



Bothell Downtown Subarea Plan and Regulations Planned Action Draft Environmental Impact Statement

December 2008



City of Bothell



City of Bothell™

December 22, 2008

**Subject: Bothell Downtown Subarea Plan and Regulations Planned Action
Draft Environmental Impact Statement**

Dear Interested Citizen:

The City of Bothell invites you to comment on the Bothell Downtown Subarea Plan and Regulations Planned Action Draft Environmental Impact Statement (Draft EIS). The Draft EIS analyzes the environmental impacts of future land use, transportation, and civic activities in Downtown Bothell.

The City and its citizens have been working on the *Downtown Subarea Plan and Regulations* since 2006. The plan would create a land use and transportation framework and implement a form-based development code to revitalize downtown. Proposed concepts include roadway rerouting, new streets, mixed-use redevelopment, and civic investment. State Route (SR) 522 would be realigned to the south and SR 527 would be extended southward to intercept SR 522 at a “T” intersection. The new SR 527 would be a multiway boulevard that would allow for through lanes and access lanes. Northshore School District (NSD) and Safeway properties would be redeveloped into a compact, walkable mixed-use area. Pop Keeney Stadium would be revised and updated. Main Street would be revitalized and extended with streetscape improvements. City Hall would be redeveloped at its current location, or relocated to a property south of the realigned SR 522 or to the NSD property. Council adoption of the Plan and Regulations is anticipated by the end of March, 2009.

State law requires that the likely environmental impacts of land use actions such as the proposed *Downtown Subarea Plan and Regulations* be identified via draft and final environmental impact statements (EISs). The Draft EIS studies two primary alternatives: the Proposed Alternative and the No Action Alternative. The Proposed Alternative would amend the City’s Comprehensive Plan and development regulations through the adoption of the *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance. If so designated in the ordinance, further environmental review on future development within the designated Planned Action area would not be necessary if the proposed development is consistent with the development levels of the adopted Planned Action Ordinance. The No Action Alternative is a continuation of the City’s current Comprehensive Plan and subarea plans applicable to downtown without amendment, and the standard project by project environmental review process would remain.

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The Planning Commission, in its review of the *Downtown Subarea Plan and Regulations* in 2008, has recommended a number of changes. This Draft EIS qualitatively compares these Planning Commission Recommendations with the primary alternatives. The recommendations are found to be consistent with the general concept and vision of the Proposed Alternative, varying somewhat in the details, and within the range of the two primary alternatives.

This Draft EIS identifies specific environmental impacts and ways to mitigate impacts in advance of development. Environmental issues evaluated in this draft EIS include: natural environment (earth, water resources, plants, and animals); air quality; land use patterns/plans and policies; aesthetics; transportation; noise; cultural resources; public services and utilities.

Public and agency comment is invited regarding the Draft EIS. The City of Bothell will accept written comments from issuance on December 22, 2008, until 5:00 p.m., January 21, 2009. Please provide written comments to the responsible official as follows:

William R. Wiselogle, Director
Department of Community Development
City of Bothell
9654 NE 182 Street
Bothell, WA 98011
Fax: (425) 486-2489

Emailed comments are welcome and should be sent to david.boyd@ci.bothell.wa.us.

In addition, the City will accept public comments on the Draft EIS at a City Council hearing scheduled for Tuesday, January 6, 2009, 6:00 p.m. or later, in the Bothell Municipal Court / Council Chambers, located at 10116 NE 183rd Street, Bothell, Washington. The next installment of the public hearing on the *Downtown Subarea Plan and Regulations* is scheduled for Tuesday, January 27, 2009, 6:00p.m. or later, in the Bothell Municipal Court / Council Chambers.

Your interest in the City of Bothell is greatly appreciated. If you would like more information about this proposal, please contact David Boyd, Senior Planner at (425) 486.8152 x4429.

Sincerely,



William R. Wiselogle, Director
Department of Community Development
SEPA Responsible Official
City of Bothell

Bothell Downtown Subarea Plan and Regulations Planned Action Draft Environmental Impact Statement

Prepared for:



City of Bothell™

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Fact Sheet

Project Title

Bothell Downtown Subarea Plan and Regulations Planned Action

Proposed Action and Alternatives

Two primary alternatives are analyzed in this draft environmental impact statement (EIS): the Proposed Alternative—adoption of the *Downtown Subarea Plan and Regulations* and the Planned Action Ordinance—and the No Action Alternative—continuation of the City’s current Comprehensive Plan and subarea plans applicable to downtown without amendment.

The Proposed Alternative would amend the City’s Comprehensive Plan and development regulations through the adoption of the *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance. The City and its citizens have been working on the *Downtown Subarea Plan and Regulations* since 2006. The plan would create a land use and transportation framework and implement a form-based development code to revitalize Downtown Bothell. Council adoption of the plan and regulations is anticipated by the end of March 2009.

Proposed Alternative concepts include roadway rerouting, new streets, mixed-use redevelopment, and civic investment. State Route (SR) 522 would be realigned to the south and SR 527 would be extended southward to intercept SR 522 at a “T” intersection. The new SR 527 would be a multiway boulevard that would allow for through lanes and access lanes. Northshore School District (NSD) and Safeway properties would be redeveloped into a compact, walkable mixed-use area. Pop Keeney Stadium would be revised and updated. Main Street would be revitalized and extended with streetscape improvements. City Hall would be redeveloped at its current location, or relocated to the NSD property or to a property south of the realigned SR 522.

The analysis of the Proposed Alternative addresses variations within the alternative, for example, where a public facility could be sited in different locations and where zone districts may have different extents.

The No Action Alternative would retain the current Comprehensive Plan, subarea plans, and development regulations. While some aspects of the proposed downtown vision would be implemented, such as many components of the major road improvements, the zoning, design standards, and other features would not change and would not accommodate the growth stimulated by infrastructure investment in a manner most conducive to the downtown vision. The State Environmental Policy

Act (SEPA) review process would not be streamlined via a Planned Action; standard review would be required on a per-project basis.

In addition, the Draft EIS qualitatively compares the Planning Commission Recommendations with the Proposed Alternative and No Action Alternative. The Planning Commission Recommendations are within the range of the two primary alternatives. The Planning Commission, in its review of the proposed development regulations, is proposing a number of changes which are consistent with the general concept and vision of the Proposed Alternative, but vary somewhat in detail. Specifically, they are recommending overall reductions in the permitted building heights (but not number of stories) in the downtown districts. They are also proposing retaining the current zoning designations around the periphery of the study area. To compensate somewhat for these reductions in allowed density, they propose expanding the Downtown Neighborhood District in a few areas.

Location

The study area consists of approximately 529 acres of land in the center of the southern portion of the City of Bothell. The boundaries are generally defined on the north by segments of Ross Road, NE 186th Street, and commercial-zoned properties running along SR 527; on the east by the east boundary of the University of Washington Bothell/Cascadia Community College Campus (UWB/CCC); on the south by the Sammamish River corridor; and on the west by property and zoning lines generally dividing the upper and lower slopes of Westhill.

Proponent

City of Bothell

Lead Agency

City of Bothell

Responsible Official

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Required Approvals

In order to implement the Proposed Alternative, the following must be approved by the City Council:

- adoption of a final *Downtown Subarea Plan and Regulations* comprising amendments to the City's Comprehensive Plan and Bothell Municipal Code;
- adoption of a Planned Action Ordinance; and
- selection of locations for public facilities including but not limited to City Hall.

Prior to City action, the State of Washington Department of Community, Trade and Economic Development will coordinate state agency review of legislative proposals.

After the City action, the likely permits to be acquired by individual development proposals include but are not limited to: land use permits, construction permits, building permits, and street use permits.

Planned Action Environmental Impact Statement Process

Emphasizing quality environmental review of early planning efforts and early public input to shape decisions, the State Environmental Policy Act (SEPA) provides for a Planned Action process. The basic steps in designating planned action projects are to prepare an environmental impact statement (EIS), designate the planned action projects by ordinance, and review permit applications for consistency with the designated planned action. The intent is to provide more detailed environmental analysis during formulation of planning proposals, rather than at the project permit review stage.

The Planned Action designation by a jurisdiction reflects a decision that adequate environmental review has been completed and further environmental review under SEPA, for each specific development proposal or phase, will not be necessary if it is determined that each proposal or phase is consistent with the development levels specified in a Planned Action Ordinance. Although future proposals that qualify as Planned Actions would not be subject to additional SEPA review, they would be subject to application notification and permit process requirements.

