City of Shoreline
17544 Midvale Ave N
Shoreline, WA 98133-4921

ENVIRONMENTAL CHECKLIST
(WAC 197-11-960)

A. BACKGROUND

1. Name of proposed project:

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

2. Name of applicant:

   City of Shoreline

3. Address and phone number of applicant and contact person:

   City of Shoreline
   17544 Midvale Ave N
   Shoreline, WA 98133

   Contact:
   Kristen Overleese, PE
   Capital Projects Manager
   206-546-0791
   koverleese@ci.shoreline.wa.us

4. Date checklist prepared:

   October 30, 2007

5. Agency requesting checklist:

   City of Shoreline and Washington State Department of Transportation (WSDOT)

6. Proposed timing or schedule (including phasing, if applicable):

   - **Environmental Documentation Complete – November 2007**
   - **Design – October 2007 to March 2009**
   - **Right of Way – January 2008 – March 2009**
   - **Advertise for Bids – March 2009**
   - **Construction – Will begin second quarter 2009, and is expected to take 2 to 4 years, depending on funding**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No plans exist for future additions, expansion, or further activity related to or connected with this proposal.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The following technical reports have been prepared to support environmental documentation for this Project, in compliance with SEPA and the National Environmental Policy Act (NEPA).

- **Air Quality Technical Memorandum. 2007. Prepared by Jones & Stokes for the City of Shoreline. June.**
- **Cultural Resources Report. 2007. Prepared by Cultural Resource Consultants, Inc. for the City of Shoreline. August.**
- **Environmental Justice Discipline Report. Prepared by Jones & Stokes for the City of Shoreline. October.**
- **Geology Technical Memorandum. 2007. Prepared by Jones & Stokes for the City of Shoreline. June.**
- **Hazardous Materials Discipline Report. 2007. Prepared by Jones & Stokes for the City of Shoreline. July.**
- **Land Use Discipline Report. Prepared by Jones & Stokes for the City of Shoreline. October.**
- **Public Utilities and Services. 2007. Prepared by Jones & Stokes for the City of Shoreline. July.**
- **Noise Discipline Report. 2007. Prepared by Jones & Stokes for the City of Shoreline. August.**
- **Social, Economic, and Relocation Discipline Report. Prepared by Jones & Stokes for the City of Shoreline. October.**
- **Transportation Discipline Report. Prepared by CH2M Hill and Jones & Stokes for the City of Shoreline. August.**
- **Visual Quality Discipline Report. Prepared by Jones & Stokes for the City of Shoreline. August.**
- **Water Quality Discipline Report. Prepared by Jones & Stokes and SvR Design for the City of Shoreline. August.**
- **Wetlands and Other Waters of the US Discipline Report. 2007. Prepared by Jones & Stokes for the City of Shoreline. August.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No pending applications for government approvals of other proposals that would directly affect this Project have been identified.

10. List any government approvals or permits that will be needed for your proposal, if known.

National Pollutant Discharge Elimination System (NPDES) Baseline General Permit for Construction Sites	**Washington State Department of Ecology**
Clean Water Act Section 401	**Washington State Department of Ecology**
Section 106 Consultation	**Washington State Department of Archeology and Historic Preservation**
Clean Water Act Section 404	**Corps of Engineers**
NEPA concurrence	**Federal Highway Administration**
Clearing and Grading	**City of Shoreline**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The Aurora Corridor North 165th Street to North 205th Street Project includes improvements to 2.0 miles of Aurora Avenue N within the City of Shoreline. The Project will include the following elements (see Figure 1, Recommended Alternative):

- **Business Access and Transit (BAT) lane in each direction;**
- **two general-purpose lanes in each direction;**
- **continuous 7-foot sidewalk, curb, and gutter on each side of the roadway;**
- **4-foot amenity/utility zone between sidewalk and curb on each side of the roadway along most of the Project length. The amenity/utility/sidewalk zone is reduced along approximately 5% (linear feet of zone) in order to minimize impacts to buildings and/or minimize impacts to parking spaces.**
- **16-foot 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 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 (along Aurora from N 165th to N 205th Street, side streets, and Midvale Avenue between N 175th and N 185th Streets); and**
- **stormwater facilities, including Low Impact Development (LID) elements in the median and/or amenity zone.**

The total width of the roadway will be 110 feet (narrower where sidewalk or amenity zone width is reduced), from back-of-sidewalk to back-of-sidewalk.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The Project is located in Shoreline, Washington, along Aurora Avenue N (State Route 99) beginning at N 165th Street and extending to N 205th Street (see Figure 2, Project Vicinity).

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other . . . .

b. What is the steepest slope on the site (approximate percent slope)?

The Project site is generally flat, although several small areas of steep slopes do exist within the Project area.

Some steep slopes occur to the east of Aurora Avenue N at approximately N 167th Street. Additional areas are located on the east and west sides of Aurora Avenue N between N 190th Street and N 205th Street, some of which are associated with an erosion hazard area. These steep slopes are likely the result of past development (i.e. road construction, site development, building construction, etc.).

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

The area of and around the Project is located in the glacial till geological unit (Qvt), which is also known as hardpan. Glacial till consists of an unsorted, crudely stratified mix of very dense silt, sand, gravel, cobbles, and boulders deposited at the base of a glacier. Because the depositing glacier overrode glacial till, it is highly compacted and therefore is relatively impermeable to water. Specific soil data for overlying soils are not available, as the NCRS has not mapped soils in the area. However, a mixture of native soils and fill are assumed to occur within the study area. Soil boring data collected for specific projects within the City of Shoreline support this assumption, and indicates that in some areas till is present at the soil surface.[1,2] This is likely due to past excavation and/or erosion. In areas where the native soil or fill that overlies till is permeable, it is possible that groundwater may be perched in the upper soil layer, unable to permeate the till.

No prime farmland is present in the Project vicinity.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The City Critical Areas Ordinance (Shoreline Municipal Code 20.80.210) defines erosion hazard areas as areas underlain with soils that the Natural Resource Conservation Service (NRCS) has classified as severe or very severe erosion hazards. Soils that are classified as severe or very severe erosion hazards are specific types of soils that have a high potential for erosion and that occur on slopes with a gradient equal to or greater than 15%.

One area of erosion hazard is located along the corridor, on the west side of Aurora Avenue N between N 188th Street and N 192nd Street (see Figure 3, Geologic Hazard Areas) at the Park-and-Ride. A small portion of this area is also present on the east side of Aurora Avenue N in the vicinity of N 188th Street by Sky Nursery. The shape of this erosion hazard area, and its location within a natural topographic basin on the landscape, suggest that it may have historically been a wet area, such as a wetland, pond, or peat bog; therefore this erosion hazard area may contain wetland deposits (geologic unit Qw). Currently, the area is paved and is used as a Park-and-Ride lot. If this area contains wetland deposits, it may be underlain with soft peat or organic-rich deposits.

The City Critical Areas Ordinance (Shoreline Municipal Code 20.80.210) defines three types of landslide hazard areas: moderate hazard, high hazard, and very high hazard. These classifications are based on soil type and the steepness of the slope on which they occur. Within the study area, only very high hazard landslide hazard areas have been mapped. These are slopes with a gradient equal to or greater than 40%.

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[1] Associated Earth Sciences, Inc. (AESI). 1999. Subsurface Exploration and Geotechnical Engineering Report, Shoreline Fire Training and Support building, Shoreline, Washington. Associated Earth Sciences, Inc. Kirkland, WA.
[2] Shannon and Wilson, Inc. 1990. Geotechnical Report: Proposed Improvements Aurora Village Shopping Center Seattle, Washington. Shannon and Wilson, Inc. Seattle, WA.

There are several small landslide hazard areas within the Project area (see Figure 3, Geologic Hazard Areas). One small area occurs to the east of Aurora Avenue N at approximately N 167th Street, with additional areas near N 175th Street. The majority of the landslide hazard areas are located on the east and west sides of Aurora Avenue N between N 192nd Street and N 205th Street, although some of these are located within the erosion hazard area mentioned above. Landslide hazard areas parallel Aurora Avenue N in two locations: between N 192nd Street and N 195th Street and between N 200th Street and N 205th Street. These steep slopes are the result of past development, and are either over-steepened or are behind retaining walls.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Grading and fill will be required for this Project. Although the exact quantities will not be known until detailed design is completed, it is expected they will be of similar proportion to the quantities of excavation and fill required for the Aurora Corridor Improvement Project between N 145th Street and N 165th Street. As such, it is estimated that approximately 19,000 cubic yards of roadway excavation and 40,000 cubic yards of gravel fill will be required for this project. Only clean fill will be imported and placed for the Project. This measure will require documentation from the supplier certifying that the fill is in compliance with Washington State soil cleanup standards. If documentation is not available, imported fill soils will be tested prior to placement. Suspect soils encountered during Project construction will be tested and, where necessary, removed from the site and disposed of in accordance with Washington State regulations.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Glacial till, which underlies the study area, is relatively stable, with minor erosion potential. Erosion risk is assessed by looking at the steepness of a slope in combination with the soil type. Erosion risk generally increases with the steepness of the slope. The majority of the Project is on relatively flat ground; however, small portions do cross steeper slopes, and in some areas cut and fill may be required. Hillside cuts create a steep slope during construction and can become susceptible to erosion. Similarly, fill placed to widen existing embankments may also be susceptible to erosion during a storm event, particularly when stockpiled prior to its placement.

Soils within the erosion hazard area are more susceptible to erosion. The Project alignment crosses the erosion hazard area. Exposing soils in this area could lead to increased erosion.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Under existing conditions, the Project site consists of 100% impervious surface (24 acres). Due to the addition of planted amenity zones and medians, the Project will provide a net decrease in impervious surface area, resulting in site coverage of approximately 93% impervious surface area.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The following measures were identified in the geotechnical analysis to avoid or minimize Project effects on erosion. With these measures in place, no permanent adverse effects from Project operations on geology or soils are expected.

