marriage or adoption.

2. Families with children are households with one or more child under 18 years of age residing in the home.

3. Elderly households have at least one member 65 years or older.

Source: Census 2000 Summary File 1 (SF 1) 100-Percent Data, Tables P18 and P21

## Income Characteristics

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 (see Table 6). Six of the eight block groups located adjacent to Aurora Avenue N (see Figure 6) 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 an especially high 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 6. Income Characteristics

	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,	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
	Block Group 2				
N	Census Tract 509, Block Group 3	768	41,458	24	3.13
	<b>Total Study Area</b>	<b>18,938</b>	<b>48,996</b>	<b>1399</b>	<b>7.39</b>
	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, Tables P53 and P87

Table 7 summarizes the number of households receiving public assistance within the Project study area, as compared to households citywide. The table shows that in 1999, 3% percentage of the households in the study area received public assistance and 7% of the population lived at or below poverty level, which is comparable to the citywide percentages. The *Environmental Justice* Discipline Report provides more detailed information on income and poverty level in the study area.

**Table 7. Households Receiving Public Assistance**

Block Groups	Total Households	Households Receiving Public Assistance <sup>1</sup>
Project Study Area	7,732	217(3%)
City of Shoreline, WA	20,746	525 (3%)

1. Public assistance income includes general assistance and Temporary Assistance to Needy Families (TANF). TANF provides temporary cash and medical help for families in need. Separate payments received for hospital or other medical care (vendor payments) are excluded. This does not include Supplemental Security Income (SSI).

Source: Census 2000 Summary File 3 (SF 3) - Sample Data, Table P64

## Disabilities

According to the 2000 Census, 17,580 people with a long-lasting physical, mental, or emotional condition, or disability, live in the City.

Table 8 summarizes the percent population with disabilities within Project study area, as compared to the population citywide. Persons with disabilities represented 35% percent of the 50,256 Shoreline residents who were aged 5 years and older in the civilian non-institutionalized population. The table shows that the proportion of people with disabilities within the study area is comparable to the citywide percentage.

**Table 8. Persons with Disabilities**

Block Groups	Total Population 5 years and over	Population 5 years and over with Disabilities	Percent of Total Population
Project Study Area	18,434	6,519	35%
City of Shoreline, WA	50,256	17,580	35%

Source: Census 2000 Summary File 3 (SF 3) - Sample Data, Table P41

The percentages presented in Table 8 are fairly substantial, but it should be noted that for purposes of the census, the definition of disability is quite broad and the persons in this category are self-identified. The number of persons with disabilities residing in the study area was based on responses from the census short form. Respondents were asked if they had any of the following long-term conditions:

- blindness, deafness, or a severe vision or hearing impairment (sensory disability) or
- a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying (physical disability).

In addition, respondents were asked if they had a physical, mental or emotional condition that made it difficult to perform certain activities, including:

- learning, remembering or concentrating (mental disability),
- dressing, bathing or getting around inside the home (self-care disability),
- going outside the home alone to shop or visit a doctor’s office (go-outside-the home disability), and

- working at a job or business (employment disability).

Respondents could report more than one type of disability and the disabilities could cause limitations to one or more activities. Not all limitations, however, can be assumed to affect the mobility of persons.

## Travel Characteristics

Table 9 summarizes the travel characteristics of the population within Project study area, as compared to the population citywide. The 2000 Census reported at the household level means of transportation available to residents. Respondents were allowed to report the number of vehicles available for personal use. Within the study area, approximately 11% of the households in 2000 had no vehicle available; without a vehicle available these residents are more transit dependent, meaning they are more likely to rely upon public transit (buses, taxis) or other forms of transportation (walking, biking, motorcycle, carpooling). The 2000 Census short form also gathered information on the means of transportation used by persons 16 years and older, to get to work. Within the study area, 82% of the population drives to work, 12% use public transportation, 3% walk, bike or motorcycle to work and 4% work from home. Percentages of means of transportation to work are similar for citywide residents.

**Table 9. Travel Characteristics**

Block Groups	Total Population 16 years and older	Drive to Work	Public Transportation	Walk, bike, motorcycle, other	Work from Home	Occupied Dwelling Units	Occupied Dwelling Units with No Vehicle Available
Project Study Area	9,670	7,910 (82%)	1,112 (11%)	279 (3%)	369 (4%)	7,949	512 (6%)
City of Shoreline, WA	26,276	21,778 (83%)	2,692 (10%)	770 (3%)	1,086 (4%)	20,735	1,366 (7%)

Note: Percentages may not sum to 100 due to rounding

Source: Census 2000 Summary File 3 (SF 3) - Sample Data, Tables P30, H44 and Sf-1

## Housing

Table 10 summarizes the housing characteristics of the population within Project study area, as compared to the population citywide. The Project corridor is primarily characterized by commercial uses; however, there

are several multifamily structures located immediately adjacent to or in very close proximity of the project corridor. Single-family houses prevail away from Aurora Avenue N and further into the surrounding neighborhoods and local streets.

Table 10 shows that in 2000, a total of 8,191 housing units were located in the study area. The majority (60%) of these housing units are owner occupied, which was 8% lower than the percentage of owner occupied units found citywide. The remaining 40% of the units in the study area were renter-occupied. Within the study area, 3% of the units are vacant, which was similar to the percentage found citywide.

**Table 10. Housing Characteristics**

Block Groups	Total Housing Units	Vacant Housing Units	Occupied Housing Units	Owner Occupied	Renter Occupied
Project Study Area	8,191	254 (3%)	7,937	4,730 (60%)	3,207 (40%)
City of Shoreline, WA	21,338	622 (3%)	20,716	14,097 (68%)	6,619 (32%)

Source: Census 2000 Summary File 1 (SF 1) 100-Percent Data, Tables H1,

The Census Bureau classifies people not living in housing units as living in group quarters. There are two general categories of people in group quarters: (1) institutionalized population and (2) non-institutionalized population. Table 11 summarizes the population living in group quarters within Project study area, as compared to the population citywide. Within the study area, 2000 Census data indicated that a total of 253 people are living in institutional group quarters; 248 of these people reside within Census Tract 202, Block Group 2 (see Figure 6), which is location of the Crista Ministries Senior Community that provides a nursing home and assisted care facility for seniors. The other four people reported in the 2000 Census are found in Census Tract 203, Block Group 5 at the northern end of the project near Echo Lake (see Figure 6).

The 207 people reported as residing in non-institutional group quarters in the 2000 Census are located throughout the study area and most are likely residing in community-based homes that provide care and supportive services, for populations that are mentally ill, developmentally disabled, physically disabled, or have other disabilities.

Table 11. Group Quarters

Block Groups	Total Population	Non-institutional Group Quarters	Institutional Group Quarters
Project Study Area	19,460	207	252 <sup>1</sup>
City of Shoreline, WA	53,025	764	538

1. 248 of these people are residing in Block Group 2, Census Tract 202  
Source: Census 2000 Summary File 1 (SF 1) 100-Percent Data Table P27

## What neighborhoods are located within the Project study area?

Aurora Avenue N directly serves four distinct neighborhoods: Richmond Highlands and Hillwood to the west, and Meridian Park and Echo Lake to the east. The roadway serves as a boundary between the western and eastern neighborhoods.