The Planned Action Ordinance is expected to encourage redevelopment and revitalization in Downtown Bothell. Property owners and potential developers will be encouraged to redevelop in Downtown Bothell by the streamlined development process that takes place under a planned action process. This EIS will help the City identify impacts of development and specific mitigation measures that developers will have to meet to qualify for a Planned Action project.

Environmental Impact Statement Authors and Principal Contributors

This document has been prepared under the direction of the City of Bothell Community Development Department. Principal and contributing consultants are listed below.

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Date of Draft Environmental Impact Statement Issuance

December 22, 2008

Date Comments Due

January 21, 2009

Public Comment

The City of Bothell will accept written comments from issuance on December 22, 2008, until **5:00 p.m., January 21, 2009**. Provide written comments to the responsible official as follows:

William R. Wiselogle, Director
 Department of Community Development
 City of Bothell
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Or email comments to david.boyd@ci.bothell.wa.us.

In addition, the City will accept public comments at the City Council hearing scheduled for Tuesday, January 6, 2009, 6:00 p.m. or later, in the Bothell Municipal Court/Council Chambers, located at 10116 NE 183rd Street, Bothell, WA.

Date of Implementation

Spring 2009

Previous Environmental Documents

Prior environmental review was conducted for the City's Comprehensive Plan and subsequent amendments, including the following EISs.

- *Final Environmental Impact Statement for the City of Bothell Proposed Comprehensive Plan 1993*
- 2001 Selected Amendments to the *Imagine Bothell... Comprehensive Plan* and Bothell Municipal Code, an integrated SEPA/GMA document incorporating a Final Environmental Impact Statement, addressed proposed changes in downtown building heights.
- *Imagine Bothell... 2004–2005 Comprehensive Plan and Code Update Final Environmental Impact Statement*, addressed citywide policies, critical areas regulations, and land use changes in and outside of downtown. Subsequent Supplemental EISs were prepared for plan amendments in 2005, 2006, and 2007.
- *SR 522, University of Washington, Bothell/Cascadia Community College south access project: environmental assessment*. 2002. U.S. Department of Transportation, Federal Highway Administration and Washington State Department of Transportation.

Where appropriate, relevant information found in prior environmental documents is also considered in this Draft EIS.

Location of Background Information

See “Contact Person” above.

Draft Environmental Impact Statement Purchase Price

Copies of the Draft EIS can be obtained from the City of Bothell Department of Community Development (see “Contact Person”) for the cost of production. Compact disks are also available. The document is also posted on the City’s website: <http://search.ci.bothell.wa.us/documents/cm/dwntwnPlan/index.htm>. The document is also available as a reference at the Bothell Regional Library located at 18215 98th Avenue NE, Bothell, WA 98011.

Table of Contents

Chapter 1. Environmental Summary.....	1-1
1.1. Introduction	1-1
1.2. Proposed Action and Location	1-1
1.2.1. Proposed Action.....	1-1
1.2.2. Location	1-2
1.3. Description of Alternatives	1-2
1.4. Summary of Potential Impacts and Mitigation Measures	1-3
1.5. Major Issues to Be Resolved	1-18
1.6. Significant Unavoidable Adverse Impacts.....	1-18
1.6.1. Natural Environment	1-18
1.6.2. Air Quality	1-18
1.6.3. Land Use Patterns/Plans and Policies	1-18
1.6.4. Aesthetics	1-19
1.6.5. Transportation.....	1-19
1.6.6. Noise.....	1-19
1.6.7. Cultural Resources.....	1-19
1.6.8. Public Services.....	1-20
1.6.9. Utilities	1-20
 Chapter 2. Description of the Alternatives	 2-1
2.1. Introduction	2-1
2.2. Background.....	2-2
2.2.1. Growth Management Act	2-2
2.2.2. City of Bothell Comprehensive Plan.....	2-3
2.2.3. Development Regulations	2-4
2.3. Alternatives	2-4
2.3.1. Introduction	2-4
2.3.2. Comparison of Alternatives	2-7
2.3.3. Growth Forecasts.....	2-23
2.3.4. Planning Commission Recommendations.....	2-28
2.3.5. Other Future Alternatives	2-32
2.3.6. Alternatives Eliminated From Consideration	2-32
2.3.7. Benefits and Disadvantages of Delaying the Proposed Alternative.....	2-35

2.4. Environmental Review.....2-35
2.4.1. Purpose2-35
2.4.2. Prior Environmental Review2-35
2.4.3. Current Environmental Review2-36

Chapter 3. Affected Environment 3-1

3.1. Natural Environment.....3.1-1
3.1.1. Affected Environment3.1-1
3.1.2. Impacts.....3.1-22
3.1.3. Mitigation Measures3.1-32
3.1.4. Significant Unavoidable Adverse Impacts.....3.1-34
3.2. Air Quality.....3.2-1
3.2.1. Affected Environment3.2-1
3.2.2. Impacts.....3.2-7
3.2.3. Mitigation Measures3.2-18
3.2.4. Significant Unavoidable Adverse Impacts.....3.2-24
3.3. Land Use Patterns/Plans and Policies.....3.3-1
3.3.1. Affected Environment3.3-1
3.3.2. Impacts.....3.3-20
3.3.3. Mitigation Measures3.3-47
3.3.4. Significant Unavoidable Adverse Impacts.....3.3-50
3.4. Aesthetics.....3.4-1
3.4.1. Affected Environment3.4-1
3.4.2. Impacts.....3.4-10
3.4.3. Mitigation Measures3.4-30
3.4.4. Significant Unavoidable Adverse Impacts.....3.4-31
3.5. Transportation3.5-1
3.5.1. Affected Environment3.5-1
3.5.2. Impacts.....3.5-16
3.5.3. Mitigation Measures3.5-34
3.5.4. Significant Unavoidable Adverse Impacts.....3.5-36
3.6. Noise3.6-1
3.6.1. Affected Environment3.6-1
3.6.2. Impacts.....3.6-6
3.6.3. Mitigation Measures3.6-10
3.6.4. Significant Unavoidable Adverse Impacts.....3.6-12
3.7. Cultural Resources3.7-1
3.7.1. Affected Environment3.7-1
3.7.2. Impacts.....3.7-9

3.7.3. Mitigation Measures	3.7-25
3.7.4. Significant Unavoidable Adverse Impacts	3.7-29
3.8. Public Services	3.8-1
3.8.1. Affected Environment	3.8-1
3.8.2. Impacts	3.8-12
3.8.3. Mitigation Measures	3.8-17
3.8.4. Significant Unavoidable Adverse Impacts	3.8-19
3.9. Utilities	3.9-1
3.9.1. Affected Environment	3.9-1
3.9.2. Impacts	3.9-9
3.9.3. Mitigation Measures	3.9-14
3.9.4. Significant Unavoidable Adverse Impacts	3.9-19
Chapter 4. References Cited	4-1
4.1. Printed References	4-1
4.2. Personal Communications	4-8
Chapter 5. Distribution List	5-1
5.1. Federal Agencies	5-1
5.2. Tribal, State, and Regional Agencies	5-1
5.3. Cities and Neighboring Planning Departments	5-2
5.4. Public Services, Transportation, and Utilities	5-2
5.5. Individuals and Companies	5-3
5.6. City Officials, Commissions, and Departments	5-3

Appendices

- Appendix A. Draft Planned Action Ordinance
- Appendix B. Determination of Significance and Scoping Notice
- Appendix C. SEPA Environmental Checklist
- Appendix D. Technical Memorandum: GHG Emission Estimates for Downtown Bothell Subarea Development
- Appendix E. Downtown Bothell Buildable Lands Analysis
- Appendix F. City of Bothell Downtown Transportation Needs Analysis—Existing Conditions Report
- Appendix G. City of Bothell Downtown Transportation Needs Analysis— Downtown Revitalization Transportation Plan
- Appendix H. Bothell Historic Resources Inventory
- Appendix I. Downtown Revitalization Water System Analysis and Proposed Improvements
- Appendix J. Downtown Revitalization Sewer System EIS Analysis and Proposed Improvements