- **A Temporary Erosion and Sedimentation Control (TESC) plan will be prepared and implemented. This plan will include operational and structural measures to control the transport of sediment. Operational measures include removing mud and dirt from trucks before they leave the site, covering fill stockpiles or disturbed areas, and avoiding unnecessary vegetation clearing. Structural measures are temporary features used to reduce the transport of sediment, such as silt fences and sediment traps.**
- **The degradation of moisture-sensitive soils will be minimized. Measures include limiting major earthwork to the drier construction season in the late spring through early fall; maintaining proper surface drainage to avoid surface water ponding; minimizing ground disturbance by limiting heavy equipment use, limiting turns, and/or not tracking directly on the subgrade; and covering the final subgrade elevation with a working mat of crushed rock and/or geotextile for protection. Mixing a soil admix such as cement into the subgrade may also add strength and stabilize the ground.**
- **Construction procedures identified in the geotechnical investigation will be implemented. These are designed to maintain or enhance slope stability in areas potentially underlain by landslide-prone soils.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Construction of the Project would generate temporary emissions of fugitive dust and tailpipe emissions from construction equipment. Fugitive dust emissions would be generated mainly by wind blowing across exposed soil surfaces during grading operations, and by movement of construction equipment over unpaved areas. Another potential source of fugitive dust would be trackout of mud onto public roads during construction. Fugitive dust emissions during construction would be temporary and localized.

Mobile construction equipment and portable stationary engines would emit air pollutants, including nitrogen oxides (NOX), carbon monoxide (CO), and particulate matter less than 10 microns in size (PM10). All non-road diesel-powered construction equipment must comply with the Environmental Protection Agency's nationwide emission regulations. Temporary portable stationary sources, such as an asphalt batch plant or a concrete batch plant, would emit small amounts of particulates, volatile organic compounds (VOCs) from asphalt processing, and combustion emissions (VOC, CO, and NOX). These emissions would be temporary and localized. It is highly unlikely that the temporary emissions would cause ambient concentrations to approach National Ambient Air Quality Standards (NAAQS) within the study area.

After construction is completed, the Project satisfies Transportation Conformity, and no operational impacts are identified. The Project would not cause any significant regional air quality impacts due to operational emissions of VOC or NOX. The regional emissions for CO and ozone precursors (VOC and NOX) are less than the emission budgets specified by the Washington Department of Ecology (Ecology). The Project would not cause or contribute to any localized air quality violations. Predictive modeling of CO concentrations (including background concentrations) at the most congested intersections showed the Project would not cause CO concentrations to exceed the NAAQS limits.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Asphalt installation and paint striping operations will emit small amounts of odor-causing compounds. Odor impacts will be temporary and limited to the immediate vicinity of the construction site.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Puget Sound Clean Air Agency (PSCAA) regulations (PSCAA Rule 1, Section 9.15) require all construction operations to employ Best Available Control Technology (BACT) to minimize fugitive dust emissions, and to prevent mud trackout onto public roads.

During Project construction, Best Management Practices (BMPs) for Fugitive Dust control will be used, which could include but are not limited to the following:

- **Maintain the engines of construction equipment according to manufacturers' specifications, to minimize exhaust emissions.**
- **Minimize equipment idling while the equipment is not in use.**
- **Install BACT emission controls on any temporary portable stationary construction equipment.**
- **Use water spray as necessary to prevent visible dust emissions.**
- **Prevent dust emissions during transport of fill material or topsoil by covering the load, either by wetting down the load or by ensuring adequate freeboard on trucks.**
- **Promptly clean up any spills of transported material on public roads by frequently using a street-sweeper machine.**
- **Cover loads of hot asphalt to minimize odors.**

3. Water

a. Surface:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No streams have been identified in the Project area. The Project is located within 300 feet of Echo Lake, which drains to Lake Ballinger, which in turn drains to McAleer Creek, a tributary to Lake Washington, which is located east of the Project area. Boeing Creek drainage flows west of the Project area into Puget Sound. There are no water bodies within the Project area that are known to have a connection to Boeing Creek (see Figure 4, Surface Water Features).

No inventoried wetlands are located along the Project corridor (verified by field investigation conducted in February 2007). Biologists' investigations indicated three ditches with a total area of 401 square feet within the study area. All three ditches will be completely filled or removed as a result of the Project. The loss of the 401 square feet of water quality improvement associated with these ditches will be compensated through the construction of new stormwater treatment facilities that are part of the Project. Those stormwater facilities will provide higher quality stormwater treatment than that currently provided by the small area of the three ditches.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The Project will require work within 200 feet of Echo Lake. No in-water work will occur.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge will be placed in or removed from currently mapped surface waters.

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

The Project will not require surface water withdrawals or diversions.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The Project is not located with a 100-year floodplain.

(6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The Project will not result in discharge of waste materials to surface waters. During construction, BMPs will be implemented (described below in section B.3.d) and after construction, stormwater treatment facilities will be in place (described below in section B.3.c) to ensure that surface water runoff will be treated before it is discharged into surface water bodies.

b. Ground:

(1) Will ground water be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No groundwater will be withdrawn and no water will be discharged to groundwater as a result of the Project.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material will be discharged into the ground as a result of the Project.

c. Water runoff (including stormwater):

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Neither construction nor operation of the Project is expected to adversely affect surface waters. No surface waters cross the Project footprint, and construction will follow the King County Surface Water Design Manual (1998, amended by the City), as guidance for preventing erosion and sediment transport from the construction area.

Conventional stormwater management, which is similar to the system that currently exists, will be designed to collect, convey, filter, and detain stormwater using curbs and gutters, concrete catch basins, pipes, wet vaults, in-ground filter systems and oil-water separators. Stormwater conveyance pipes and catch basins will be replaced and located along curbs and gutters to maximize collection. Per 1998 King County Surface Water Design Manual requirements for conveyance, as amended by the City, the pipes will be sized to convey the 25-year storm event and the overflow from the 100-year runoff event, which will be modeled using the King County continuous modeling program. Since the Project will remove and replace existing pavement, water quality will be provided to remove total suspended solids that can be collected from the roadway. In addition, due to the high traffic loads along Aurora Avenue N, oil/water separators will be located at every intersection. Low Impact Development (LID) elements will be utilized in conjunction with the conventional conveyance system, to the extent that the other Project design elements will allow. LID is an approach to stormwater management that uses the natural processes of vegetated areas to infiltrate, filter, store, evaporate, and detain runoff close to its source. When LID is coupled with conventional methods, it often reduces/removes the need and cost for large-scale conventional stormwater management methods such as detention pipes and vaults. In addition to mimicking the natural process for stormwater management, LID stormwater elements can improve the aesthetics of the Project area by increasing vegetative areas.

(2) Could waste materials enter ground or surface waters? If so, generally describe.

Waste materials that could enter surface waters include non-point source pollutants contained in existing runoff, such as sediment, oil and grease, soluble metals, nutrients, organics, and trash and debris.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The specific methods for preventing stormwater contamination during construction will be the responsibility of the construction contractor, but would likely include installation of temporary storm drain filters, use of silt fences, and covering exposed soil in areas where soil is excavated, graded, or filled. Because the Project footprint and adjacent lands are generally low gradient and largely paved, erosion control can be achieved through these standard BMP erosion control measures.

4. Plants

a. Check or circle types of vegetation found on the site:

X **Deciduous tree:** alder, maple, aspen, other

X **Evergreen tree:** fir, cedar, pine, other

X **Shrubs**

X **Grass**

❑ Pasture

❑ Crop or grain

❑ Wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

❑ Water plants: water lily, eelgrass, milfoil, other

X **Other types of vegetation**

b. What kind and amount of vegetation will be removed or altered?

Very little natural vegetation occurs on or near the site. Vegetation that is removed will be predominantly landscaping material or non-native invasive species such as blackberry (*Rubus* sp.).

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plants are known to occur on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The finished roadway will have a landscaped median containing shrubs and groundcover plants and may include trees. Portions of the 4-foot amenity zone will also be landscaped using low maintenance, drought-resistant, compact vegetation including trees, shrubs, and groundcover plants. Native plant species may be used, where feasible.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: hawk, heron, eagle, songbirds, other: crow, robin, starling

mammals: deer, bear, elk, beaver, other: raccoon, opossum

fish: bass, salmon, trout, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

The Project is located in a commercial area of the City of Shoreline. No streams or wildlife habitat are located along the Project corridor. Echo Lake is located within 300 feet of the Project. Echo Lake drains to Lake Ballinger and McAleer Creek, which contains anadromous fish; including Endangered Species Act (ESA) listed fall Chinook salmon (*Oncorhynchus tshawytscha*). No listed terrestrial wildlife species are known to occur on or near the site.

c. Is the site part of a migration route? If so, explain.

The Project site is not part of a recognized migration route.

d. Proposed measures to preserve or enhance wildlife, if any:

Measures to avoid impacts to waters downstream of Echo Lake, and therefore to avoid impacts to listed fish species, will be implemented through construction BMPs as described in section B.3 for surface water treatment.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

- **Electricity for streetlights and signals**
- **Fuel for construction vehicles and equipment**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The Project will not affect the potential use of solar energy by adjacent properties. Street trees that could be planted as part of the Project would not attain sufficient height to shade solar panels on the roofs of buildings.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Existing street light bulbs throughout the Project corridor will be replaced with more energy-efficient light bulbs (though there will be more lights, so not an overall decrease in energy).