Figure 8 shows the neighborhood boundaries, and the various government institutions, religious institutions, schools, parks nonprofits or other community facilities located within them. Each neighborhood is described in the following sections.

### Richmond Highlands

The Richmond Highlands neighborhood is bounded by Aurora Avenue N to the east; N 165th Street to the south; N 185th Street to the north; and 8th Avenue NW, Shoreline Community College and Shoreview Park to the west. This neighborhood is characterized primarily by single-family homes with multifamily structures located along Linden Avenue N. Land use adjacent to Aurora Avenue N is primarily commercial.

Richmond Highlands Park and Recreational Center and Shorewood High School are located along Fremont Avenue N within this neighborhood. The Shoreline Historical Museum is housed in the historic Ronald Elementary School along N 175th Street adjacent to the Shorewood High School. St. Luke School, a private school for preschool through 8th grade, is also found in this neighborhood along Dayton Avenue N.

Shoreline Fire Station Number 61, which also houses the fire department headquarters, is located at 17525 Aurora Avenue N and Station Number 64 is located at 719 N 185th Street.

The privately owned Highland Ice Arena is located on Aurora Avenue N and has two ice rinks open to the public for ice-skating and hockey.

Other community facilities in this neighborhood include: Herzl Memorial Park, a 5.4-acre cemetery located northwest of the intersection of Dayton Avenue N and Carlyle Hall Road N; Arden Ronald United Methodist Church located along Aurora Avenue N; and the Richmond Masonic Lodge, located on N 185th Street, which rents meeting space for a variety of community groups.

Nine Neighborhood Watch groups have been identified in the Richmond Highlands neighborhood.

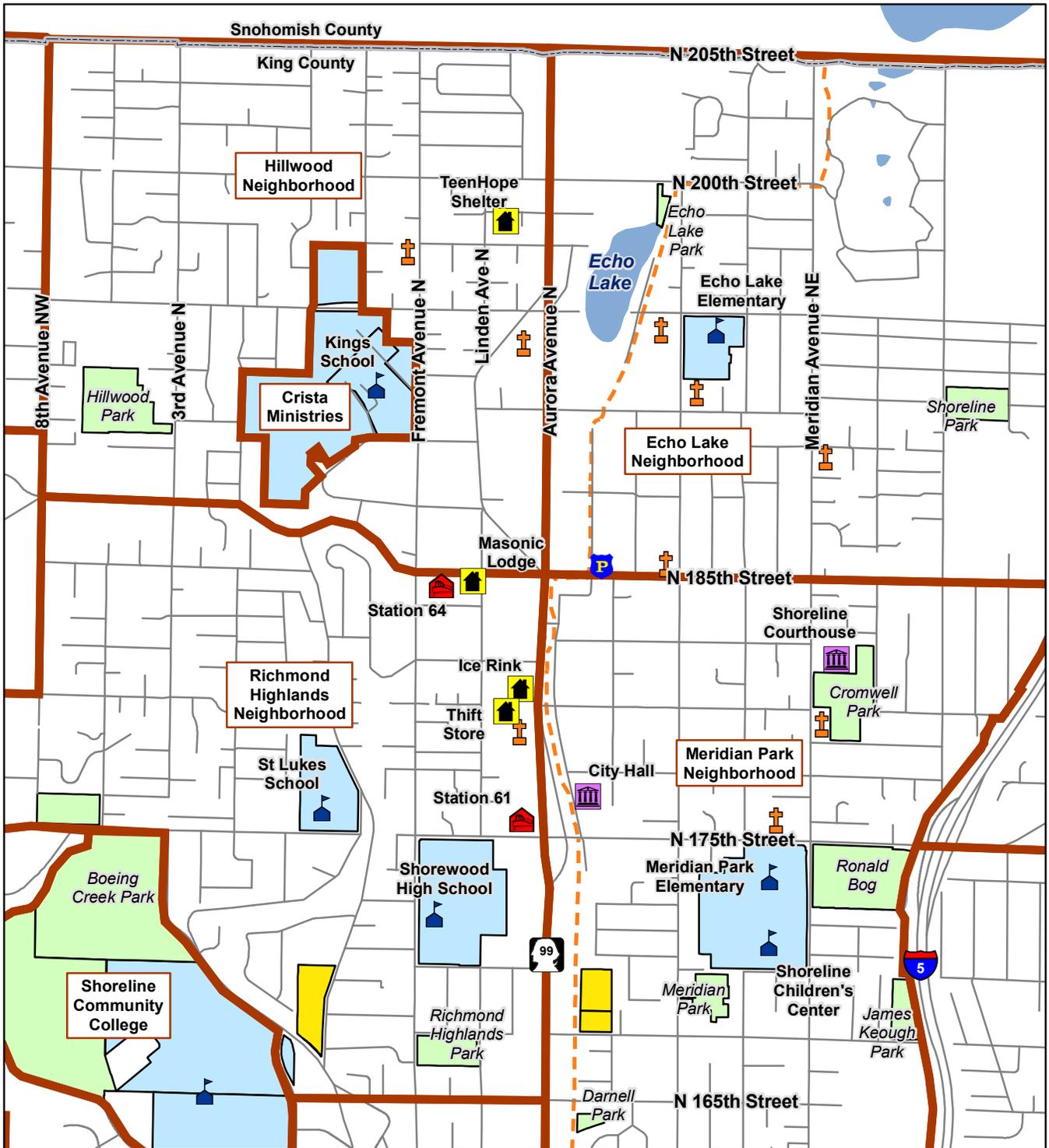
## Meridian Park

The Meridian Park neighborhood is bounded by Aurora Avenue N to the west; I-5 to the east; N 160th Street to the south; and N 185th Street to the north. Land uses abutting Aurora Avenue N are mostly commercial intermixed with a few multifamily structures. To the east of Aurora Avenue N into the center of the neighborhood, single-family homes are prevalent. Multifamily housing is located along N 175th Street.

A number of government services are located within the Meridian Park neighborhood including Shoreline City Hall on N 175th Street, and the Shoreline Police Department on N 185th Street. A variety of public and private community facilities are located within the neighborhood, including: Meridian Park Elementary School, Shoreline Children's Center School, Meridian Park, Ronald Bog Park, Cromwell Park, King County District Court, and the Shoreline City Hall and Police Department. The Interurban Trail runs through the west side of this neighborhood, generally parallel to Aurora Avenue N.

The Sephardic Cemetery and Machzikay Hadath Cemetery are located on 4.5-acres just east of the Interurban Trail along N 167th Street. Several places of worship are located in the Meridian Park neighborhood including: Aurora Church of the Nazarene, and Korean Zion Presbyterian Church.

Seven Neighborhood Watch groups have been identified in the Meridian Park neighborhood.