Tables

Table 1 1.	Summary of Potential Impacts of Proposed Alternative and No Action Alternative	1-4
Table 1 2.	Summary of Potential Land Use and Aesthetic Impacts of Proposed Alternative, No Action Alternative, and Planning Commission Recommendations.....	1-15
Table 2-1.	Elements Contained in Current Comprehensive Plan	2-3
Table 2-2.	Comparison of Primary Alternatives and Planning Commission Recommendations.....	2-9
Table 2-3.	Proposed Capital Improvements by Alternative.....	2-23
Table 2-4.	Population, Housing, and Employment Comparison	2-24
Table 2-5.	Proposed Square Footage and Dwelling Units of New Development through 2035—Proposed Alternative	2-26
Table 2-6.	Maximum Height Comparison—Proposed Alternative and Planning Commission Recommendations	2-28
Table 2-7.	Districts Comparison—Proposed Alternative and Planning Commission Recommendations.....	2-31
Table 3.1-1.	303(d)-Listed Waters in the Study Area.....	3.1-12
Table 3.1-2.	Localized Flooding and Drainage Problems and Solutions	3.1-16
Table 3.1-3.	Special Status Wildlife that Could Occur in the Study Area.....	3.1-19
Table 3.2-1.	National and State of Washington Ambient Air Quality Standards	3.2-1
Table 3.2-2.	Proposed Alternative Contribution to Forecast 2035 Regional Population and Vehicle Miles Traveled	3.2-10
Table 3.2-3.	Carbon Monoxide Hot-Spot Modeling Results (in ppm)	3.2-12
Table 3.2-4.	Assumed Land Use Growth (2000–2035) for Greenhouse Gas Emission Calculations	3.2-15
Table 3.2-5.	Calculated GHG Emission Reductions Associated with TOD	3.2-17
Table 3.3-1.	Commercial Land Uses in Study Area.....	3.3-3
Table 3.5-1.	Average Daily Traffic Volumes on Major Corridors—Existing (2006)	3.5-5
Table 3.5-2.	Neighborhood Street Traffic Volumes—Existing (2006)	3.5-7
Table 3.5-3.	Level of Service Criteria for Intersections	3.5-8
Table 3.5-4.	Signalized Intersections Level of Service Summary—Existing (2006)	3.5-9

Table 3.5-5. Unsignalized Intersections Level of Service Summary—Existing (2006) 3.5-9

Table 3.5-6. Signalized Intersections PM Peak-Hour Level of Service Summary—No Action Alternative (2035) 3.5-21

Table 3.5-7. Unsignalized Intersections PM Peak-Hour Level of Service Summary—No Action Alternative (2035) 3.5-23

Table 3.5-8. Average Daily Traffic Volumes on Major Corridors—No Action Alternative (2035)..... 3.5-23

Table 3.5-9. Neighborhood Street Average Daily Traffic Volumes—No Action Alternative (2035)..... 3.5-24

Table 3.5-10. Required Off-Street Parking Spaces—No Action Alternative (2035) 3.5-25

Table 3.5-11. Signalized Intersections PM Peak-Hour Level of Service Summary—Proposed Alternative (2035) 3.5-29

Table 3.5-12. Unsignalized Intersections PM Peak-Hour Level of Service Summary—Proposed Alternative (2035) 3.5-29

Table 3.5-13. Average Daily Traffic Volumes on Major Corridors—Proposed Alternative (2035)..... 3.5-30

Table 3.5-14. Neighborhood Street Average Daily Traffic Volumes—Proposed Alternative (2035)..... 3.5-31

Table 3.5-15. Required Off-Street Parking Spaces—Proposed Alternative (2035)..... 3.5-32

Table 3.6-1. Typical A-Weighted Sound Levels 3.6-2

Table 3.6-2. Maximum Permissible Noise Levels at Receiving Property Line 3.6-3

Table 3.6-3. Adjustment to Maximum Permissible Noise Levels at Receiving Property Line..... 3.6-4

Table 3.6-4. FHWA Noise Abatement Criteria and WSDOT Impact Criteria 3.6-5

Table 3.6-5. PM Peak-Hour Traffic Volumes of Major Study Area Streets..... 3.6-7

Table 3.6-6. Modeled PM Peak-Hour Noise Levels of Major Study Area Streets 3.6-8

Table 3.7-1. Pacific Northwest General Cultural Sequence 3.7-2

Table 3.7-2. Previously Conducted Cultural Resources Surveys within 1 Mile of the Study Area 3.7-11

Table 3.7-3. Cultural Resources on “Buildable Lands” 3.7-16

Table 3.7-4. Cultural Resources along the Main Street Extension Project Corridor..... 3.7-18

Table 3.7-5. Cultural Resources along the SR 522 Wayne Curve and East of Wayne Curve Project Corridor 3.7-19

Table 3.7-6. Cultural Resources along the Beardslee Boulevard Widening Project Corridor 3.7-19

Table 3.7-7. Cultural Resources along the Non-Motorized Improvements Project Corridor 3.7-20

Table 3.7-8. Cultural Resources on Northshore School District Property 3.7-20

Table 3.7-9. Cultural Resources in the Vicinity of City Hall/Dawson Alternative Sites 3.7-21

Table 3.7-10. Cultural Resources in the Vicinity of the Main Street Enhancement Project 3.7-23

Table 3.7-11. Cultural Resources in the Vicinity of the NE 185th Street Improvements 3.7-25

Table 3.8-1. City of Bothell Emergency Response Fleet 3.8-5

Table 3.8-2. Park and Open Space Inventory 3.8-7

Table 3.8-3. Schools Serving the Study Area 3.8-8

Table 3.8-4. Schools Level of Service 3.8-11

Table 3.8-5. Northshore School District Student Generation Rates 3.8-14

Table 3.9-1. Study Area Sanitary Sewer Infrastructure 3.9-5

Table 3.9-2. Study Area Sanitary Sewer Deficiencies 3.9-6

Table 3.9-3. Storage Analysis—Proposed Alternative 3.9-12

Figures

Figure 2-1.	Study Area.....	2-6
Figure 2-2.	Current Comprehensive Plan Map	2-11
Figure 2-3.	Current Zoning Map.....	2-12
Figure 2-4.	Proposed Land Use and Zoning Districts Map	2-14
Figure 2-5.	Review Process for Planned Action Projects.....	2-17
Figure 2-6.	Proposed Capital Facilities	2-22
Figure 2-7.	Bothell Vicinity	2-25
Figure 2-8.	Buildable Lands	2-27
Figure 2-9.	Opportunity Sites	2-29
Figure 2-10.	Planning Commission Recommendations	2-33
Figure 3.1-1.	Topography	3.1-2
Figure 3.1-2.	Geology	3.1-4
Figure 3.1-3.	Erosive Soils and Known Landslides.....	3.1-7
Figure 3.1-4.	Seismic Hazard Areas	3.1-8
Figure 3.1-5.	Surface Water	3.1-10
Figure 3.3-1.	Existing Land Use.....	3.3-2
Figure 3.4-1.	Visual Character of Main Street.....	3.4-2
Figure 3.4-2.	Visual Character of UWB/CCC Campus.....	3.4-4
Figure 3.4-3.	Visual Character of North of Main Street.....	3.4-5
Figure 3.4-4.	Visual Character of SR 527 Corridor	3.4-7
Figure 3.4-5.	Maximum Building Envelope	3.4-17
Figure 3.4-6.	Conceptual Rendering.....	3.4-20
Figure 3.4-7.	Maximum Heights—Proposed Alternative	3.4-25
Figure 3.5-1.	Roadway Functional Classifications	3.5-3
Figure 3.5-2.	Intersection Traffic Control—Existing (2005)	3.5-4
Figure 3.5-3.	Daily Traffic Volumes—Existing (2006)	3.5-6
Figure 3.5-4.	PM Peak-Hour Traffic Volumes and Level of Service—Existing (2006) ...	3.5-10

Figure 3.5-5. Parking and Loading Zones—Existing (2006)..... 3.5-12

Figure 3.5-6. Study Area Accidents (1998–2000) 3.5-14

Figure 3.5-7. Transit Facilities—Existing (2005) 3.5-17

Figure 3.5-8. Sidewalk Condition—Existing (2005) 3.5-18

Figure 3.5-9. Bicycle Facilities—Existing (2005) 3.5-19

Figure 3.5-10. PM Peak-Hour Traffic Volumes and Level of Service—No Action
Alternative (2035)..... 3.5-22

Figure 3.5-11. Areas Eligible for Transit Parking Reduction..... 3.5-26

Figure 3.5-12. PM Peak-Hour Traffic Volumes and Level of Service—Proposed
Alternative (2035)..... 3.5-28