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

Many current and historical businesses adjacent to Aurora Avenue N released fuel and other hazardous materials at some point in the past. However, with the exception of the sites described below, all of the reported historical spills were either previously cleaned up or are being handled by the property owners with oversight by Ecology. Contaminated soils or groundwater at the following sites have the potential to impact Project construction or to expose the City to regulatory liability. (Site numbers refer to numbers given in the Phase I Assessment):

- **Former Bill Langeberg gas station located at N 185th Avenue/Aurora Avenue N (identified as Site South O86-O88 in the Hazardous Materials Discipline Report prepared for this Project). Widening of Aurora Avenue N and the N 185th Street approach could encroach into areas where contaminated soil was previously left in place when the former fuel tanks were removed in 1994. Ecology has indicated they believe residual soil contamination at this site poses a risk to groundwater. Either the current owner or the City should conduct Phase II soil and groundwater investigations, and remediate any identified contamination before site grading begins.**
- **Former Tune N Lube, located at 17550/17560 Aurora Avenue N (identified as Site South A5-A7 in the Hazardous Materials Discipline Report prepared for this Project), which the City will acquire as part of this Project. An unknown amount of kerosene-containing soil is known to exist under the site, which could interfere with grading activity for Project construction. The City should alert the construction contractor to the likely soil contamination, and require the contractor to develop a contingency plan to remediate contaminated soil if it is encountered during site grading. Former Joe's ARCO gas station was also located at this site. Ecology files did not include any reports on when, how, or if, this former gas station was cleaned up after it ceased operation. Either the current owner or the City should conduct Phase II soil and groundwater investigations, and remediate any identified contamination before site grading begins.**

- **Former Mac-Ray dry cleaner, located at 18419 Aurora Avenue N (identified as Site South O85 in the Hazardous Materials Discipline Report prepared for this Project). This former dry cleaner was located close to the roadway. Soil under or adjacent to the building could contain trace amounts of cleaning solvents released during operation of the dry cleaner. Either the current owner or the City should conduct Phase II soil and groundwater investigations, and remediate any identified contamination before site grading begins.**

The Project will require demolition of buildings or structures. Based on the age of those structures, it is possible they could have been constructed using asbestos-containing materials (ACM) or lead-based paint. Construction workers demolishing the structures could be exposed to airborne asbestos or lead unless those materials are removed from the structure before it is demolished.

Although analysis completed for this Project deems it unlikely, it is possible that contaminated soil or contaminated perched groundwater could be encountered during construction.

(1) Describe special emergency services that might be required.

No special emergency services are anticipated as a result of this Project.

(2) Proposed measures to reduce or control environmental health hazards, if any:

- **At the sites identified under section B.7.a, the City will conduct Phase II soil and groundwater investigations, and remediate any identified contamination before site grading begins.**
- **The City will require its construction contractors to have contingency plans to ensure that construction crews can identify suspected contaminated soil and groundwater caused by unreported historical releases and will properly manage contaminated soil they might encounter during construction.**
- **The current 9-1-1 emergency response system used within the City will minimize the potential for future spills caused by future traffic accidents along Aurora Avenue N to impact soil, surface water, or groundwater. In addition, City maintenance crews will continue to be trained in spill prevention and spill response related to their routine maintenance activity along Aurora Avenue N.**
- **Before demolition of any buildings begins, the City will survey and abate asbestos and lead-based paint in accordance with federal and state regulations.**
- **In the unlikely event that contaminated soil or contaminated perched groundwater is encountered during construction, the contamination can be remediated using the following conventional methods:**
  - **Shallow Soil Contamination – excavation and temporary stockpiling of suspected contaminated soil, sampling and chemical sampling of stockpiled soil, shipment of contaminated soil to an approved off-site landfill.**
  - **Groundwater Extracted during Construction – temporary storage of extracted groundwater in portable tanks, chemical characterization, off-site disposal, disposal to sanitary or storm sewers following agency approval.**

8. **Noise**

a. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There are no types of existing noise in the area that are expected to affect this Project. Noise in the Project area is primarily generated by existing traffic on Aurora Avenue N.

b. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

During construction, noise levels will temporarily increase near construction sites due to the use of heavy equipment and the transport of construction materials.

The FHWA Traffic Noise Model Version 2.5 (TNM) was used to predict existing and future noise levels during the evening peak hour period for the baseline year (2005) and the design year (2030). Noise levels were modeled at receiver locations consisting of houses, apartments, and condominium with outdoor usages, and businesses with

outdoor seating areas within 500 feet of the roadway. Predicted peak-hour noise levels were compared to FHWA's Noise Abatement Criteria (NAC) to determine if the Project will result in traffic noise impacts.

For the baseline year (2005), the noise modeling results indicated that traffic noise levels at the following food service outdoor seating area currently exceeds the NAC:

- **Starbucks at 20121 Aurora Avenue N (labeled Outdoor Seating-3 in the Noise Discipline Report)**

For the design year (2030), the modeled noise levels at the following locations will exceed the NAC for No Build and the Project Alternatives:

- **Starbucks at 20121 Aurora Avenue N**
- **The Mattino Condominium at 935 N 200th Street (labeled Apartment-8 in the Noise Discipline Report)**
- **Firlands Way Condominium at 19523 Firlands Way N (labeled Apartment-9 in the Noise Discipline Report)**
- **19370 Firlands Way N (labeled House-21 in the Noise Discipline Report)**
- **19344 Firlands Way N (labeled House-29 in the Noise Discipline Report)**

The Project-related noise increase (2030 Project Alternative minus 2030 No Build Alternative) are projected to be no greater than 2 dBA. It is unlikely such a small noise increase would be discernible at any receiver location.

c. Proposed measures to reduce or control noise impacts, if any:

To reduce the potential for temporary, adverse noise impacts associated with construction, the contractor will be required to comply with all federal, state, and local regulations relating to construction noise. Construction noise could be reduced by using portable, temporary enclosures or walls to surround noisy stationary equipment, substituting quieter equipment or construction methods, minimizing time of operation, and locating equipment as far as practical from sensitive receptors. To reduce construction noise at nearby receivers, a Construction Noise Reduction Plan will be incorporated into construction plans and contractor specifications, including the following elements.

- **Locating stationary equipment away from receiving properties would decrease noise from that equipment as a function of the increased distance.**
- **Erecting portable noise barriers around loud stationary equipment located near sensitive receivers would reduce noise.**
- **Turning off construction equipment during prolonged periods of nonuse would eliminate unnecessary noise.**
- **Requiring contractors to maintain all equipment and recommending they train their equipment operators to be aware of nearby noise sensitive areas would potentially reduce noise effects.**
- **Recommending training construction crews to avoid unnecessarily loud actions (e.g., dropping bundles of rebar onto the ground or dragging steel plates across pavement) near noise-sensitive areas would reduce noise effects.**

For Project operations, no noise abatement measures would satisfy WSDOT's feasibility and reasonableness criteria. Noise barriers installed along the right-of-way to protect the affected homes and business would not be technically feasible because the affected units require driveway access to Aurora Avenue N.

9. Land and shoreline use

a. What is the current use of the site and adjacent properties?

Aurora Avenue N is a primary, local commercial corridor that runs through the City of Shoreline with older strip commercial development and a mixture of new and old big box development containing retail/wholesale uses located on each side of the roadway. Most of the buildings are set back from the street and fronted by large parking areas. Other development along the Project corridor includes motor courts, a nursery, motels, restaurants, bars, small retail establishments, casinos, multifamily uses, and many automobile-related businesses. Existing land uses

in the corridor are predominantly commercial, though some single- and multi-family residential and other uses are present. The City of Shoreline Fire Station 61 and Headquarters is located along the west side of the Project at 17525 Aurora Avenue N. 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. Shoulders and sidewalks of varying widths are located sporadically along the corridor, with no curb or gutter, and little landscaping.

b. Has the site been used for agriculture? If so, describe.

No agricultural uses are present within the Project vicinity.

c. Describe any structures on the site.

Accessory structures adjacent to or within the right-of-way include commercial signs, billboards, light poles, and utility poles.

d. Will any structures be demolished? If so, what?

The following structures would be fully or partially demolished as part of the Project:

- **Full acquisition and demolition of 3 commercial properties**
  - **McCaughan properties – 17750 and 17760 Aurora Avenue N**
  - **James Alan Salon – 18551 Aurora Avenue N (property of Seattle City Light)**
- **Partial acquisition and demolition of 3 commercial buildings (Aurora Rents, Key Bank, Top Tattoo).**
  - **Aurora Rents – 17244 Aurora Avenue N**
  - **Key Bank – 17504 Aurora Avenue N**
  - **Top Tattoo – 19918 Aurora Avenue N**
- **Potential acquisition of 1 rental house and potential impacts to 2 apartment buildings (affecting up to 8 apartments) located on one parcel (19522 Aurora Avenue N). The house would be fully acquired and demolished only if the proposed traffic signal at Aurora Avenue N and N 196th Street/N Firlands Way is approved by WSDOT. The Project is not expected to directly impact either of the apartment buildings located on this parcel, but 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.**

e. What is the current zoning classification of the site?

The Project corridor runs through several zoning districts including Regional Business, Industrial, Community Business, and High-Density Multifamily (R-48). See Figure 5, Zoning Designations. The majority of the Project is located adjacent to land zoned Regional Business.

f. What is the current comprehensive plan designation of the site?

Comprehensive Plan Land Use Designations adjacent to the Project include: Mixed Use, Community Business, Regional Business, and Public Facilities. See Figure 6, Comprehensive Plan Future Land Use. The majority of the Project is located adjacent to land designated Community Business.

g. If applicable, what is the current shoreline master program designation of the site?

No shorelines of the state, as defined under the Shoreline Management Act, are located within the Project study area.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Small occurrences of steep slopes and one erosion hazard area have been identified along the Project corridor, pursuant to the City of Shorelines Critical Area ordinance (SMC Chapter 20.80). See Figure 3, Geologic Hazard Areas. These are described above in section B.1.

i. Approximately how many people would reside or work in the completed project?

The Project consists of roadway improvement, thus, no people will reside or work in it.

j. Approximately how many people would the completed project displace?