- |  |                             |  |                     |
|--|-----------------------------|--|---------------------|
|  | City Boundary               |  | Fire Station        |
|  | Neighborhood                |  | Police Station      |
|  | Road                        |  | School              |
|  | Interurban Trail            |  | Place of Worship    |
|  | Mortuary/Cemetery/Crematory |  | Government Facility |
|  | School Grounds              |  | Private Facility    |
|  | Park                        |  |                     |

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

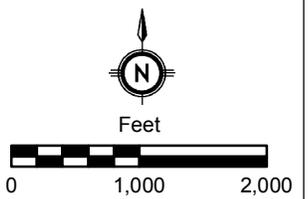


Figure 8. Neighborhoods and Public Services  
Aurora Corridor Improvement Project  
October 2007

## Hillwood

The Hillwood neighborhood is located in north Shoreline, bounded by Aurora Avenue N to the east; N 205th Street to the north; 8th Avenue NW to the west; and N Richmond Beach Road and N 185th Street to the south. Similar to other neighborhoods in the study area, Hillwood is predominantly comprised of single-family residences; however, land uses along Aurora Avenue N consist predominantly of commercial uses, with some multi-family housing. Multifamily development is present west of these commercial uses, toward Linden Avenue.

Shoreline Park and Ride is a large parking lot with 384 parking spaces located southwest of the intersection of Aurora Avenue N and N 192nd Street. The park-and-ride is currently owned by WSDOT and operated by King County Metro Transit.

Crista Ministries is located in the center of the Hillwood neighborhood and is comprised of a 55-acre campus. The campus includes King's School, a private school for preschool through 12th grade, and the Crista Senior Community, a continuing-care retirement community serving over 550 residents through residential apartment living, assisted living and a skilled nursing center.

Two churches were identified in this neighborhood: New Hope Seattle abutting Aurora Avenue N and Apostolic Lutheran Church along Fremont Avenue N.

The TeenHope Shelter is also located in the Hillwood neighborhood and operates out of a one-story residential house on N 199th Street just west of the Project. TeenHope provides shelter for up to 8 homeless teens between the ages of 13 and 17, and also provides meals, clothing, counseling, employment and educational guidance to teens in crisis situations. TeenHope also offers a parent/teen mediation program called the Peace Table.

Four Neighborhood Watch groups have been identified in the Hillwood neighborhood.

## Echo Lake

The Echo Lake neighborhood is bounded by Aurora Avenue N to the west; the City limit to the north; N 185th Street to the south; and I-5 to

the east. Echo Lake serves as a focal point in this neighborhood and is considered a key neighborhood amenity.

Echo Lake Elementary School and Echo Lake Park are also located in this neighborhood.

The Aurora Village Transit Center is located on N 200th Street, just east of Aurora Avenue N. This facility has 12 bus bays and a park-and-ride lot with 202 parking spaces.

Several religious institutions were identified in this neighborhood including: Shoreline Covenant Church, Saint David Emmanuel Episcopal Church, Seattle Christian Assembly (with services held in Chinese), and Holy Apostles Greek Orthodox Church.

Echo Lake has a neighborhood association that holds regular meetings on the third Tuesday of each month, to discuss neighborhood concerns, City events and projects, and host speakers on various issues. The neighborhood association also hosts an annual summer picnic in July, and works on maintenance and improvements to Echo Lake Park. The Interurban Trail runs through the west side of this neighborhood, generally parallel to Aurora Avenue N. Ten Neighborhood Watch groups have been identified in the Echo Lake neighborhood.

Land uses abutting Aurora Avenue N are primarily commercial mixed with multifamily development. A new nonprofit facility, Shoreline/South Snohomish County YMCA, has submitted building plans to the City for a new 56,000 square foot facility, which will be located on Aurora Avenue N, north of 192nd Street. This facility will provide a variety of services to the community, including an indoor pool, basketball courts, climbing wall, exercise room, teen center, family center, meeting rooms and kitchen. Future multi-family housing and commercial development is also planned for this area.

## What City recreational facilities and clubs are located within the Project study area?

A variety of public parks, opens spaces, and recreational facilities are located within the study area, as shown in Figure 8 (City of Shoreline 2005b). Major facilities and youth sports clubs are described in the following sections.

## Interurban Trail

The Interurban Trail is a 3.25-mile paved, multi-purpose pedestrian and bicycle trail that is located the east side of Aurora Avenue N within the Seattle City Light power transmission line right-of-way between N145th Street and N 205th Street. The trail connects neighborhoods to shopping, services, employment, transportation centers, and parks. The trail corridor provides an important north-south linkage through the City and to the rest of the regional Interurban Trail system. The trail serves as the spine of the City's bicycle trail system and allows for the use of commuters as well as recreational bicyclists, walkers and joggers.

## Richmond Highlands Recreation Center and Park

Richmond Highlands Recreation Center and Park is a 4.2-acre community park located south of Shorewood High School and includes: a small gym with a stage and indoor play equipment, a game room with billiard and ping pong tables, a meeting room with kitchen, outdoor children's play equipment and a ball field.

## Meridian Park

Meridian Park is a 3.13-acre park located south of Meridian Park Elementary School and includes a wetland with a stream crossing the site as well as some passive meadow and natural areas with a circular trail. The park also includes picnic tables, benches, a basketball court and tennis courts.

## Ronald Bog Park

Ronald Bog Park is a city owned 13.61-acre natural area at the headwaters of Thornton Creek. The site was once a peat bog that was actively mined in the 1950's. The park currently features a small square-shaped pond that shows evidence of the past peat mining activities; in addition, the pond now serves an important function in stormwater management for the City. Local students and community members are currently monitoring wildlife and plants in the park and participating in restoration activities.

## Cromwell Park

The 9.02-acre Crowell Park is a community park composed of two separate parcels. The northern portion of the site, located to the east and

south of the King County District Court, includes a playground area, a basketball court, a baseball field and a soccer field. The southern portion of the park is much smaller, and is heavily wooded.

## Echo Lake Park

Echo Lake Park is a 0.77-acre park located at the north end of Echo Lake and abutting the Interurban Trail along the park's eastern border. The park includes restroom facilities, picnic tables and benches.

## Youth Sports Clubs

Within the study area, three nonprofit local youth sports clubs (100% volunteer operated) are active in multiple neighborhoods.

- Richmond Little League, for children interested in playing baseball and softball from pre-school through high school
- Hillwood Soccer Club, organizes soccer practices and recreational games for children aged 5 through 18
- Richmond Junior Football, organizes teams for youth ages 6 to 14
- Various hockey leagues play at Highland Ice Arena, located at 18005 Aurora Avenue N.

These clubs demonstrate and develop community cohesion, as they tend to organize teams based on neighborhoods and use many of the ball fields and facilities located in the study area neighborhoods.

## What is the current economic condition of the study area?

### Business and Shopping Patterns

Retail development along Aurora Avenue N falls into several distinct categories, which differ according to the number and type of stores, the amount of space and site area, and the size of the market area they serve, both in terms of population and distance.

The two largest retail centers in the economic study area are Aurora Village and Aurora Square. Aurora Village, located at the southeast corner of Aurora Avenue N and N 205th Street, is anchored by Costco

and Home Depot. Other major tenants at this 572,000 square foot facility include OfficeMax, Petco, and Big 5 Sporting Goods. Aurora Square is a 360,000 square foot community shopping center located at N 160th Street and Aurora Avenue N. Anchor tenants at this facility consist of Sears and Central Market. Other large tenants consist of Pier 1 Imports, Marshalls, Paper Zone, Big Lots, and Aaron Brothers Framing. Some non-profit entities also occupy large spaces at Aurora Village. The third largest center within the project corridor is anchored by Fred Meyer and is located southwest of the intersection of N 185th Street and Aurora Avenue N. Dunn Lumber is also located at this intersection. Sky Nursery is a major nursery and garden center, located just north of N 185th Street. Large stand-alone grocery stores within the area consist of Top Foods on N 175th Street and Safeway on N 155th Street.