Figure 3.7-1. Historic Inventory and Designations 3.7-14

Figure 3.8-1. Public Services and Facilities 3.8-2

Figure 3.9-1. Existing Water System 3.9-3

Figure 3.9-2. Existing Sewer System..... 3.9-7

Figure 3.9-3. Proposed Sewer System 3.9-17

Acronyms

ADA	Americans with Disabilities Act
ADD	average daily demand
ADF	average daily flow
ADT	average daily traffic
BACT	Best Available Control Technology
BMC	Bothell Municipal Code
BMPs	best management practices
BO	biological opinion
CAFE	Corporate Automobile Fuel Economy
CAO	Critical Areas Ordinance
CB	Community Business
CFP	Capital Facilities Plan
CFR	Code of Federal Regulations
City	City of Bothell
CLG	Certified Local Government
CO	carbon monoxide
Corps	U.S. Army Corps of Engineers
DAHP	Washington State Department of Archaeology and Historic Preservation
dB	Decibel
dB _A	A-Weighted Decibel
Ecology	Washington State Department of Ecology
ECOSS	Environmental Coalition of South Seattle
EDNA	environmental designation for noise abatement
EIS	environmental impact statement
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FAR	fire-affected rock

FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gas
GMA	Washington State Growth Management Act
gpm	gallons per minute
Hz	Hertz
I	Interstate
IPCC	Intergovernmental Panel on Climate Change
L _{dn}	Day-Night Level
LEED	Leadership in Energy and Environmental Design
L _{eq}	Equivalent Sound Level
LOS	level of service
mg	million gallons
mgd	million gallons per day
mph	miles per hour
MSATs	mobile source air toxics
MTCA	Model Toxics Control Act of the State of Washington
MUGA	Municipal Urban Growth Area
MVSO	Motor Vehicle Sales Overlay
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NRHP	National Register of Historic Places

NSD	Northshore School District
OFM	Washington State Office of Financial Management
OP	Office Professional
PDD	peak daily demand
PM10	fine particulate matter 10 microns or less in size
PM2.5	fine particulate matter 2.5 microns or less in size
ppm	parts per million
PROSAP	Parks, Recreation & Open Space Action Plan
PSCAA	Puget Sound Clean Air Agency
PSRC	Puget Sound Regional Council
PVC	polyvinyl chloride
R-AC	Residential-Activity Center
RTP	Regional Transportation Plan
SEPA	State Environmental Policy Act
SLS&E	Seattle, Lake Shore, and Eastern Railroad
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SPU	Seattle Public Utilities
SR	state route
SSA	sewer service area
TDM	transportation demand management
TIP	transportation improvement program
TMDL	total maximum daily load
TNM	traffic noise model
TOD	transit-oriented development
TSP	total suspended particulates
USFWS	U.S. Fish and Wildlife Service
UW	University of Washington

UWB/CCC	University of Washington Bothell/Cascadia Community College
VMT	vehicle miles traveled
VOC	volatile organic compound
WAC	Washington Administrative Code
WASIST	Washington State Intersection Screening Tool
WDFW	Washington Department of Fish and Wildlife
WSA	water service area
WSDOT	Washington State Department of Transportation

Chapter 1. Environmental Summary

1.1. Introduction

This chapter summarizes significant impacts, mitigation measures, and significant avoidable adverse impacts evaluated in this Draft Environmental Impact Statement (Draft EIS) for the Bothell Downtown Subarea alternatives described below in Section 1.3 and in Chapter 2. This summary is intentionally brief; the reader should consult individual sections in Draft EIS Chapter 3 for detailed information concerning the affected environment, impacts, and mitigation measures.

1.2. Proposed Action and Location

1.2.1. Proposed Action

The future of Downtown Bothell is currently directed by the City's existing *Imagine Bothell... Comprehensive Plan* (City of Bothell 2004a) and the associated subarea plans and implementing regulations that apply to downtown. The City has entered into a new Downtown Subarea planning process to more directly and fully address future land use, transportation, and civic activities in Downtown Bothell. This planning process would amend existing plans and regulations.

In addition, as part of the downtown planning process, and consistent with the State Environmental Policy Act (SEPA) rules, the City is considering a Planned Action Ordinance, which would streamline environmental review for development consistent with the proposed downtown plans and regulations.

1.2.2. Location

The study area reviewed in this Draft EIS consists of approximately 529 acres of land in the center of the southern portion of the City of Bothell. The boundaries are generally defined on the north by segments of Ross Road, NE 186th Street, and commercial-zoned properties running along State Route (SR) 527; on the east by the eastern boundary of the University of Washington Bothell/Cascadia Community College Campus (UWB/CCC); on the south by the Sammamish River corridor; and on the west by property and zoning lines generally dividing the upper and lower slopes of Westhill.

1.3. Description of Alternatives

The Proposed Alternative would amend the City's Comprehensive Plan and development regulations through the adoption of the *Downtown Subarea Plan and Regulations* (Freedman Tung and Bottomley 2008) and corresponding Planned Action Ordinance. The City and its citizens have been working on the *Downtown Subarea Plan and Regulations* since 2006. The plan would create a land use and transportation framework and implement a form-based development code to revitalize downtown. Council adoption of the plan and regulations is anticipated by the end of March 2009.

Concepts include roadway rerouting, new streets, mixed-use redevelopment, and civic investment. SR 522 would be realigned to the south and SR 527 would be extended southward to intercept SR 522 at a "T" intersection. The new SR 527 would be a multiway boulevard that would allow for through lanes and access lanes. Northshore School District (NSD) and Safeway properties would be redeveloped into a compact, walkable mixed-use area. Pop Keeney Stadium would be revised and updated. Main Street would be revitalized and extended with streetscape improvements. City Hall would be redeveloped at its current location, or relocated to a property south of the realigned SR 522, or to the NSD property.

To help facilitate the application of the *Downtown Subarea Plan and Regulations*, the Proposed Alternative includes the adoption of a Planned Action Ordinance. If adopted pursuant to WAC 197-11-164 to 172, the Planned Action Ordinance would indicate that this EIS, when completed, adequately addresses significant impacts of the Proposed Alternative. It would also exempt from future SEPA threshold determinations and EISs those projects that are consistent with the parameters analyzed in this Draft EIS.

The No Action Alternative would retain the current Comprehensive Plan and development regulations. While some aspects of the proposed downtown vision would be implemented, such as many components of the major road improvements, the zoning, design standards, and other features would not change and would not

accommodate the growth stimulated by infrastructure investment in a manner most conducive to the downtown vision. The SEPA review process would not be streamlined via a Planned Action Ordinance; standard review would be required on a per-project basis.

The two primary alternatives represent “bookends” for a range of possible growth levels and locations in the study area. The Planning Commission Recommendations represent a “hybrid” of the two alternatives; they are qualitatively addressed in this Draft EIS, because they are within the “bookends.” The Planning Commission, in its review of the proposed *Downtown Subarea Plan and Regulations*, has proposed a number of changes; these changes are consistent with the general concept and vision of the Proposed Alternative, but vary somewhat in detail. Specifically, it recommends overall reductions in the permitted building heights (but not number of stories) in the heart of the study area. It also proposes retention of current zoning designations around the periphery of the study area, to preserve the single-family residential character of the surrounding neighborhoods. To compensate somewhat for these reductions in allowed density, it proposes expansion of the Downtown Neighborhood District in a few areas.

1.4. Summary of Potential Impacts and Mitigation Measures

Table 1-1 summarizes the environmental impacts and key mitigation measures for each element of the environment evaluated in Chapter 3 of the Draft EIS. The summary focuses on the No Action and Proposed Alternatives.

The Planning Commission Recommendations represent a hybrid of the No Action and Proposed alternatives (primary alternatives); as such, it is covered by the analysis of the primary alternatives. The Planning Commission Recommendations differ with the two primary alternatives in terms of land use and aesthetics effects. Thus Table 1-2 summarizes the potential impacts of the Planning Commission Recommendations in comparison to the two primary alternatives for land use and aesthetics topics alone.

For a complete discussion of the elements of the environment considered in the Draft EIS please refer to Draft EIS Chapter 3.