Residences
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.[3]

Businesses
Full acquisition is expected of three commercial properties. Relocation will be required for two used automobile dealerships that are currently located at 17550 and 17560 Aurora Avenue N; and the James Alan Salon located at 18551 Aurora Avenue N.

For the other impacted buildings described above in section B.9.d, building and/or business owners will have the option to redevelop upon the existing site, but they may also choose to relocate.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, as amended. Relocation resources are available without discrimination to all residential and business relocations. If building impacts occur, the City will compensate the owners per federal requirements. The City will assist relocated residents in finding comparable housing, and will compensate for out-of-pocket moving expenses, per federal requirements.

Measures identified to minimize potential adverse effects due to construction include communication plans, construction contract management, signage, access strategies, promotional activities, and business assistance.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Adopted City plans and policies strongly support improvements in aesthetics, traffic operations, safety, and multimodal travel along Aurora Avenue N. Over time, the Project could potentially cause a change in the commercial

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[3] **U.S. Census. 2000. Demographic data for the City of Shoreline, WA. http://www.census.gov/main/www/cen2000.html**

land use pattern of the Aurora corridor, but this change would be regulated by the City Comprehensive Plan and development regulations. Comparison of the future land use map with existing land use indicates that the City foresees a transition to more Community Business and Mixed Use development within the Project corridor, which would be encouraged by the streetscape, safety, transit, and pedestrian improvements included in the Project.

The Project is consistent with these City plans and policies, so no mitigation is proposed.

10. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units will be provided as part of this roadway improvement project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Impacts to rental residences located on one property (19522 Aurora Avenue N) are expected to result from the Project. Full acquisition would be required for the one house located on this parcel, requiring relocation of the tenants. As described above in section B.9.j., Renovation may be needed for the two apartment buildings located on this parcel, one with six units potentially affected, and other with two units. Temporary relocation may be needed for the tenants of one or more of these eight apartments during construction. This parcel is located within a block group that is among the higher percentage of minority and low-income populations within the study area. The maximum potential permanent and temporary relocation would affect up to approximately 3% of the total residences within the block group and less than 1% of residences within the study area.[4]

c. Proposed measures to reduce or control housing impacts, if any:

Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Act, as amended. Relocation resources are available without discrimination to all residential and business relocations. If building impacts occur, the City will compensate the owners per federal requirements. The City will assist relocated residents in finding comparable housing and will compensate for out-of-pocket moving expenses, per federal requirements.

11. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No buildings will be constructed as part of this Project. Structures associated with the construction of these roadway improvements will include streetlights, bus stop shelters, and street furniture.

b. What views in the immediate vicinity would be altered or obstructed?

This Project will not result in obstruction of any views in the immediate vicinity.

View of and from the roadway will be improved after the Project is completed due to undergrounding of utilities, addition of vegetation in the new median, and addition of vegetation, lighting, and pedestrian amenities in the amenity zones. The new sidewalk, median, and vegetation will tend to frame views and provide a more interesting visual composition, as well as provide more visual cohesiveness to the Project corridor. The incorporation of context sensitive solutions into Project design will create an improvement over the existing visual quality in the study area, and thus no adverse visual effects are expected to result from completion of the Project.

Construction-related activities will temporarily affect Aurora Avenue N users and neighbors during construction. It is expected that traffic cones and barriers located along the roadway, used for construction-related traffic control and channelization, will be visually prominent throughout Project construction. Detours, traffic control devices, or lane shifts will require greater driver attention and might distract motorists from views outside the construction

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

areas. Temporary clutter may appear in some views due to the presence of construction activities, equipment, stored materials, and general disruption of landscaping with fencing, equipment, vehicles, and lighting.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Mitigation for Project effects has been made an inherent part of Project design from its inception through the use of context sensitive solutions. Using this approach, development and implementation of a roadway project begin with outreach to the public and stakeholders and incorporate the communities' 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 the Aurora Corridor Improvement Project, the corridor design concept is the culmination of extensive public process. The input of all users and stakeholders was considered consistently and on many levels including aesthetic, social, economic, and environmental values, needs, and constraints.

This process molded the development of a Project concept that minimizes negative visual effects of the Project. As part of the context sensitive solutions process, elements and treatments such as new landscaping and plantings will be used to screen, soften, or enhance the visual features of the Project.

Other examples of treatments that will be employed to avoid or minimize negative operational effects include the following recommended BMPs:

- **Hydro-seed all locations with exposed soil and steep slopes with Washington native grasses, to prevent soil erosion, reduce water pollution, and help preserve the existing landscape character.**
- **Design for aesthetic treatment (materials, pattern, texture, concrete stain color) on any retaining walls, noise barriers, barriers, and construction elements.**
- **Design for gradual grade transitions (slope rounding) at hinge and catch points of earthwork slopes, as well as flatter slopes (1:4 slope ratios) where applicable, to preserve the existing grade around the base of trees that are to remain so their roots are not impacted by cut or fill earthwork.**
- **Shield light fixtures to minimize glare and uplighting. Lights will be screened and directed away from residences to the highest degree possible. The number of nighttime lights installed will be minimized to the greatest degree possible. Light fixtures and poles will be painted; no reflective surfaces are proposed that will contribute to reflective daytime glare.**
- **Use low-sheen and non-reflective surface materials to reduce potential for glare; the finish should be matte and roughened.**

During Project construction the following measures will be taken to minimize temporary visual impacts:

- **Locate/screen storage and staging areas in areas that minimize visual prominence to the greatest extent possible to reduce temporary visual effects during construction.**
- **Light and glare effects associated with possible nighttime construction activities should be addressed by using downcast lighting sources and shielding roadway lighting.**

12. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Some addition of light and glare could potentially occur in the evenings due to additional travel lanes that are part of the Project. Potential light and glare effects would include:

- **additional light and glare visible to roadway users due to increased lanes of on-coming traffic; and**
- **additional light and glare visible to pedestrians, residents, and workers located in nearby residential and commercial areas.**

However, these potential effects would be offset by some Project elements. Addition of vegetation within the center median will soften some effects from light and glare for roadway users. Addition of vegetation within the amenity zone will soften light and glare effects for viewers in nearby residential and commercial areas.

Light and glare from temporary lighting used for possible nighttime construction could have a potential impact.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Lighting is included as part of the finished Project is intended to increase safety. No safety hazards due to light and glare have been identified. Lighting will not interfere with existing views.

c. What existing off-site sources of light or glare may affect your proposal?

No existing off-site sources of light or glare have been identified.

d. Proposed measures to reduce or control light and glare impacts, if any:

The following measures will mitigate light and glare impacts:

- **Shielding light fixtures will minimize glare and uplighting. Lights will be screened and directed away from residences to the greatest degree possible. The number of nighttime lights installed will be minimized to the greatest degree possible. Light fixtures and poles will be painted; no reflective surfaces are proposed that will contribute toward reflective daytime glare.**
- **Using low-sheen and non-reflective surface materials will reduce potential for glare; the finish should be matte and roughened.**

During Project construction the following measures will be taken to minimize temporary visual impacts:

- **Locate or screen storage and staging areas to minimize their visual prominence to the extent possible.**
- **Address light and glare effects associated with possible nighttime construction activities by using downcast lighting sources and shielding roadway lighting.**

13. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

A variety of public parks, open spaces, and recreational facilities are located within the study area (see Figure 7, Neighborhoods and Public Services). Major facilities and youth sports clubs are described as follows.

Interurban Trail
The Interurban Trail is a 3.25-mile paved, multi-purpose pedestrian and bicycle trail that is located on 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.

Parks
- **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 is a 3.13-acre park located south of Meridian Park Elementary School and includes a wetland with a stream crossing 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 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 1950s. 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.**

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

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

- **Richmond Little League offers services 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.**

In addition, the Highland Ice Arena is located at 18005 Aurora Avenue N. In addition to serving as a recreational ice skating facility for the general public, the arena hosts various hockey leagues.

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

b. Would the proposed project displace any existing recreational uses? If so, describe.

The Project will not displace any existing recreational facilities or uses. Sidewalk improvements should improve pedestrian access and safety along Aurora Avenue N and improve connections between recreational facilities.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No adverse effects to recreation are identified; thus, no mitigation measures are proposed.

14. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

A cultural resources assessment was completed for this Project. No places or objects listed on, or proposed for, national, state, or local preservation registers were identified within the Area of Potential Effect (APE).

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Four historic properties were identified in the APE:

- **Auto Cabins – 17203 Aurora Avenue N**
- **Echo Lake Tavern – 19508 Aurora Avenue N**
- **Erickson House – 19502 Aurora Avenue N**
- **North Trunk Red Brick Road – Ronald Place N, between N 173rd Street and N 180th Street**

These properties are eligible for listing, but not listed in the National Historic Register.

c. Proposed measures to reduce or control impacts, if any:

No adverse effects to these properties have been identified, so no mitigation is proposed. Although landscaping, sidewalk construction, and related improvements may occur on the parcels on which the three historic buildings

are situated, the integrity of the properties will not be affected by the Project. The Project will not directly result in removal or demolition of the North Trunk Red Brick Road. If segments of the brick road should be paved over or removed as a secondary effect of the Project, a finding of No Effect has been identified in the Cultural Resources Assessment prepared for this Project. Concurrence on this finding was provided by the Washington State Department of Archeological and Historic Preservation (DAHP) in October 2007.

15. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

Aurora Avenue N is a major north/south urban highway that serves both local and regional traffic within the City (see Figure 2, 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 5 with connections at N 145th Street, N 175th Street, and N 205th Street.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

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 Snohomish County Community Transit. The following bus routes currently serve the Project corridor:

- **Metro Routes: 301, 303, 331, 342, 346, 348, 358, 373**
- **Community Transit Routes: 100, 101, 118, 131, 416, 870**

In addition, the following two Park-and-Ride lots are located along the Project corridor:

- **Shoreline Park-and-Ride (400 stalls) is located at the southwest corner of Aurora Avenue N and North 192nd Street and access is available from Aurora Avenue N and N 192nd Street.**
- **Aurora Village Transit Center (200 stalls) is located one block east of Aurora Avenue N on N 200th Street. It is accessible from N 200th Street and the Aurora Village parking area.**

c. How many parking spaces would the completed project have? How many would the project eliminate?