The recently completed Gateway Plaza is located across the street from Fred Meyer and is anchored by Bartells. Recent development along Aurora Avenue N within the City, in addition to Gateway Plaza, consists of the following:

- Walgreens, at 17524 Aurora Avenue N
- Aquaquip, at 16350 Aurora Avenue N
- Napa Auto Parts, at 16340 Aurora Avenue N
- Watermark Credit Union, at 16330 Aurora Avenue N
- Sun Insurance/Cascade Bank, a 9,600 square foot retail/office building under construction in the 15400 block of Aurora Avenue N
- McDonald's, reconstruction on a different portion of their existing site at 15225 Aurora Avenue N

New and pre-owned car dealerships represent a significant business category along the Aurora Avenue N corridor. The most prominent dealers are Carter Subaru, Chuck Olson Chevrolet, Sandberg Oldsmobile/Cadillac, and Rich's Car Corner. These auto dealerships serve a market area that extends beyond Shoreline, attracting customers from throughout the Puget Sound. Other businesses in the corridor include several national chain fast food restaurants (Property Counselors 2007).

There are also several office buildings or mixed-use buildings providing office space within the study area. Facilities consist primarily of smaller medical/dental and other professional buildings. There are four areas

where office development is generally concentrated; the intersection of N 175th Street and Midvale Avenue N; the intersection of N 180th Street and Midvale Avenue N; the 18500 block of Firlands Way N; and N 200th Street, south of Aurora Village. The total supply of office space is approximately 240,000 square feet. The City government offices are also located within the Aurora Corridor, in the vicinity of N 175th Street and Midvale Avenue N.

## Property Values

Assessed values for land along Aurora Avenue N currently range between \$20 to \$40 per square foot, with the majority of properties located between N 145th Street to N 185th Street assessed at \$35 to \$40 per square foot. Based on actual sale transactions in recent years adjusted for appreciation, and the fact that assessed values typically lag market value, actual current land values likely range between \$40 and \$50 per square foot. (Property Counselors 2007)

Approximately a dozen improved property sales have occurred in the Project area since mid-2004. Most buildings aged 20 years or greater indicated sale prices in the range of \$100 to \$150 per square foot of building area. Newer, small facilities tended to sell at prices of \$300 per square foot and higher. Between early 2003 and mid-2006, there were approximately 10 recorded transactions where the property was acquired for the land rather than the existing improvements. Prices for these sales generally ranged between \$30 and \$40 per square foot. (Property Counselors 2007)

The existing assessed value of the two-mile portion from N 165th Street to N 205th Street shows an assessed land value that exceeds the value of improvements (buildings) by a factor of more than 3.4. As developed sites usually have improvement (building) values that exceed the underlying land values, this indicates that the property along the corridor is underutilized in total. (Property Counselors 2007)

## Employment

Table 12 presents the employment profile for the City. While the Services sector is the largest sector in aggregate, there are no major employers within this sector. Most Services-related businesses are small and serve the local population. The largest employers in the City are the school district, WSDOT, and the major retailers (Costco, Home Depot, and Fred Meyer).

**Table 12. Employment in the City of Shoreline**

Industry/Trade	Persons Employed <sup>1</sup>
Construction and Resources	825
FIRE (Finance, Insurance, Real Estate)	570
Services	7,092
Manufacturing	159
Retail	2,794
WTU (Wholesale trade, Transportation, Utilities)	137
Education	2,339
Government	2,444
<b>Total</b>	<b>16,360</b>

1. Employment compiled for 2006  
Source: Property Counselors 2007

## Tax revenues

There are approximately 300 businesses located along Aurora Avenue N within the City, which generate approximately \$465 million in annual taxable sales. This represents approximately 70% of the total taxable sales in the City.

Of the 288 businesses, 213 are located in the Project Area (between N 165th Street and N 205th Street), including 101 retail businesses, 96 service businesses, and 16 other businesses. Of the \$465 million in taxable sales in the Aurora Corridor, \$403 million are generated by businesses in the Project Area.

Sales from new and pre-owned car dealerships account for nearly 20% of total taxable retail sales. Other major concentrations in the retail trade sector are Building Materials/Garden Equipment and Supplies (14.5%) and General Merchandise (9.9%). The only significant category in the industry/services sector is Food Services at 6.8%. Business sectors in which the Aurora Avenue N has a relative lack of activity are Furniture & Home Furnishings, Electronics & Appliances, Apparel, Construction, Manufacturing, Information, and Finance/Insurance.

(Property Counselors 2007)

## What residences are located within the Project area?

Shoreline is a mature, built-out community with limited available area to support additional population growth. As of 2005, only about 1% of the total land area remained vacant. Residential single-family development accounts for approximately 51% of the land uses in the community. Multifamily residential development accounts for approximately 3.7% of the land use, and is primarily located near the commercial areas along Aurora Avenue N and in neighborhood centers such as Richmond Beach, Echo Lake, North City, and Ballinger. (City of Shoreline 2005)

Overall vacancy as of autumn 2006 was 3.3%, compared to 4.2 % for all of King County and 3.9% for Snohomish County. Over the past five years, vacancy peaked at 8.1% in autumn 2004 and has steadily declined since then. Average rent has increased 7.4% since late 2003 to its current level of \$802 per month. (Property Counselors 2007)

Eleven larger apartment complexes (25 units or more) are located near Aurora Avenue N, although none of these properties actually front the roadway. All these complexes were built prior to 1986. Several are located along Linden Avenue N, one block west of Aurora Avenue N.

A major new apartment project recently broke ground in the 19200 block of Aurora Avenue N, just south of Echo Lake. Over 500 units are planned as part of a mixed-use center, including approximately 200 senior housing units and 300 market rate units. Other development at this site consists of retail space and a new YMCA.

The largest concentration of condominiums in the Aurora Corridor is located at Echo Lake. There are 234 units along the west side of the lake, constructed between 1968 and 1986.

Within the study area there are 21,330 housing units, of which 76% are single family housing or contain two housing units (e.g. contain a mother-in-law apartment or are duplexes). There are 4,977 housing units in buildings ranging in size from 3 units to 50 or more units, and there are 189 units classified as mobile homes, recreational vehicles, or boats. (US Census 2000)

## 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 and how their communities may be affected. 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 provide input to 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. The Aurora

Business Team worked with City staff to develop Alternative A for the Project.

## 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, property owners, and residences in the City
- postcards mailed to the following community members:
  - property owners and tenant businesses located along the Project corridor
  - residences located within 700 feet of the Aurora Avenue N centerline
  - all people on the City's interested party list
- notice on City website (<http://www.cityofshoreline.com>)
- notice on government access channel (Channel 21)
- 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) 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. Major themes reflected in the scoping comments included concerns about traffic mobility and safety under existing conditions; concerns about the effects of project construction on businesses; a desire for incorporating natural stormwater solutions into the project design; and a desire for this Project to have a design and look that is consistent with the improvements that are now complete on Aurora Avenue N between N 145th Street and N 165th Street. All of these themes are addressed within the 14 environmental reports prepared for this Project. The City also contracted for a separate stormwater concept report and economic report to address themes and concerns that were beyond the scope of what is covered in the environmental process.