Table 1-1. Summary of Potential Impacts of Proposed Alternative and No Action Alternative

Proposed Alternative	No Action Alternative
3.1 Natural Environment	
<p>Impacts Common to All Alternatives:</p> <p>The study area will experience redevelopment and growth but the location and intensity of development differ by alternative.</p> <p>Earth: Areas undergoing redevelopment would be subject to erosion hazards until construction has been completed and the disturbed areas permanently stabilized. Development in liquefaction areas would require specific engineering studies and exploration and would most probably require engineered foundations. Sites containing hazardous materials would require remedial actions in accordance with the Model Toxics Control Act; this may include additional excavations and soil treatments.</p> <p>Water: Redevelopment in the downtown area would increase the number of cars, resulting in increased pollutant loading in stormwater-receiving streams, including increased levels of dissolved copper. The Bothell Crossroads project may entail removal of wetland buffer area and construction of a new stormwater outfall to the Sammamish River.</p> <p>Biota: Increased pollutant loading from stormwater runoff, particularly dissolved copper, may have adverse impacts on salmonids in North Creek, the Sammamish River, and Horse Creek.</p>	
<p>Population and housing in the study area are expected to more than double under the Proposed Alternative. This level of growth would normally be expected to be accompanied by a proportional increase in nonpoint source pollution. However, that increase would likely be less than proportional under the Proposed Alternative, because it incorporates capital development projects that focus more growth in downtown, encourage the use of mass transit, and improve the pedestrian/bicycle environment. The Proposed Alternative would nonetheless likely represent an increase in pollutant loading to stormwater, compared to the No Action Alternative, because the No Action Alternative represents a much smaller increase in population and number of housing units, compared to the Proposed Alternative.</p>	<p>Impacts under the No Action Alternative are the same as those described above under "Impacts Common to All Alternatives."</p>
Mitigation Measures	
<p>The Proposed Alternative concentrates a greater portion of future development downtown, where fewer environmentally sensitive features exist, thus protecting less developed areas.</p>	
<p>The City will encourage new development in the study area to utilize Low Impact Development (LID) techniques to reduce stormwater runoff.</p>	
<p>The City will undertake the following actions and condition development accordingly in the study area:</p> <ul style="list-style-type: none"> ▪ Comply with the NPDES Phase II Municipal Stormwater Permit for Western Washington (Ecology 2007). ▪ Prior to the adoption of ordinances in conformance with the NPDES Phase II permit, apply interim stormwater standards (either the current Ecology manual or an equivalent set of standards). 	

Proposed Alternative	No Action Alternative
<ul style="list-style-type: none"> ▪ Support development of total maximum daily load (TMDL) plans for the Sammamish River and North Creek, and comply with TMDL provisions. ▪ Monitor dissolved copper concentrations in municipal stormwater discharges, and use all known and reasonable technologies to achieve the lowest possible dissolved copper concentrations. 	
<p>Applicants for development on potentially contaminated parcels shall be required to conduct a site assessment to determine current contamination status.</p>	
<p>3.2 Air Quality</p>	
<p><i>Impacts Common to All Alternatives</i></p>	
<p>Under all alternatives, the study area will experience gradual growth, including the introduction of mixed-use development. Development under either alternative would generate localized air pollutant emissions during construction activities, and would increase regional vehicle travel and tailpipe emissions.</p>	
<p>Construction: Emissions from construction equipment could slightly degrade local air quality and could cause detectable odors. Stationary equipment must comply with Puget Sound Clean Air Agency (PSCAA) regulations.</p>	<p>Construction: Similar to Proposed Alternative.</p>
<p>Commercial Activity: Both new and existing commercial facilities could use stationary equipment that emits air pollutants. These facilities would be required to list their pollutant-emitting equipment with the PSCAA (Regulation I and Regulation II).</p>	<p>Commercial Activity: Similar to Proposed Alternative.</p>
<p>Transportation Conformity: Although the population and localized vehicle travel in the study area would increase, the increase in tailpipe emissions would be very small relative to overall regional tailpipe emissions. The modeled ambient carbon monoxide (CO) concentrations at all intersections are below the allowable federal limits under 2035 conditions.</p>	<p>Transportation Conformity: Similar to Proposed Alternative.</p>
<p>Mobile Source Air Toxics (MSATs): There may be localized areas where ambient concentrations of MSATs could be temporarily increased with future highway improvement projects. On a regional basis, federal vehicle and fuel regulations and fleet turnover will over time cause substantial reductions that will cause region-wide MSAT levels to be significantly lower than today generally.</p>	<p>Mobile Source Air Toxics: Similar to Proposed Alternative.</p>
<p>Greenhouse Gases (GHG): The Proposed Alternative will reduce regional GHG emissions relative to the No Action Alternative due to increased transit oriented development. The Proposed Alternative would reduce regional GHG emissions by roughly 5,314 metric tons CO₂-equivalent per year compared to the No Action Alternative and business as usual. The GHG emission reductions would beneficially contribute to the state's goal of reducing statewide GHG emissions.</p>	<p>Greenhouse Gases: The No Action Alternative will generate increased regional GHG emissions, compared to the Proposed Alternative.</p>

Proposed Alternative	No Action Alternative
Mitigation Measures	
<p>The Proposed Alternative includes provisions for the improvement of public transit and park-and-ride facilities, which would reduce vehicle travel in the region, and in turn, reduce vehicle emissions.</p>	
<p>At its discretion, the City may require all construction contractors to implement air quality control plans for construction activities in the study area, including BMPs to control fugitive dust and odors.</p>	
<p>All stationary emission sources associated with new commercial facilities would be required to register with PSCAA (Regulation I and Regulation II).</p>	
<p>The City could require development permit applicants to identify the Greenhouse Gas reduction measures included in their projects, and explain why other measures are not included or are not applicable.</p>	
3.3 Land Use Patterns, Plans and Policies	
<i>Impacts Common to All Alternatives</i>	
<p>Under all alternatives, the study area will experience gradual growth, including the introduction of mixed-use development. Location and intensity of growth differ by alternative. Employment and housing would also increase under all alternatives.</p>	
<p>Land use patterns in the Downtown Core and Downtown Neighborhood districts would become more intense, favoring mixed-use and multifamily development and a compact, pedestrian-oriented commercial core. A wider range of uses would also be allowed at greater densities than existing conditions.</p>	<p>Land use patterns would increase in intensity, and a larger percentage of development would not be compatible with the City's downtown vision. Dispersed commercial uses and a general lack of cohesion among adjacent developments would continue to dominate, and surface parking would be located in visible areas.</p>
<p>A significant goal of the Proposed Alternative and form-based zoning in general, is to create compatibility between adjacent developments, adding value. SR 522 Corridor would experience an improvement in building and streetscape design under Proposed Alternative due to introduction of a form-based code.</p>	<p>Existing zoning allows a wider range of physical layouts, which can result in a less cohesive development pattern.</p>
<p>Employment and housing growth under the Proposed Alternative will exceed the No Action Alternative.</p>	<p>Employment and housing mix would increase over existing conditions, but would be less than under the Proposed Alternative.</p>
<p>The Proposed Alternative is generally consistent with the City's Comprehensive Plan goals and policies related to Downtown Bothell. The newly created districts are generally consistent with the existing Comprehensive Plan land use designations applied to land use within downtown. In areas currently characterized by more than one land use designation, the districts generally apply a similar range of uses under a single district designation and purpose statement, simplifying the land use hierarchy in the study area. Some plan and code amendments are needed to integrate the proposed <i>Downtown Subarea Plan and Regulations</i>.</p>	<p>The No Action Alternative retains the current Comprehensive Plan unchanged. Policies and actions that identify the need to address a new downtown plan would not be implemented.</p> <p>Elements of the current Comprehensive Plan are consistent in terms of direction and intent for growth management; however, some of the horizon years differ.</p>

Proposed Alternative	No Action Alternative
Mitigation Measures	
<p>The Proposed Alternative includes mitigation features in the form of the following:</p> <ul style="list-style-type: none"> ▪ sustainability features incorporated into the proposed form-based code (surface water, open space, architectural regulations, etc.); ▪ historic resource protection regulations; ▪ provisions governing uses allowed adjacent to residential zones bordering the study area; ▪ inclusion of the Riverfront Special Overlay to protect views of the Sammamish River; ▪ Mobile Home Special Overlay to preserve mobile homes as affordable housing; and ▪ overlays to protect established single-family neighborhoods in Sunrise Valley and Valley View. 	
<p>As part of a future comprehensive plan update, the City should update horizons years to make them consistent across all elements. This applies to both alternatives.</p>	
<p>As part of the Proposed Alternative the City should amend the following plans and regulations:</p> <ul style="list-style-type: none"> ▪ Amend Comprehensive Plan Subarea boundaries to match the new Downtown Subarea Plan boundaries. ▪ Update the Transportation Element of the comprehensive plan to include all proposed transportation projects. ▪ The City should amend Comprehensive Plan policies and actions that, with the Proposed Alternative, are no longer current. Policies that should be reviewed and possibly updated include: ED-A4 and ED-A24 regarding the preparation of a downtown plan. 	
<p>Zoning code amendments associated with the Proposed Alternative include:</p> <ul style="list-style-type: none"> ▪ Replace BMC 12.64 Downtown Subarea Regulations with the Proposed Alternative’s form-based code. ▪ As part of adopting this new form-based code, examine other zoning code sections to ensure that, at a minimum, proper cross references are made. ▪ Review the regulations in BMC 12.64 to determine which should be retained in some form, moved to another subarea plan, or replaced with the new regulations, as described above. 	
3.4 Aesthetics	
<i>Impacts Common to All Alternatives</i>	
<p>Under all alternatives, the study area will experience gradual growth, including the introduction of mixed-use development. Location and intensity of growth differ by alternative, but building heights are anticipated to increase over existing conditions under all alternatives.</p>	
<p>The concentration of additional building height in the SR 522 and SR 527 corridors could block territorial views (such as to the “feathered edge”) from a few properties located to the north of the study area. The introduction of taller buildings in the Downtown Core could potentially create views that are not currently available.</p>	
<p>Visual Character: The use of more defined districts with unique intents together with the form-based elements of the code are likely to create more predictability with the future development in the study area than the No Action Alternative.</p>	<p>Visual Character: The City’s system of applying multiple zoning designations to the same area, while allowing for flexibility of use, may produce more uncertain aesthetic results than the more prescriptive regulations included under the Proposed Alternative. Redevelopment in the single-family neighborhood north of Main Street may introduce more intense uses that would conflict with existing residential character.</p>