Parking supply in the Project area consists of both compliant and non-compliant spaces, defined as follows:

- **Compliant Parking consists of parking spaces completely contained upon private properties that do not require backing onto City right-of-way for access or egress. 4,300 compliant parking spaces are located in the Project area under existing conditions.**
- **Non-Compliant Parking consists of 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. 193 non-compliant parking spaces are located in the Project area under existing conditions.**

No parking spaces will be added as part of this Project.

The Project is expected eliminate of 119 compliant parking spaces and 168 non-compliant parking spaces. It is expected that some parking spaced would be regained by converting the parking layout on the property to fewer compliant spaces.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The Project consists of improvements to the existing Aurora Avenue N between N 165th Street and N 205th Street, as described above in section A.11. Project elements include improvements to Echo Lake Place, as well as the intersection approaches of the major east-west roadways that intersect with Aurora Avenue N within the Project corridor.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The Project will not use, nor is it located in the vicinity of water, rail, or air transportation.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

The Project corridor currently supports 33,000 to 39,000 vehicles per day. Peak volumes occur during the PM peak period. Over the next 20 years, volumes along the corridor are expected to increase by 1.1% annually.

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. Analysis does not indicate that new vehicular trips would be generated by the completed Project. However, it does show that without improvements, average delay at key signalized intersections along Aurora Avenue N will fall to LOS F. These conditions are considered unacceptable by most drivers and fail to meet the City's adopted standard of LOS E.

g. Proposed measures to reduce or control transportation impacts, if any:

Construction
Construction impacts related to the Project will be mitigated to the greatest extent possible through the application of construction BMPs including Traffic Control Plans, construction staging plans, and continual communication and coordination with businesses along the corridor. City residents will be advised to use alternate routes during periods of closure and regional transit service will be used to provide additional person-movement capacity at these times.

Planning adequate traffic control during design and construction of this Project is crucial to a smooth, successful, and safe construction. In addition to providing safety to workers, motorists, and pedestrians, the traffic control plan must provide access to the work zones, business driveway delineation, signage for businesses, and lighting. Continued public information and opportunities for input will be provided throughout the period of construction. In addition, partnerships with adjacent businesses will be maintained throughout the construction period to ensure that business access needs are met during construction. All transportation modes—pedestrians, bicycles, transit, trucks, and passenger vehicles—will be taken into account.

- **Transit – Coordination with the King County Metro and Snohomish County Community transit agencies will be ongoing throughout the construction period to minimize impacts to transit service. Bus zone relocation or closure will be clearly signed and communicated to transit riders. Temporary stops will be provided in a safe and accessible location, free of conflicts from other traffic and construction activity.**
- **Bicycles and Pedestrians – The needs of bicyclists and pedestrians within the construction zones will be considered, and the range of pedestrian needs is wide, including those of the elderly and those with sensory impairments. The following will be considered when developing a Traffic Control Plan for road construction:**
  - **Bicyclists and pedestrians may be separated from work site activities to avoid impedance to the work and safety risks.**
  - **Bicyclists and pedestrians may be separated from other traffic moving through or around the work area.**
  - **Bicyclists and pedestrians may be provided with a safe travel way (temporary sidewalk or bike path).**
  - **Construction flaggers may be provided to facilitate the safe movement of pedestrians and bicyclists through the work zone.**
  - **Well-marked detour routes for bicycles and pedestrians will be provided to enable direct and safe access to destinations.**
- **Traffic Control Plan – Formal traffic control plans will be prepared for the construction of the Project to ensure that adequate traffic control will be provided during the construction phases and to help ensure that access through the construction zone and to businesses will be safe. Traffic control plans will be prepared in**

accordance with standards provided in the Manual on Uniform Traffic Control Devices for Streets and Highways.[5]

- **Construction Staging Plan – The primary options for construction staging are shift, detour, and half-width construction.**
  - **Shift construction allows business access during construction and minimizes the spread of construction impacts throughout the community. The shift option maintains the existing lane configuration of the roadway by using reduced lane widths to maximize roadway capacity and driver comfort during construction. By using shift construction staging, the sidewalk and amenity zone, driveways, and new curb-and-gutter will be constructed for the 2 miles on one side. Once completed, traffic will be shifted toward the recently completed section and the opposing sidewalk and amenity zone, driveways, and curb-and-gutter will be constructed. Finally, traffic will be shifted to create a work zone for the construction of the median.**
  - **Half-width construction staging is another option that maintains some service along the roadway during construction. With this option, all of the roadway traffic will be placed on one half of the roadway while the other half is under construction. The number of traffic lanes will be reduced, and business access will be more difficult to provide.**
  - **Construction detours might be needed if major structural repair of the roadway or extensive underground utility relocation is required. Such detours will usually be considered only if the following conditions apply:**

    a. The route under construction is other than a high-volume route and detour length is less than 10 miles.

    b. Significant environmental impacts and right-of-way clearance problems are anticipated.

    c. The cost of maintaining the designated detour route is less than the cost of the half-width construction option.

    When detours and lane closures are needed on high-volume multilane highways, they are generally scheduled to occur during the non-peak daytime and nighttime hours when traffic volumes are at their lowest levels. Detour routes, when used will be well signed, using only appropriate arterial routes. Choosing the sequence of construction requires tradeoffs between competing goals of construction. These include minimizing the length of construction, keeping traffic flowing, maximizing access to properties, and ensuring proper pavement construction.

- **Maintaining Access and Communication – During the course of construction, access to businesses along Aurora Avenue N will be maintained. Temporary access revisions will be well marked and will provide the most direct access to properties possible. Signing during construction can be divided into two categories, signs that are required to identify the worksite and its related conditions and hazards, and signs that identify business locations and access points that might be obscured during construction. Owners and tenants along the corridor will be kept informed of construction schedules, schedule changes, and information detailing construction activities. Construction information will be provided via a Project website, phone line, newsletters, and personal contact with the contractor and construction management team.**

Operations
No adverse impacts to transportation would be anticipated as a result of the completed Project, so no mitigation measures are proposed. Transportation operations and safety would be improved. The safety and operations of general-purpose traffic, transit, and pedestrians would be improved, and access to businesses along the corridor would be improved and made safer. Because the Project would enhance traffic capacity, additional volumes could be accommodated and overall traffic operations would be improved.

16. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Construction

[5] **Federal Highway Administration (FHWA). 2003. Manual on Uniform Traffic Control Devices for Streets and Highways. US Department of Transportation.**

Construction activities are not expected to result in an increased need for public services, but could cause temporary increases in traffic congestion and might temporarily reduce access to public services in the Project area. Buses, including transit and school buses, and emergency vehicles would continue to use Aurora Avenue N during construction but could be delayed by construction-related traffic congestion. Although a health and safety plan would be in place for the construction activities, there would still be a potential for on-site accidents, resulting in an increased need for emergency medical aid from the fire department.

Operations
The proposed improvements to Aurora Avenue N would improve public serves in the Project area. The completed Project will reduce traffic congestion and thereby enhance mass transit and access by emergency vehicles.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Construction
Potential effects on public services will be minimized or avoided through implementation of the following measures:

- **Detour routes will be developed for emergency response providers to minimize the effects on response times and access to their respective facilities.**
- **Increased police security may be needed at construction sites and staging areas as a result of theft, vandalism, or trespass, and would also be required for additional traffic and pedestrian control during construction.**
- **Communication plans implemented by the City will include the following elements:**
  - **Coordinate with law enforcement agencies to implement crime prevention principles;**
  - **Notify and coordinate with fire departments for waterline relocations that may affect water supply for fire suppression and establish alternate supply lines prior to any breaks in service;**
  - **Notify and coordinate with fire departments to ensure they can respond to all calls in a timely manner during periods that traffic flow is affected by project construction;**
  - **Notify and coordinate with fire departments before construction to alleviate the potential for increased response times due to roadway closure in accordance with the City's road closure ordinance;**
  - **Notify and coordinate with police departments to ensure they have adequate staffing to provide traffic and pedestrian control during construction;**
  - **Notify emergency service providers and police departments in advance of construction schedules and any planned street closures;**
  - **Coordinate with school officials before and during construction; and**
  - **Schedule construction at night, when feasible, to reduce congestion during peak hours, and thereby minimize effects on school bus routes and service activities such as trash collection.**

Operations
The completed Project is expected to have a beneficial impact on provision of public services, so no mitigation is proposed.

17. Utilities

a. Circle utilities currently available at the site: **electricity, natural gas, water, refuse service, telephone, sanitary sewer**, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity, which might be needed.

Construction
During construction, earth-moving activities may affect utilities located below grade and above grade (overhead wires, fire hydrants, signal cabinets, light poles, etc.). There may be a need to reroute utility lines, water lines, and/or cables, which could cause temporary outages. These outages would be short-term and intermittent. Relocation of some utilities may have a subsequent effect on other utilities near the relocation work. The City would

review these effects on a case-by-case basis prior to taking action. Construction methods and BMPs to minimize the disruption of utilities would be developed prior to the start of construction.