## 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.

## Outreach to Potential Linguistically Isolated Households

Due to the results of the analysis for the Environmental Justice report prepared for this Project, outreach efforts for planned public meetings and all future written notices related to the Project will be made in Spanish, Chinese, and Korean languages (each identified as a language spoken by at least 3% of the population in the study area). In addition, the City has retained a translation service to be employed on requests from citizens for any presentation or written material prepared for the Project, and to answer questions related to the Project.

## 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/>

The web site includes Korean, Chinese, and Spanish contact information for the Project, as described in the previous section.

### 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 ABC Team. This group consists of residents and business owners 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 ABC 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.

### 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.

## 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.



## Chapter 5. Potential Effects

This chapter describes potential effects on social resources, economics, and relocation identified under the No Build and three Build Alternatives. Please note, mitigation measures identified to address these effects are presented in Chapter 6.

### How were potential social, economic, and relocation effects evaluated?

#### Social

Evaluation of social elements included assessment of community cohesion; and identification of effects on residents and neighborhoods, as described in other environmental reports prepared for this Project. Evidence of a cohesive community could include a high degree of interaction among neighbors and physical elements of a neighborhood such as parks and sidewalks, which foster social interaction between residents and link residents to community resources. Determining a neighborhood's level of community cohesion is subjective, but key criteria may include:

- Safe, walkable streets that provide easy access to neighborhood resources and encourage residents to spend time outside and around their neighborhoods.
- Public gathering places (such as parks or cafes) that attract local residents, and that are safe and easily accessible.

- An organized and active neighborhood association or annual event, like a summer block party.
- Limited turnover in housing, (e.g. a high number of owner-occupied residences, or rental properties that have long-time tenants.)

In addition to using US Census data and published statistics described earlier, other methods were utilized such as interviews with city staff and social service providers familiar with the study area, citizen input, field observations, and information from other environmental reports.

Potential adverse and beneficial effects of the project on neighborhoods and residents were identified by reviewing the following environmental reports prepared for this Project:

- Transportation
- Air Quality
- Noise
- Visual Quality
- Surface Water
- Cultural, Archeological, and Historical Resources
- Environmental Justice
- Land Use Patterns, Plans and Policies
- Public Services and Utilities

## Economic

Potential impacts were evaluated using conceptual plans for the Build Alternatives overlaid on aerial photographs, and conducting field reconnaissance at the Project site, to identify buildings and parking spaces potentially impacted by the Project. CH2M Hill, who worked with the City to develop the alternatives, provided conceptual plans for the three Build Alternatives (CH2M Hill 2007). As discussed in Chapter 4, the City contracted with Property Counselors to prepare a separate Economic Analysis Technical Report that assessed in detail the potential business and property related economic impacts of the project (Property Counselors 2007). Building and parking impact quantities presented in

this report were obtained from the Property Counselors report. The value of taxable property converted to project right-of-way was based upon tax assessor records. The report also provided the basis for

- Assessment of property acquisition projected to occur as a result of the Project alternatives, and potential impacts to buildings and parking expected to result from that acquisition.
- An analysis of effects on tax revenues, projected to occur as a result of the property acquisition.

The information provided in the Property Counselors report was corroborated through the following means:

- Interviews with 30 individual business owners/operators, located along the Project corridor, to identify their concerns
- A review of case studies of business impacts from other similar improvement projects, including the improvement of Aurora Avenue N recently completed in the City between N 145th Street and N 165th Street
- An assessment of future projected future property values is based upon trends along SR 99 in south Snohomish County, and SR 522 in Seattle, after similar types of roadway improvement projects were completed.

## Relocation

The potential for residential and business relocation was evaluated by comparing the Alternative boundaries with existing land use data. For this analysis, permanent relocation was considered likely if a building would be removed. Temporary residential relocation was considered likely if renovation required by the Project would alter the habitability of the residence during construction.

## How will the completed Project affect communities and neighborhoods?

### Build Alternatives

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

### Community Cohesion

No adverse effects to access and linkages to community facilities or services are expected. The proposed sidewalks under all of the Build Alternatives will result in a beneficial effect for community cohesion, by providing a safe, pedestrian-friendly environment along Aurora Avenue N, and improving connections to the surrounding neighborhoods, parks, recreational facilities, and the Interurban Trail.

Access to nearby parks, trails and other recreational facilities will remain unchanged and none of these facilities will be negatively affected by any of the proposed alternatives.

### Effects on Residents and Businesses

No adverse operational effects are expected to result after the Project is completed, under any of the Build Alternatives. Operational benefits that are the same for all three Build Alternatives are identified as follows:

- The Project would improve traffic mobility under all three Build Alternatives, through additional capacity provided by the BAT lanes, and improved channelization resulting from installation of the median and consolidation of driveways.
- Improved mobility resulting from the Project would result in a beneficial effect on vehicle travel times under all three Build Alternatives, including improved conditions for the movement of freight and goods.
- The Project would improve traffic safety under all three Build Alternatives through a reduction in potential conflict points resulting from channelization improvements described above. Elimination of the non-compliant parking that requires vehicles to back into the traffic flow on Aurora Avenue N would also improve safety by

eliminating the potential for conflict between slower backward-moving vehicles and faster forward-moving vehicles on the roadway.

- The Project would improve safety and mobility for pedestrians through provision of continuous, even sidewalks, curbs and gutters that would provide dedicated space for pedestrian travel and physically separate them from vehicular traffic. 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 sidewalks would also improve pedestrian connections to transit, and provide a safe location for people waiting for buses. 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.

Transportation analyses and conclusions are presented in detail in the *Transportation* discipline report prepared for this Project.

Additional operational benefits under that vary between the Build Alternatives are identified as follows

- 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. Alternative A does not include an amenity zone, so would not result in this added benefit.
- The Project is expected to improve the overall visual quality of the corridor under all three Build Alternatives. However, the addition of the amenity zone under Alternatives B and C provides more space for plantings, street furniture, and other pedestrian amenities, and thus greater opportunity for visual improvement. Visual quality analysis and conclusions are presented in detail in the *Visual Quality* discipline report prepared for this Project.

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

- **Environmental Justice** – The Project would result in no disproportionate significant 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. Environmental Justice analysis and conclusions

are presented in detail in the *Environmental Justice* discipline report prepared for this Project.

- **Air Quality** – 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.
- **Noise** – 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). WSDOT guidance stipulates that noise mitigation shall be eligible for funding only if it is both “feasible” and “reasonable.” A number of factors go into determining whether noise abatement measures are feasible and/or reasonable, including the following:
  - noise reduction achievability;
  - abatement costs;
  - highway safety (obstruction of sight distance along curves); and
  - environmental effects of abatement construction.

No noise abatement measures satisfy the WSDOT feasibility and reasonableness criteria. Noise analysis and conclusions are presented in detail in the *Noise* discipline report prepared for this Project.

- **Visual Quality** – 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.
- **Water Quality** – 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.
- **Cultural Resources** – The Project is not expected to have negative effects to tribal areas, or to cultural resources. Cultural resource analysis and conclusions are presented in detail in the *Cultural, Archeological, and Historical Resources* discipline report prepared for this Project.

---

**Noise Abatement Criteria (NAC)**

Interior and exterior noise level thresholds, specified by the FHWA, for various residential and commercial land uses.