Proposed Alternative	No Action Alternative
<p>Height and Bulk: The proposed maximum heights are generally higher than existing buildings. As a result, redevelopment under the Proposed Alternative could affect pedestrian comfort in these environments and create temporary conflicts of scale with existing development. Maximum heights would increase in some areas, such as the Downtown Core District, and decrease in others, such as the Downtown Neighborhood District and portions of the Downtown Transition District. Increased heights and decreased setbacks may cause conflicts of scale with lower-density existing development, both within the study area and in adjacent areas. The application of design standards, with special attention to upper story setbacks, would be necessary to minimize conflicts of scale. Within the subarea, the various districts act to provide a transition in scale. However, the Proposed Alternative contains the potential for conflicts of scale with development surrounding the study area.</p>	<p>Height and Bulk: Under the No Action Alternative, the building heights could increase in R-AC zones surrounding the intersection of SR 522 and SR 527. These zones currently contain a number of properties developed at heights below the maximum allowed by code. Redevelopment at the full allowed height could cause isolated conflicts of scale with the existing historic development. Redevelopment near Main Street is not subject to the design guidelines of the Proposed Alternative, and may adversely impact historic properties in the area.</p>
<p>Light and Glare: Increased presence of retail and entertainment uses in the study area may create additional light and glare from exterior illumination. Increased automobile traffic may also generate additional nighttime glare.</p>	<p>Light and Glare: More commercial growth will occur over existing conditions and could add light and glare from exterior illumination, though to a lesser degree with expected lower growth. Traffic volumes and the potential for nighttime glare is similar the Proposed Alternative.</p>
<p>Mitigation Measures</p>	
<p>The Proposed Downtown Subarea Plan contains design guidelines governing height, massing, lighting, parking, setbacks, historic resource protection, and sustainability features for new development.</p>	
<p>The No Action Alternative would continue the Urban Design Element goals and policies set forth in the Comprehensive Plan, as well as sections 12.14.170–12.14.230 BMC, which contain provisions for exterior building and site design.</p>	
<p>The City could consider revising maximum allowable heights in zones/districts that border the edge of the study area to reduce impacts on surrounding development and aid transitions from residential areas to the more urban downtown. The Planning Commission Recommendations provide an example of this type of approach.</p>	
<p>To reduce potential impacts on territorial views, green roofs and roof gardens could be encouraged on all development in the study area through the use of incentives such as alternative stormwater requirements, parking standards, or other.</p>	

Proposed Alternative	No Action Alternative
3.5 Transportation	
<p>Concurrency: SR 522 Corridor between 96th Avenue NE and Kaysner Way would improve from the current LOS D to LOS C. LOS C meets the concurrency requirements and is a two-grade improvement over the No Action Alternative.</p>	<p>Concurrency: SR 522 Corridor between 96th Avenue NE and Kaysner Way would degrade from LOS D to LOS E, which still meets concurrency requirements.</p>
<p>Signalized Intersections: LOS for individual signalized intersections in the study area would degrade by 1-2 levels. The average vehicle delay would less under the Proposed Alternative than under the No Action Alternative, except for the SR 527/NE 190th Street intersection, which would remain at LOS E. No intersections would deteriorate to LOS F.</p>	<p>Signalized Intersections: LOS for signalized intersections in the study area would degrade 1-2 levels (varies by location). The intersection of SR 522 and SR 527 would degrade to LOS F.</p>
<p>Unsignalized Intersections: Under the Proposed Alternative, LOS at all but three unsignalized intersections would be degraded by 2035 compared to existing conditions. Two of the three Main Street intersections would operate at LOS F. The LOS could be improved by installing traffic signals. However more detailed traffic simulation studies indicate that traffic operations along the street may remain slow. Additionally, implementing mitigation measures such as signals may not be consistent with the character of the street. Providing streets that maximize vehicle flow may not be consistent with providing on-street parking, a shopping environment, or safe and efficient pedestrian movements.</p>	<p>Unsignalized Intersections: Under the No Action Alternative, LOS results at unsignalized intersections would be similar to the Proposed Alternative.</p>
<p>Major Corridor Volumes: Average Daily Traffic volumes for major traffic corridors would increase throughout the street system compared to existing conditions. The increases would vary somewhat from under the No Action Alternative, but the largest increases would be along north-south arterials.</p>	<p>Major Corridor Volumes: Average Daily Traffic volumes for major traffic corridors would increase by an amount similar to the Proposed Alternative, though distribution would differ by location. The largest increases would be along the north-south arterials.</p>
<p>Neighborhood Street Volumes: ADT volumes on neighborhood streets would be lower under the Proposed Alternative than under the No Action Alternative. Volumes would decrease compared to existing conditions on NE 188th Street east of 92nd Avenue NE, similar to the No Action Alternative, but would also decrease on 91st/92nd Avenue NE west of SR 522, due to the diversion of neighborhood traffic to the improved 98th Avenue/185th Street corridor. Further reduction of neighborhood traffic is dependent on providing additional arterial capacity by widening SR 527 north of the study area to SE 228th Street.</p>	<p>Neighborhood Street Volumes: Under the No Action Alternative, ADT volumes would increase on all neighborhood streets compared to existing conditions, except for on NE 188th Street east of 92nd Avenue NE.</p>

Proposed Alternative	No Action Alternative
<p>Parking: Under the Proposed Alternative, parking requirements for commercial land uses would be reduced in line with the allowed reductions in the current code. The Proposed Alternative also includes a reduction in the amount of required multifamily residential parking. Parking rates would decrease due to improved transit access, mixed uses, and shared parking. The proposed residential parking standard reductions are comparable to published parking demand surveys for multifamily residential land uses.</p>	<p>Parking: Under the No Action Alternative, the existing parking regulations would remain in place. Off-street parking rate reductions are possible, and require administrative approval based on transit service.</p>
<p>Mitigation Measures</p>	
<p>Both the No Action and Proposed Alternatives include future transportation improvement projects that will benefit the study area. These projects are described in detail in Chapter 2.</p>	
<p>The City has adopted a Commute Trip Reduction program; participating employers encourage their employees to reduce vehicle miles of travel and single-occupant commutes.</p>	
<p>Pedestrian and transit facilities are required to be provided by developers under City code.</p>	
<p>The City may consider additional coordination with local transit agencies to achieve the following:</p> <ul style="list-style-type: none"> ▪ Promote transit usage through coordination of bus routes and scheduling. ▪ Develop level of service standards that include the percentage of residents living within a specified distance of transit routes and establishing appropriate bus frequencies. ▪ Implement employer outreach programs to promote the use of alternative transportation modes. ▪ Encourage employers to provide incentives for employees to commute by transit, ridesharing, or other alternative means. 	
<p>The City should implement a parking management plan for the study area. If parking demand exceeds available supply, further mitigation measures could include:</p> <ul style="list-style-type: none"> ▪ hourly time restrictions; ▪ parking meters; ▪ residential neighborhood parking permits; ▪ modification of code parking requirements; and ▪ construction of additional parking. 	