Potential effects on utilities would be minimized or avoided through the following measures:

- **Consider the location of utilities in future detailed designs to avoid or minimize conflicts, disruption of service, and disruption of or restrictions on access and maintenance functions.**
- **Prepare a consolidated utility plan identifying existing locations, potential temporary locations, and potential new locations for utilities; sequencing and coordinating schedules for utility work; and describing any service disruptions, for review with affected utility providers prior to the start of construction.**
- **Field-verify the exact locations and depths of underground utilities prior to construction.**
- **Coordinate with property and business owners to plan service outages to minimize impacts.**
- **Notify neighborhoods of utility interruptions by providing a schedule of construction activities in those areas.**
- **Coordinate with utility franchise holders and provide them with Project schedules to minimize the effects of utility relocations (for example, equipment procurement times, relocation ahead of construction, etc.).**

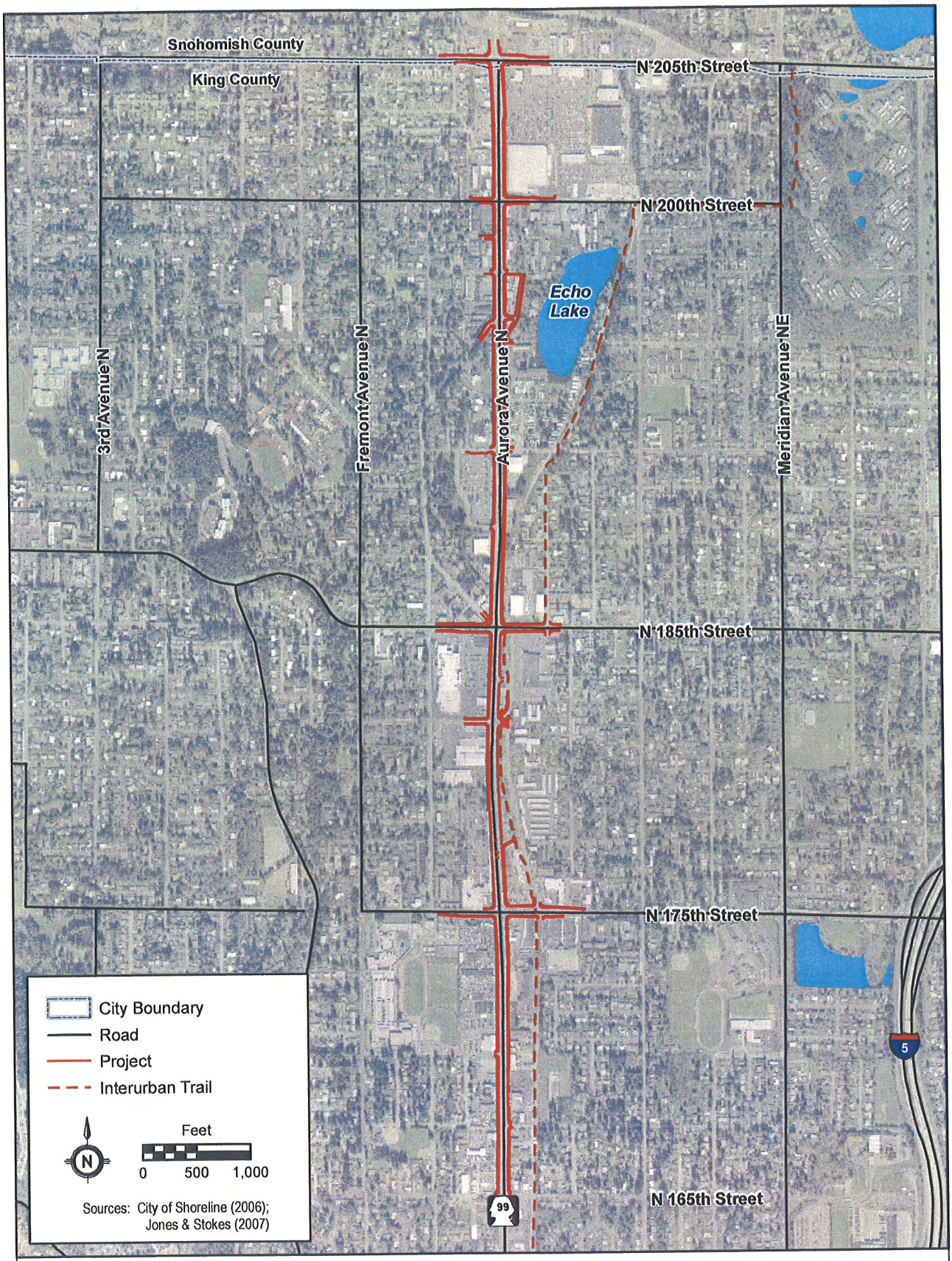
Operations
Existing aerial utilities would be relocated to an underground utility corridor, improving their reliability. The completed Project is expected to have a beneficial impact on provision of utilities, so no mitigation is proposed.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