---

- **Land Use, Plans and Policies** – The Project is consistent with local adopted land use plans and policies. Over time, the Project could potentially cause a change in the commercial land use pattern along the Aurora corridor, but this change would be regulated by the City Comprehensive Plan and development regulations, and is expected to be consistent with the City’s Future Land Use Map. Improvements to vehicular and non-motorized travel that would result from the Project support the community business and mixed-use development planned in the corridor, as shown on the adopted Future Land Use Map. Alternative C is partially located outside the right-of-way boundaries defined for improvements to Aurora Avenue N in City Ordinance 326. If this alternative is selected as the Recommended Alternative, the City will take action to make the Project compliant with the Comprehensive Plan. Land use analysis and conclusions are presented in detail in the *Land Use, Plans, and Policies* discipline report prepared for this Project.

The Project is consistent with the 32 Points (see Chapter 2 for detailed description), adopted in 1999, except:

- No amenity zone is included in Alternative A, because it the City chose to evaluate a slightly narrower alternative, as compared to Alternatives B and C.
- Curb bulb-outs not proposed on side streets because the City chose to only include improvements to side street intersection approaches in this Project;
- No pedestrian-only signals are proposed because they cannot be constructed without evidence from rigorous signal warrant analysis that meets FHWA standards;
- Reduction in speed limit to 35 mph cannot be implemented without evidence for need from corridor speed study.

As part of development of the Recommended Alternative, the City is working with community members to update the 32 Points to reflect community priorities that have evolved since the original adoption in 1999.

- **Public Services and Utilities** – The Project is not expected to change or reduce public services, or create a need for new services; therefore, no adverse effects are expected. Under all three Build Alternatives, utilities will be undergrounded, but they are expected to

function in the same capacity as they do under existing conditions and be less disruptive once they are underground. Police, fire, and emergency medical services would benefit from improved traffic mobility that would result from the Project. Analysis and conclusions related to utilities and services are presented in detail in the *Utilities and Services* discipline report prepared for this Project.

Elements to optimize operational effects have 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 (described in Chapter 4). The input of all users and stakeholders was considered consistently and on many levels including aesthetic, social, economic and environmental values, needs, and constraints.

## No Build Alternative

The No Build Alternative would result in degradation of traffic Adverse operational effects are expected under the No Build Alternatives, identified in the *Transportation* Discipline Report prepared for this Project, as follows:

- Intersection operations at N 170th Street, N 182nd Street, and N 195th Street are projected to fail under existing and projected 2030 conditions, and fail to meet the City's adopted traffic operational standard of LOS E.
- Projected increase in traffic congestion on Aurora Avenue N would adversely affect the movement of freight and goods through the corridor.
- 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.

---

### 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.

---

Drivers and transit riders may experience increases in travel time due to increasing congestion on the roadway. 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. A choice of alternative travel routes could result in an increase in traffic volumes on parallel roadways.

In addition to these potential adverse effects, the No Build Alternative would not receive improvements to visual quality and water quality that would be implemented under the Build Alternatives.

## How would the Project affect properties within the study area?

### Build Alternatives

All three Build Alternatives would require the acquisition of right-of-way along Aurora Avenue N to accommodate Project improvements. Some commercial properties would be directly impacted by the loss of existing parking and/or impacts to buildings resulting from right-of-way acquisition.

### Property Acquisition

A total of 140 parcels are adjacent to the Project, covering approximately 128 acres. Table 13 shows the amount of property acquisition that has been estimated for each Build Alternative.

The table shows that the amount of property acquisition would be greatest under Alternative C and least under Alternative A. Under all three alternatives, one parcel with over 15% of its property acquired is zoned as multi-family residential (discussion follows under “Effects to Buildings”). Aside from this parcel, almost all of the land that would be acquired and converted to transportation use is commercial. Except where noted in the following sections, acquisition would consist of strips of property adjacent to the existing roadway, and are not expected to affect the ability to do business.

**Table 13. Property Acquisition by Alternative**

Percent of parcel affected	Alternative A		Alternative B		Alternative C	
	Number of parcels	Amount of acquisition (square feet)	Number of parcels	Amount of acquisition (square feet)	Number of parcels	Amount of acquisition (square feet)
No acquisition	29	n/a	34	n/a	26	n/a
Less than 5% of property	71	52,610	58	46,017	57	51,947
5% to 10-% of property	20	34,210	21	41,397	33	75,126
10% to 15% of property	5	16,402	9	20,328	11	27,551
Over 15% of property	15	46,963	18	56,989	13	29,237
<b>Total</b>	<b>140</b>	<b>150,185</b>	<b>140</b>	<b>164,713</b>	<b>140</b>	<b>183,861</b>

Source: CH2M Hill 2007 and Property Counselors 2007

## Effects on Parking

The estimated effects on parking supply for each of the Build Alternatives are shown in Table 14. Parking effects were assessed for both compliant and non-compliant parking. Compliant parking spaces are those completely contained upon 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. A substantial loss of parking can affect a business's ability to operation. As part of project design the City will work with property owners to minimize overall parking loss to the extent possible (recommended mitigation measures to minimize parking loss are presented in Chapter 6). On many properties, the affected compliant parking can be reconfigured so that the number of impacted compliant spaces shown in Table 14 does not represent a complete loss.

### 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 14. Estimated Parking Impacts

	Alternative A	Alternative B	Alternative C
<b>Existing Spaces</b>			
Compliant <sup>1</sup>	4,292	4,292	4,292
Non-Compliant <sup>1</sup>	193	193	193
Total	4,485	4,485	4,485
<b>Spaces Lost<sup>2,3</sup></b>			
Compliant <sup>1</sup>	130	151	242
Non-Compliant <sup>1</sup>	167	168	150
Total	297	319	392
Resulting Available Spaces	4,188	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% <sup>4</sup>	24	24	25
Number of Parcels Losing More than 20% and Resulting in Less than 3.3 Spaces per 1,000 square feet of Building Space <sup>5</sup>	15	15	16

1. Compliant parking spaces are those completely contained upon 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 upon 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 is expected that parking offset by providing employee parking behind the building or off-site

5. City of Shoreline code requires one parking space per 300 square feet of building space, which is equivalent to 3.3 spaces per 1,000 square feet.