Proposed Alternative	No Action Alternative
3.6 Noise	
<i>Impacts Common to all Alternatives</i>	
Development under any alternative would result in temporary increases in noise levels from construction activities. Future traffic volumes would increase on local streets within the study area. These traffic increases would result in higher ambient noise levels from moving and idling traffic at residential dwelling units constructed adjacent to the streets.	
Redevelopment in the study area would require construction activity, which would produce temporary increases in noise levels.	Noise impacts would be similar to the Proposed Alternative.
The combination of roadway widening, increased traffic volumes, and rerouting of buses would increase peak-hour Leq noise levels at existing homes adjacent to the NE 185th St/98th Ave NE Connector north of SR 522 by as much as 9 dBA. That forecast peak-hour increase is less than WSDOT's "substantial increase" impact threshold of 10 dBA.	The No Action Alternative does not include the NE 185th Street/98th Avenue NE Connector project.
The potential improvement of NE 185th Street and its extension to 98th Avenue NE, included under the Proposed Alternative, would shift transit facilities from SR 522 and Main Street to NE 185th Street and the NE 185th Street/98th Avenue NE Connector. Buses decelerating, accelerating, and idling at bus stops along NE 185th Street and 98th Avenue NE would increase ambient noise and that could affect adjacent homes. However, since the exact bus-stop locations have not been determined, the significance of the noise impact on nearby land use cannot be identified at this time.	The No Action Alternative does not include the NE 185th Street/98th Avenue NE Connector project. Bus routes would remain focused on SR 522 and Main Street.
Mechanical equipment associated with new commercial development has the potential to increase ambient noise levels if control measures are not implemented.	Noise impacts would be similar to the Proposed Alternative.
Mitigation Measures	
Current city regulations address nighttime construction and require a noise control study demonstrating compliance with the City's nighttime noise ordinance limits.	
Current city regulations require the use of low-noise mechanical equipment at office and retail facilities adequate to comply with the City noise ordinance limits.	
If State or Federal funds are used, road improvements will be required to adhere to the noise standards used by WSDOT.	
Based on site specific considerations at the time of construction permit review, the City will have the discretion to require all construction contractors to implement noise control plans for construction activities during temporary daytime construction activities.	
The City may reduce the potential for excessive bus noise by locating bus stops away from single-family land uses. If bus stops will have to be installed in front existing homes, the City could mitigate the impacts by installing double-pane windows combined with new air conditioners to these impacted homes next to bus stops.	

Proposed Alternative	No Action Alternative
<p>3.7 Cultural Resources</p>	
<p><i>Impacts Common to all Alternatives</i></p> <p>All analyzed alternatives include growth and development that has the potential to impact cultural resources, depending on proximity; most likely properties for potential impact are those on the historic inventory that are considered subject to redevelopment according to buildable lands or opportunity sites analysis.</p> <p>The SR 522 Bothell Crossroads project is planned in the vicinity of an identified cultural resource at 17909 Bothell Way (Brooks Biddle Chevrolet).</p> <p>The SR 527 projects are planned in the vicinity of an identified cultural resource at 18603 Bothell Way NE (W.A. Anderson School).</p> <p>The Main Street Extension project could have an adverse effect at properties on the historic inventory located at: 18221 Bothell Way NE (Safeway); 18204 98th Avenue NE (1947 House); and 18212 98th Avenue NE (Unnamed).</p> <p>The SR 522 Wayne Curve improvement projects could have adverse effects on seven identified cultural resources along Bothell Way NE (See Section 3.7 for a complete list).</p> <p>The Beardslee Boulevard Widening project could have adverse effects on identified cultural resources at 18821 Beardslee Boulevard and 18225 NE Campus Parkway.</p> <p>Non-motorized transportation improvements in the study area could have adverse effects on ten identified cultural resources, located primarily along 104th Avenue NE.</p> <p>Purchase and/or redevelopment of the Northshore School District property could adversely affect the W.A. Anderson School at 18603 Bothell Way NE.</p> <p>The City Hall/Dawson Replacement project could adversely affect several identified cultural resources, depending on the location chosen (See Section 3.7 for a complete list).</p>	
<p>The Proposed Alternative supports greater growth in the study area than the No Action Alternative. With greater growth levels comes greater redevelopment to accommodate the growth, and therefore a higher likelihood of impacts on cultural resources. While the growth and capital facility impacts are potentially greater than under the No Action Alternative, the Proposed Alternative provides for additional protection for historic resources.</p>	<p>The study area would undergo less growth than under the Proposed Alternative; however, because this growth could occur on any property in the study area, potential impacts on cultural resources are the same under both alternatives.</p>
<p>The Proposed Alternative proposes enhancing the existing Main Street by refreshing the streetscape and considering reinstating the straight alignment with parallel parking on each side. The proposed Main Street Enhancement project could have adverse impacts on several cultural resources that are located along the project corridor. Potential impacts may also extend to other elements that comprise the existing streetscape. However, the overall intent of the project is to enhance the existing businesses, possibly restore the original street configuration, and provide a more uniform palette of street furnishings that would complement the historic character of the street.</p>	<p>The No Action Alternative does not propose Main Street enhancements.</p>
<p>The NE 185th Transit-Oriented Street and Extension and the NE 185th Street Downtown Transit Center and Park and Ride have the potential to adversely affect cultural resources in the study area (See Section 3.7 for more information).</p>	<p>The No Action Alternative does not propose NE 185th Street improvements.</p>

Proposed Alternative	No Action Alternative
Mitigation Measures	
<p>The Proposed Alternative incorporates regulations to preserve historic resources.</p>	
<p>Reconstruction or adaptive reuse of historic properties would be required to meet U.S. Secretary of the Interior Standards for the Treatment of Historic Properties.</p>	
<p>Proposed development that could impact properties in the study area that are listed on national, state, or local historic registers must comply with the historic resources regulations included in the Downtown Subarea Plan and Regulations.</p>	
<p>Where development activity is proposed on a property that is included in the Bothell Historic Resources Inventory, the project would be required to undergo administrative review, consistent with the provisions of BMC 22.28 to determine whether it is an historic resource. If the property is determined to be an historic resource, then the proposed project must comply with the Historic Resources Regulations provided in the proposed <i>Downtown Subarea Plan and Regulations</i>.</p>	
<p>Archaeological testing must be completed for proposed projects that involve significant excavation or any changes made to the vegetation and landforms near existing waterways in the study area. Archaeological project monitoring is suggested for subsurface excavation and construction in these high probability areas.</p>	
<p>In the event that a future development project in the study area is proposed on or immediately surrounding a site containing an archaeological resource, the potential impacts on the archaeological resource must be considered and, if needed, a study conducted by a qualified archaeologist to determine whether the proposed development project would materially impact the archaeological resource. Avoidance and other measures to reduce impacts are described in Section 3.7.</p>	
<p>Non-site-specific mitigation could include development of an educational program, interpretive displays, design guidelines, or professional publications.</p>	
3.8 Public Services	
<p>Police Protection: Increased population within the City and study area could increase the demand for police service and the number of calls for assistance received.</p>	<p>Police Protection: Impacts are similar to the Proposed Alternative.</p>
<p>Fire Protection: Increased development in the City and study area would require an additional 2.43 fire stations to meet level of service standards.</p>	<p>Fire Protection: Impacts are similar to the Proposed Alternative.</p>
<p>Parks and Recreation: Considering City and study area population increases, the Proposed Alternative would increase demand for public parkland by 81.2 acres and increase the City's existing parkland deficit.</p>	<p>Parks and Recreation: Considering City and study area population increases, the No Action Alternative would increase public demand for public parkland by 79.2 acres and increase the City's existing parkland deficit.</p>
<p>Schools: The Proposed Alternative would add up to 587 students in 2035.</p>	<p>Schools: The No Action Alternative would add up to 286 students in 2035.</p>
Mitigation Measures	
<p>The Proposed Alternative includes regulations requiring the dedication of open space as part of future development.</p>	
<p>The City has commissioned the preparation of a fire facility needs study, and all future development will be required to comply with the City's fire code.</p>	
<p>The 2008 update of the City's Parks, Recreation & Open Space Action Plan recommends the acquisition of 59.8 acres of parkland by 2035 to reduce the City's park deficit.</p>	

Proposed Alternative	No Action Alternative
<p>The City has included the following park-related projects in their Capital Facilities Plan:</p> <ul style="list-style-type: none"> ▪ North Creek Schoolhouse: Relocation of a historic structure to Centennial Park. ▪ The Park at North Creek: Development of a community park at the current location of a King County underground wastewater storage tank. ▪ Regional Aquatic Center and Community Center: Construction of a new aquatic center to replace the existing community pool. 	

Increased use of on-site security measures could reduce the need for increased police protection in the study area.