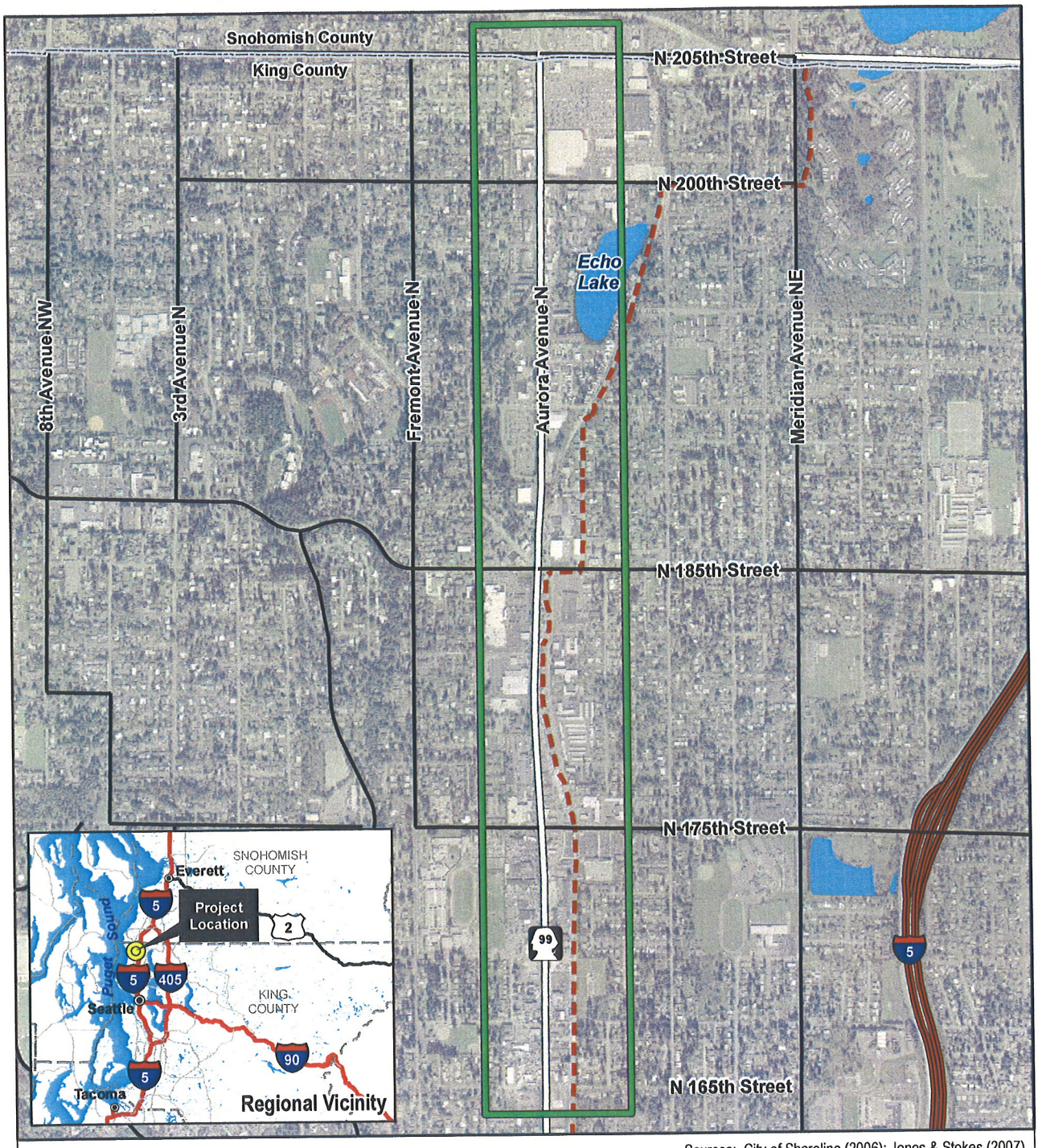
Signature: Kristen M Overlease

Date Submitted: 11/9/07



CITY OF SHORELINE AURORA CORRIDOR

Figure 1. Proposed Project
Aurora Corridor Improvement Project
November 2007



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

City Boundary
Project Area
Interstate
State Route
Arterial
Interurban Trail

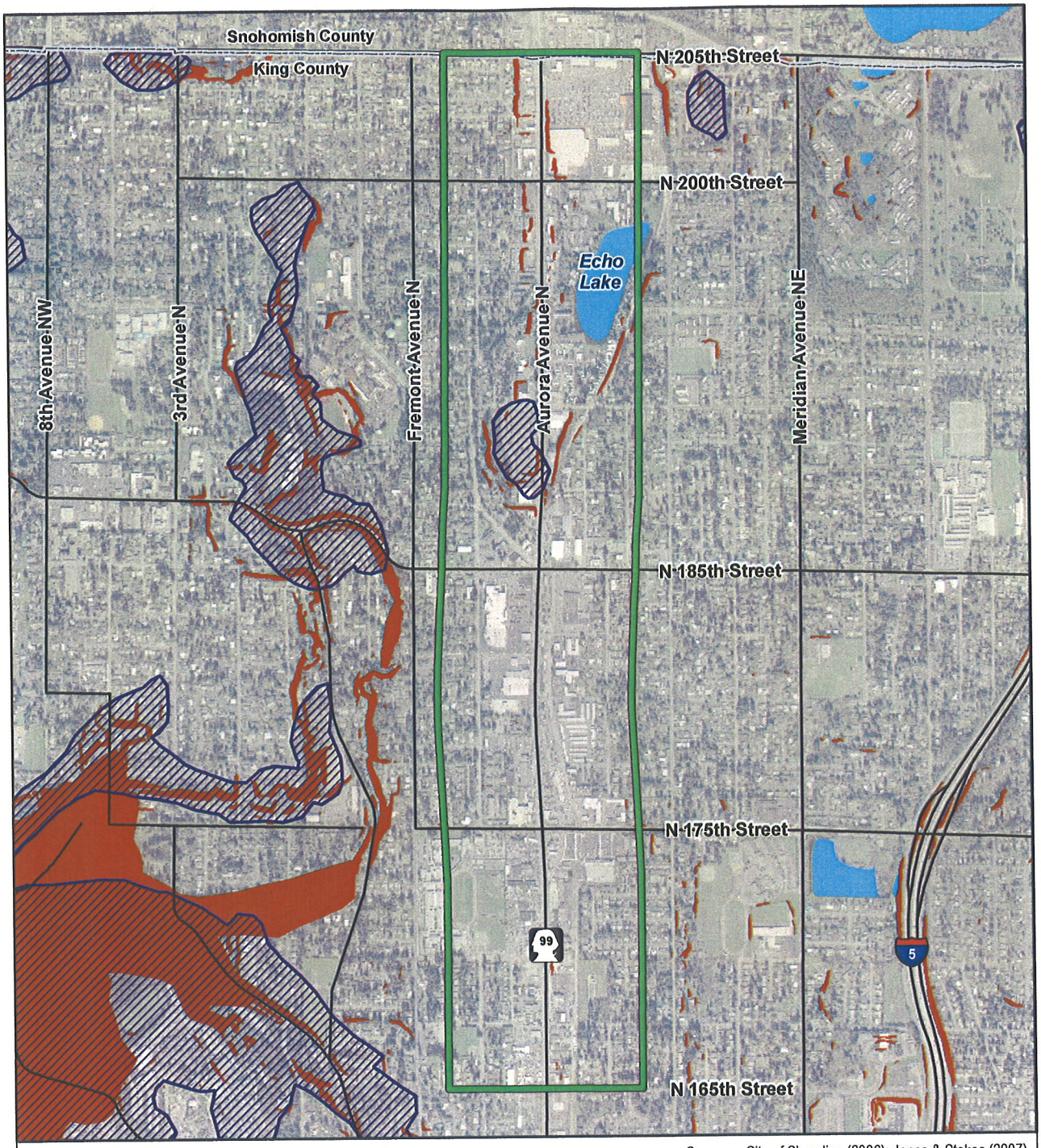
N

Feet

0 1,000 2,000

CITY OF SHORELINE AURORA CORRIDOR

Figure 2. Project Vicinity
Aurora Corridor Improvement Project
November 2007



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

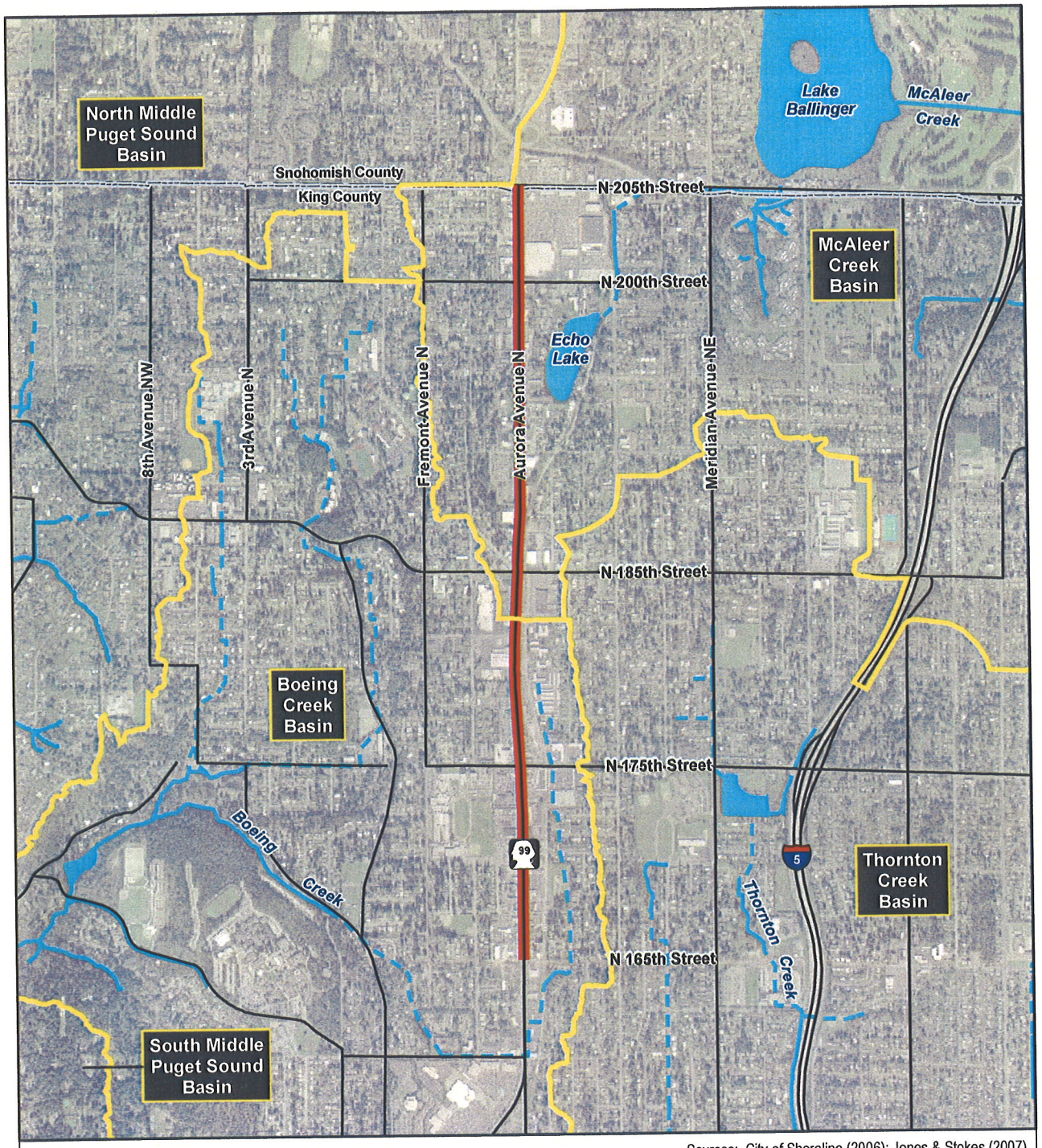
City Boundary
Study Area
Road
Erosion Hazard Area
Landslide Hazard Area

N

Feet
0 1,000 2,000

CITY OF SHORELINE AURORA CORRIDOR

Figure 3. Geologic Hazard Areas
Aurora Corridor Improvement Project
November 2007



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

- City Boundary
- Project
- Road
- Open Water Course
- Piped Water Course
- Water Body
- Surface Water Basin

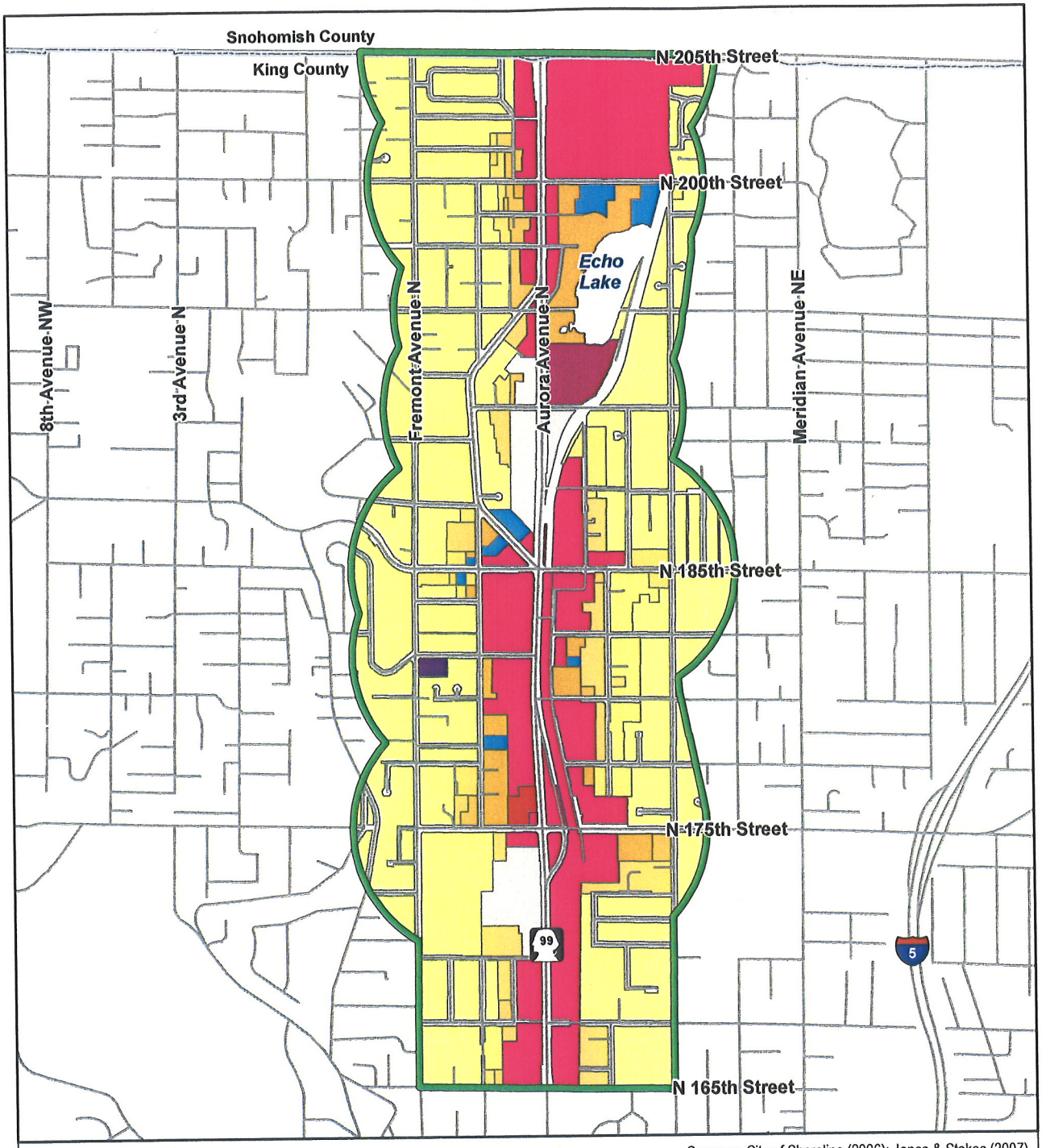
N

Feet

0 1,000 2,000

AURORA CORRIDOR

Figure 4. Surface Water Features
Aurora Corridor Improvement Project
November 2007