Source: CH2M Hill 2007 and Property Counselors 2007

## Effects to Buildings

The Project could require major or partial demolition of several buildings. *Partial* demolition is indicated if less than 10% of the building would be impacted; *major* demolition 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. Affected buildings under each of the Build Alternatives are summarized as follows. (Note, odd-numbered addresses are located on the west side of Aurora Avenue N, and even-numbered addresses are located on the east side)

## Alternative A

### *Full Acquisition*

- McCaughan Properties – 17550 and 17560 Aurora Avenue N
- James Alan Salon – 18551 Aurora Avenue N (land is property of Seattle City Light – property rights would be transferred to City)
- House (rental) – 19522 Aurora Avenue N

### *Major Acquisition*

- Aurora Rents – 17244 Aurora Avenue N
- Key Bank – 17504 Aurora Avenue N

### *Partial Acquisition*

- Old Country Buffet – 16549 Aurora Avenue N
- Chuck Olson Chevrolet – 17037 Aurora Avenue N
- Apartment buildings (2 buildings, eight units total) 19522 Aurora Avenue N
- Retail buildings – 19550 Aurora Avenue N

## Alternative B

### *Full Acquisition*

- McCaughan Properties – 17550 and 17560 Aurora Avenue N
- James Alan Salon – 18551 Aurora Avenue N (land is property of Seattle City Light – property rights would be transferred to City)
- House (rental) – 19522 Aurora Avenue N

### *Major Acquisition*

- Aurora Rents – 17244 Aurora Avenue N
- Key Bank – 17504 Aurora Avenue N
- Retail buildings – 19550 Aurora Avenue N
- Top Tattoo – 19918 Aurora Avenue N

### *Partial Acquisition*

- Old Country Buffet – 16549 Aurora Avenue N
- Gerber Towing – 16707 Aurora Avenue N
- Chuck Olson Chevrolet – 17037 Aurora Avenue N

- Apartment buildings (2 buildings, eight units total) 19522 Aurora Avenue N

## Alternative C

### *Full Acquisition*

- McCaughan Property – 17550 Aurora Avenue N
- James Alan Salon – 18551 Aurora Avenue N (land is property of Seattle City Light – property rights would be transferred to City)
- House (rental) – 19522 Aurora Avenue N

### *Major Acquisition*

- Aurora Rents – 17244 Aurora Avenue N
- Key Bank – 17504 Aurora Avenue N
- Shell Food Mart and Photo Express – 17505 Aurora Avenue N
- Retail buildings – 19550 Aurora Avenue N
- Lovers – 20019 Aurora Avenue N

### *Partial Acquisition*

- Old Country Buffet – 16549 Aurora Avenue N
- Gerber Towing – 16707 Aurora Avenue N
- Chuck Olson Chevrolet – 17037 Aurora Avenue N
- Spiro's Pizza and Pasta – 18411 Aurora Avenue N
- Apartment buildings (2 buildings, eight units total) 19522 Aurora Avenue N
- Top Tattoo – 19918 Aurora Avenue N

Owners of buildings with major or partial impacts may choose to remodel and remain on site, or they may choose to relocate. Either way, there is potential for an adverse impact to the business during remodeling or in the course of relocating. Mitigation identified to minimize impacts to businesses is discussed in Chapter 6 of this report.

## 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 impacts would occur.

## Will the Project require relocation of any residences or businesses?

### Build Alternatives

#### 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. 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.
- 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.

This maximum potential permanent and temporary relocation would affect up to approximately 3% of the total residences within the block group, which amounts to less than 1% of residences within the study area (U.S. Census 2000).

## Businesses

Full acquisition and demolition is expected of three commercial properties:

- McCaughan properties – 17750 and 17760 Aurora Avenue N – two used automobile dealerships are currently located on these parcels
- James Alan Salon – 18551 Aurora Avenue N (land is property of Seattle City Light – property rights would be transferred to City)

Relocation will be required for businesses located on these parcels. For the impacted buildings described in the previous section, building and/or business owners will have the option to redevelop upon the existing site, but they may also choose to relocate.

Capacity exists for these businesses to relocate within Shoreline, if that is their preference. However, the locations that they choose will not be known until after the City has completed negotiations associated with right-of-way acquisition. Potential exists for short-term business impacts resulting from relocation, due to either closures that occur during moving, or ramp-up time during which customers become accustomed to a new location.

## 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 relocation of residences or businesses would be required.

## What are the potential effects of the Project on economic elements?

### Build Alternatives

#### Effect on Land Values

Economic analysis completed for this Project (Property Counselors 2007) indicates that current land prices in the corridor fall in the range of \$40 to \$50 per square foot. These prices are somewhat higher than prices along SR 99 in Snohomish County or south of Seattle. Table 16 presents the projected effect of the Project on land values, based upon trends

along SR 99 in south Snohomish County, and SR 522 in Seattle, after similar types of roadway improvement projects were completed (Property Counselors 2007).

**Table 15. Projected Effect of Project on Land Values**

	Current	After Construction
Land Value (Sq. Ft.)	\$40 – \$50	\$45 – \$58
Assessed Value Land	\$182,678,900	\$210,080,700

Source: Property Counselors 2007

## Effect on Property Tax Revenues

The property tax revenues to State and local government will change with land ownership and land value. Table 16 summarizes the change in tax base and associated revenues for the City, State and other local governments.

**Table 16. Projected Effect of Project on Annual Property Tax Revenue**

	Alternative A	Alternative B	Alternative C
<b>Tax Base Changes</b>			
<b>Assessed Value</b>			
Existing Land	\$ 182,678,900	\$ 182,678,900	\$ 182,678,900
Increase in Land Value	27,401,835	27,401,835	27,401,835
Property Acquisition	(5,256,475)	(5,764,955)	(6,435,135)
Existing Building Value	54,012,800	54,012,800	54,012,800
Building Acquisition	(267,200)	(612,700)	(778,600)
<b>Total</b>	<b>\$ 258,569,860</b>	<b>\$ 257,715,880</b>	<b>\$ 256,879,800</b>
<b>Net Change</b>	<b>\$ 21,878,160</b>	<b>\$ 21,024,180</b>	<b>\$ 20,188,100</b>
<b>Property Tax Rate</b>			
State of Washington	2.4979%	2.4979%	2.4979%
City of Shoreline	1.3748%	1.3748%	1.3748%
Other Local Governments	8.1574%	8.1574%	8.1574%
<b>Total</b>	<b>12.0300%</b>	<b>12.0300%</b>	<b>12.0300%</b>

<b>Projected Change in Property Tax Revenue</b>			
State of Washington	\$ 30,077	\$ 28,903	\$ 27,754
City of Shoreline	54,649	52,516	50,427
Other Local Governments	178,468	171,502	164,682
<b>Total</b>	<b>\$ 263,194</b>	<b>\$ 252,921</b>	<b>\$ 242,863</b>

Source: Property Counselors 2007

Projections summarized in the table indicate that property tax revenue lost as a result of property acquisition is expected to be offset by increase in assessed land values. (Property Counselors 2007)

## No Build Alternative

Under the No Build Alternative it is assumed that land in the Project corridor would continue in its current uses. No economic effects are projected.

## Will Project construction result in any temporary effects on properties?

### Build Alternatives

Under all three Build Alternatives, the City would acquire an approximate temporary 10-foot construction easement along all properties that abut the Project. Construction activities within the Project right-of-way and construction easement could potentially affect traffic circulation within the corridor, access to and from properties, and visibility along the corridor.

Construction activities would result in reduced capacity on the roadway, causing traffic delays and frequent lane shifts and access changes. Drivers and transit riders may experience increases in travel time due to detours and construction delays. 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. A choice of alternative travel routes could result in an increase in traffic volumes on parallel roadways.

Construction activities could also result in temporary access changes to local business, motels, and multifamily structures. 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 (except for short periods of time during paving).

Fencing, signage, equipment, and activities related to construction could potentially affect the visibility of businesses along the corridor.

These effects would only last for the duration of construction. At the end of the construction period, all temporary construction easements would be returned to property owners.

## Effects to Residences and Businesses

Construction of any of the Build Alternatives is expected to take 2 to 4 years, depending on phasing, and has the potential to be disruptive to residents and businesses located along the Project corridor. It is expected that local residents and businesses would experience temporary construction impacts under all three Build Alternatives. 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 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.