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

Zoning Designations

City Boundary	R4	R24	CZ
Study Area	R6	R48	NB
Road	R8	CB	NCBD
	R12	RB	I
	R18	RB-CZ	O

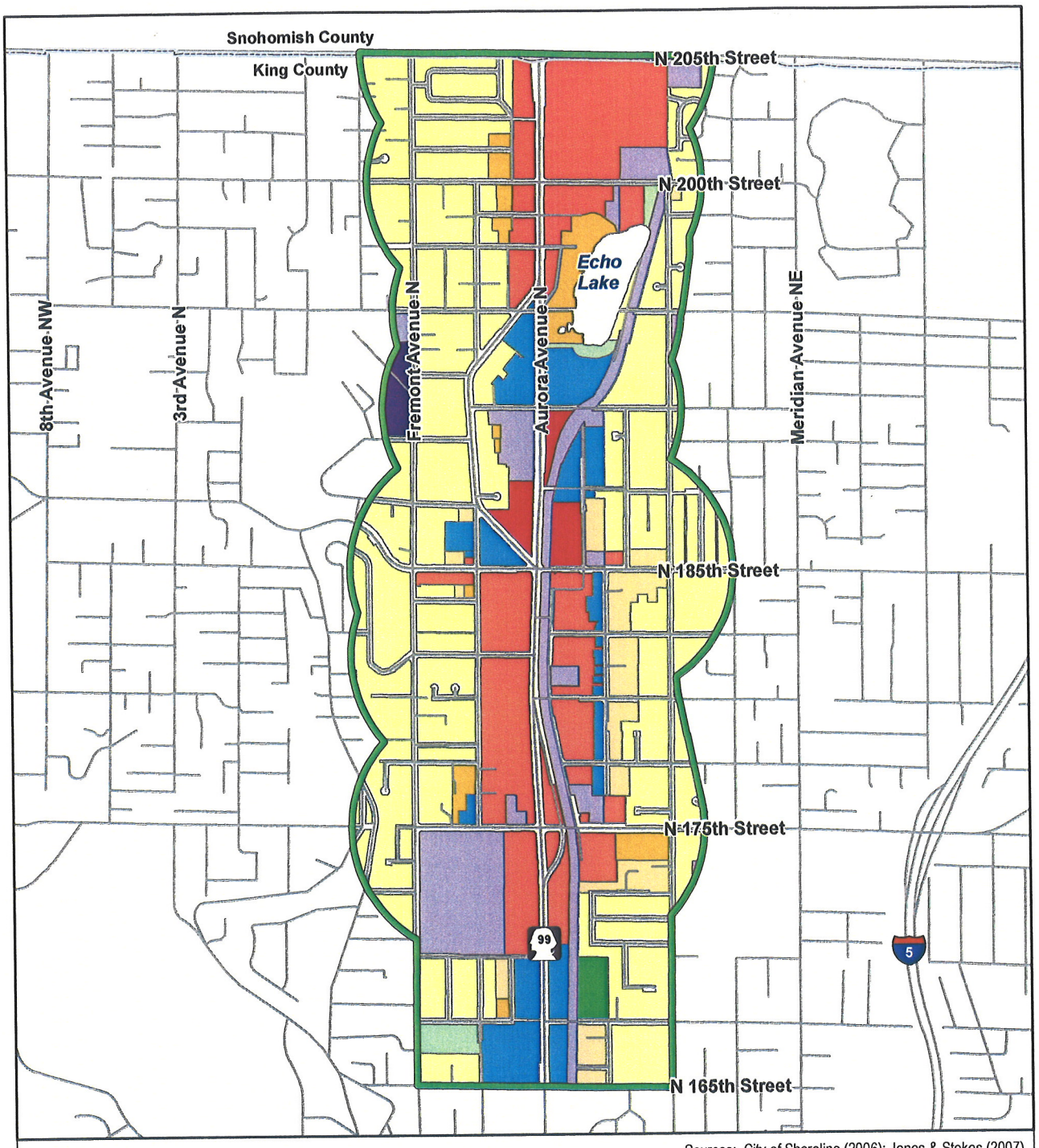
N

Feet

0 1,000 2,000

AURORA CORRIDOR

Figure 5. Zoning Designations
Aurora Corridor Improvement Project
November 2007



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

Comprehensive Plan Future Land Use

- City Boundary
- Study Area
- Road
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Community Business
- Regional Business
- Single Family Institution
- Public Facility
- Public Open Space
- Private Open Space

N

Feet

0 1,000 2,000

CITY OF SHORELINE AURORA CORRIDOR

Figure 6. Comprehensive Plan Future Land Use
Aurora Corridor Improvement Project
November 2007

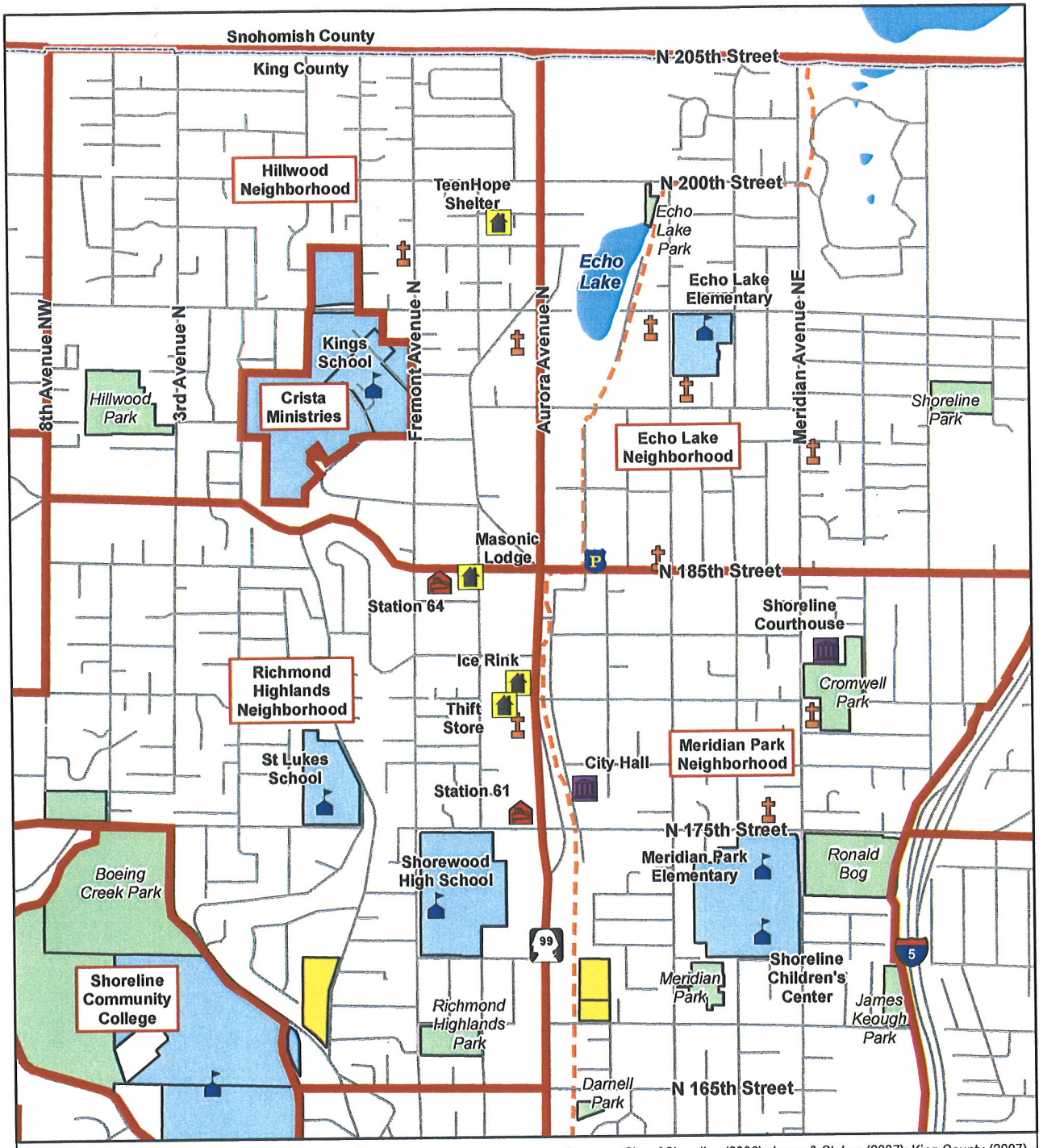


Figure 7. Neighborhoods and Public Services
Aurora Corridor Improvement Project
November 2007