Note, some of the short-term impacts of construction may be offset by various long-term benefits for land uses, described later in this chapter under the operational and indirect impact discussions. In addition, potential beneficial effects of Project construction include sales tax on construction and construction employment, described as follows.

- Economic analysis completed for the Project estimates construction-related taxable retail sales of up to \$77,000,000, which would result in sales tax revenue of \$386,400 to the City, and \$704,700 to other local governments. No state construction tax revenues are projected,

since the State will be paying a portion of those taxes in project costs. (Property Counselors 2007)

- Construction employment of up to 154 annual full time equivalent employees is estimated to result from Project construction. This estimate is based upon typical annual construction business receipts of \$500,000 per full time employee. (Property Counselors 2007)

## No Build Alternative

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

## What secondary cumulative effects could potentially occur as a result of the Project?

The intent of the Project is to improve transit and pedestrian mobility and overall corridor aesthetics. This action may possibly spur the pace of redevelopment in the project area. Redevelopment would be primarily commercial in nature in accordance with the City's Comprehensive Plan and would likely result in employment opportunities. To the extent redevelopment within the project area would occur, secondary impacts could include increased employment opportunities, increased assessed values and property tax revenues, and increased retail sales activity and sales tax revenues.

The cumulative impacts of the Project and other nearby projects, such as the Aurora Corridor Improvement, N 145th Street to N 165th Street, and the Interurban Trail that now runs throughout the city, would be to increase the accessibility of the area's businesses to a variety of travel modes. The increased accessibility may result in increased retail trade activity, which may also accelerate development activity within the project area.



## Chapter 6. Measures Taken 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 and/or minimize operational impacts?

#### Property Acquisition and Relocation

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 as per federal regulations.

If the Project results in available parking for a business to drop below City requirements, the business will be grandfathered in as parking-compliant. If renovation to the property occurs after Project construction is complete, the business would need to come back into parking compliance. No additional mitigation is recommended.

At the one parcel where tenant relocations could be needed for one or more rental units on the property, City will assist relocated residents in finding comparable housing, and compensate for out-of-pocket moving expenses.

Project elements and related activities that could be developed to minimize potential effects to businesses resulting from parking and building impacts are as follows.

- Alter roadway cross sections in some areas to reduce building acquisitions and parking impacts, but require dedication of full width of right-of-way at time of redevelopment.
- Combine driveways to maximize parking.
- Coordinate all upcoming public improvements to assure business stability at completion of highway improvements.
- Use completion of improvements as centerpiece of new promotion of the district.
- Increase corridor-wide economic development activities to promote the area, expand existing businesses, and attract new development to district.

## Context Sensitive Solutions

As discussed earlier in this report, mitigation for many potential 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 (described in Chapter 4). The input of all users and stakeholders was considered consistently and

on many levels including aesthetic, social, economic and environmental values, needs, and constraints.

## Other Measures

No mitigation is recommended for potential loss in taxable business receipts due to property acquisition. Loss expected to be offset by increase in property values and expected new development (Property Counselors 2007).

## What mitigation measures are proposed to minimize temporary effects of construction?

### Communities and Neighborhoods

Each discipline report lists the measures to avoid and/or minimize construction effects for each element of the environment.

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 minority and low-income populations 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.

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 minority and low-income populations, as well as the general population.

- 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.

---

#### 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.

---

## Economic Conditions

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.

## Chapter 7. References

- City of Shoreline. 2005a. Comprehensive Plan. Adopted by Ordinance 388. June 13. Shoreline, WA.
- . 2005b. Park and Recreation Open Space Plan. Adopted May 23, 2005. Available at <http://cosweb.ci.shoreline.wa.us/uploads/attachments/PROS.MP.pdf>. Accessed March 2006.
- . 2007. Interurban Trail Map. Available: <[http://cosweb.ci.shoreline.wa.us/uploads/attachments/pwk/2006\\_GEN.pdf](http://cosweb.ci.shoreline.wa.us/uploads/attachments/pwk/2006_GEN.pdf)>. Accessed: March 30, 2007.
- CH2M Hill. 1999. Aurora Corridor Multimodal Pre-Design Study Report. Prepared for City of Shoreline.
- CH2M Hill. 2007. Building and impact summary for three Build Alternatives.
- CH2M Hill. 2007. Truck percentages on Aurora Avenue N. Personal communication from Tim Newkirk to Jennifer Barnes, Jones & Stokes. October 30.
- Crista Ministries. 2007. Website information on private school facilities and senior community. Available at [http://www.crista.org/about\\_us/default.asp](http://www.crista.org/about_us/default.asp). Accessed March 2007.
- Gluck, Jerome, Herbert S. Levinson, and Vergil Stover. 1999. Impacts of Access Management Techniques. National Cooperative Highway

Research Program (NCHRP) Report 420. Prepared for the Transportation Research Board. National Research Council. Washington, DC.

Healy, Elizabeth. 2007. Federal Highway Administration. Personal communication with Kristen Overleese, City of Shoreline. January 17.

Hillwood Soccer Club. 2006 Website. Available at <http://www.sysa.org/hillwoodsoccer/Index.htm>. Accessed March 2007.

Office of Financial Management, Forecasting Division. 2007. Rank of Cities and Towns by April 1, 2007 Population Size, State of Washington. Available at <http://www.ofm.wa.gov/pop/april1/rank2007.xls>. Accessed August 2007.

Property Counselors. 2007. Aurora Corridor Economic Analysis Technical Report. Prepared for the City of Shoreline. November.

PSRC (Puget Sound Regional Council). 2001. *Destination 2030: Metropolitan Transportation Plan for the Central Puget Sound Region*.

Richmond Little League. 2007. Website information on location and ages served. Available at <http://www.richmondlittleleague.com/frameset.php>. Accessed March 2007

Richmond Junior Football. 2007. Website information on location and ages served. Available at <http://www.richmondjrfootball.com>. Accessed March 2007.

Transportation Research Board. Highway Capacity Manual. 2000. Special Report 209. National Research Council. Washington, DC.

U.S. Census 2000. Demographic data for the City of Shoreline, WA. <http://www.census.gov/main/www/cen2000.html>

U.S. Department of Education. 2007. National Center for Education Statistics. Common Core of Data, public school data 2004-2005 school year. Available: <<http://nces.ed.gov/>>. Accessed April 25, 2007.

U.S. Department of Education. 2007. National Center for Education Statistics. Common Core of Data, public school data 2004-2005 school year. Available: <<http://nces.ed.gov/>>. Accessed April 25, 2007.

Washington State Department of Transportation (WSDOT). 2002. Washington State Highway System Plan: 2003 – 2022. Prepared by the WSDOT Planning Office. February.

———. 2005. Freight and Goods Transportation System 2005 Update. Prepared by the Office of Freight Strategy and Policy. December.

———. 2006. Environmental Procedures Manual. Publication M31-11. Prepared by the Environmental Services Office. March. Available: <<http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/EPM/EPM.htm>>.

Washington State Transportation Commission (WSTC). 1998. Transportation Commission List of Highways of Statewide Significance. Passed by Resolution #584. December. Available: <<http://www.wsdot.wa.gov/ppsc/hsp/HSSLIST.pdf>>.