3.9 Utilities

<p>Water: The Proposed Alternative would increase the need for water storage and increase fire flow requirements within the study area. These increases would exacerbate an existing water storage deficiency. If nesting of storage is allowed, surplus water storage would be projected.</p>	<p>Water: The No Action Alternative would increase the need for water storage and increase fire flow requirements within the study area, though not to as great a degree as the Proposed Alternative. These increases would exacerbate an existing water storage deficiency. If nesting of storage is allowed surplus water storage would be projected.</p>
<p>Wastewater: Average Daily Flows under the Proposed Alternative would increase and exacerbate existing wastewater infrastructure deficiencies in the study area.</p>	<p>Wastewater: Average Daily Flows under the No Action Alternative would increase and exacerbate existing wastewater infrastructure deficiencies in the study area though to a lesser degree than the Proposed Alternative.</p>
<p>Solid Waste: Increased development in the study area will increase the demand for solid waste services and the amount of space required to collect and store waste.</p>	<p>Solid Waste: Similar to Proposed Alternative</p>

Mitigation Measures

The Bothell Crossroads and SR 527 projects included under both the Proposed and No Action Alternatives include provisions for utility upgrades within their rights-of-way.

The Proposed Alternative regulations include a standard that requires solid waste, recycling, and food waste to be located away from street frontages and screened from view.

The City's 2009-2015 Capital Facilities Plan includes funding for the design and construction of expansion/replacement of the Penn Park Reservoir.

The City's 2006 Wastewater System Comprehensive Plan includes a number of capital improvements, located within the study area, and designed to correct existing system deficiencies.

The City regulates solid waste collection container sizes, locations and screening through the Bothell Municipal Code.

The City should consider nesting fire suppression storage within standby storage to reduce future deficits in water system storage capacity.

In order to accommodate increased wastewater flows from the Proposed Alternative, the City should implement the improvements recommended by Gray & Osborne in their November 2008 analysis. See Section 3.9.

The City should consider altering their solid waste standards as recommended in *Solid Waste Collection in Mixed Use Settings* (ICF Jones & Stokes 2008).

Table 1-2. Summary of Potential Land Use and Aesthetic Impacts of Proposed Alternative, No Action Alternative, and Planning Commission Recommendations

Topic	Proposed Alternative	No Action Alternative	Planning Commission Recommendations
Land Use Patterns	Land use patterns in the Downtown Core and Downtown Neighborhood districts would become more intense, favoring mixed-use and multifamily development. A wider range of uses would also be allowed at greater densities than existing conditions.	Land use patterns would increase in intensity, and a larger percentage of development would not be compatible with the City's downtown vision. Dispersed commercial uses and a general lack of cohesion among adjacent developments would continue to dominate, and surface parking would be located in visible areas.	<p>Similar to the Proposed Alternative, Planning Commission Recommendations promote new districts including the Downtown Core, Downtown Neighborhood, and General Downtown Corridor among others.</p> <p>The Planning Commission Recommendations eliminate the Downtown Transition District, retaining the current zoning designations around the periphery of the study area similar to the No Action Alternative.</p>
Land Use Compatibility	A significant goal of the Proposed Alternative, and form-based zoning in general, is to create compatibility between adjacent developments, adding value. The 522 Corridor would experience an improvement in building and streetscape design under Proposed Alternative due to introduction of form-based code.	Existing zoning allows a wider range of physical layouts, which can result in a less cohesive development pattern.	<p>The Planning Commission recommends eliminating the Downtown Transition District to avoid any commercial uses directly adjacent to single-family zones on the periphery of the study area.</p> <p>The Planning Commission's recommendation to retain areas characterized by single-family residential development near the entrance to Beardslee Place in existing zoning would eliminate the anticipated impact on land use compatibility for this area under the Proposed Alternative.</p>
Employment and Housing Mix	Employment and housing growth under the Proposed Alternative will exceed the No Action Alternative.	Employment and housing mix would increase over existing conditions, but would be less than under the Proposed Alternative.	The Planning Commission Recommendations are expected to accommodate a slightly smaller percentage of population and employment growth in the study area and its vicinity than the Proposed Alternative due to the change in peripheral zones, but greater than the No Action Alternative due to the mixed use districts in the central part of the study area.
Plans and Policies	The Proposed Alternative is generally consistent with the City's Comprehensive Plan goals and policies and land use designations related to Downtown Bothell. In areas currently characterized by more than one land use	The No Action Alternative retains the current Comprehensive Plan unchanged. Policies and actions that identify the need to address a new downtown plan would not be implemented.	The Planning Commission Recommendations are generally similar to the Proposed Alternative in their consistency with the City's Comprehensive Plan goals and policies related to the study area. They would implement a

Topic	Proposed Alternative	No Action Alternative	Planning Commission Recommendations
	<p>designation, the districts generally apply a similar range of uses under a single district designation and purpose statement, simplifying the land use hierarchy in the study area. Some plan and code amendments are needed to integrate the proposed <i>Downtown Subarea Plan and Regulations</i>.</p>	<p>Elements of the current Comprehensive Plan are consistent in terms of direction and intent for growth management; however, some of the horizon years differ.</p>	<p>new downtown plan, but would generally provide a lower intensity, transition between the study area and surrounding neighborhoods.</p> <p>There is a somewhat stronger emphasis on the preservation of and/or transition to existing residential neighborhoods consistent with land use and housing goals and policies. In terms of economic development and urban design goals, the Planning Commission Recommendations would not realize the benefits of the form-based code as widely.</p> <p>Some policy and regulatory amendments would be needed to incorporate the Planning Commission Recommendations into the adopted Comprehensive Plan and municipal code.</p>
<p>Visual Character</p>	<p>The use of more defined districts with unique intents together with the form-based elements of the code are likely to create more predictability with the future development in the study area than the No Action Alternative.</p>	<p>The City's system of applying multiple zoning designations to the same area, while allowing for flexibility of use, may produce more uncertain aesthetic results than the more prescriptive regulations included under the Proposed Alternative. Redevelopment in the largely single-family neighborhood north of NE 185th Street may introduce more intense uses that would conflict with existing residential character.</p>	<p>Potential changes to visual character are anticipated to be generally similar to under the Proposed Alternative, except in those areas where district boundaries differ or where existing zoning is retained.</p>
<p>Height and Bulk</p>	<p>The proposed maximum heights are generally higher than existing buildings. Maximum heights would increase in some areas, such as the Downtown Core District, and decrease in others, such as the Downtown Neighborhood District and portions of the Downtown Transition District. Increased heights and decreased setbacks may cause conflicts of scale with lower-density existing development, both within the study area and in adjacent areas. The application of design standards, with special attention to upper story setbacks, would be necessary to minimize conflicts of</p>	<p>Under the No Action Alternative, the building heights could increase in R-AC zones surrounding the intersection of SR 522 and SR 527. These zones currently contain a number of properties developed at heights below the maximum allowed by code. Redevelopment at the full allowed height could cause isolated conflicts of scale with the existing historic development. Redevelopment near Main Street is not subject to the design guidelines of the Proposed Alternative, and may adversely impact historic properties in the area.</p>	<p>In general, the Planning Commission Recommendations call for lower height limits than the Proposed Alternative, but higher limits than the No Action Alternative. In most cases, the Planning Commission Recommendations allow the same maximum number of floors as the Proposed Alternative, but absolute height in feet is capped at a lower value.</p>

Topic	Proposed Alternative	No Action Alternative	Planning Commission Recommendations
	<p>scale. Within the subarea, the various districts act to provide a transition in scale. However, the Proposed Alternative contains the potential for conflicts of scale with development surrounding the study area.</p>		
Views	<p>The concentration of additional building height in the SR 522 and SR 527 corridors could block territorial views. The introduction of taller buildings in the Downtown Core could potentially create views that are not currently available.</p>	<p>Similar to the Proposed Alternative.</p>	<p>View impacts under the Planning Commission Recommendations are anticipated to be in the range of the No Action and Proposed alternatives. The reduction of building height limits in the downtown area is anticipated to result in less significant impacts on views than the Proposed Alternative.</p>
Light and Glare	<p>Increased presence of retail and entertainment uses in the study area may create additional light and glare from exterior illumination. Increased automobile traffic may also generate additional nighttime glare.</p>	<p>Similar to the Proposed Alternative.</p>	<p>Similar to the Proposed Alternative.</p>

1.5. Major Issues to Be Resolved

Adoption of the *Downtown Subarea Plan and Regulations* and a Planned Action ordinance would allow changes to land use patterns, structure heights and shared and reduced parking ratios, among other topics; these plan and regulation changes together with the capital improvements would support development and redevelopment of the area to a more intensive mixed-use character consistent with the vision statement: "...to positively affect the evolution of the downtown and its environs, to reverse the forces of disinvestment in its historic center, and to fully restore and heighten the vitality, character and civic beauty of the district, reviving and enhancing its iconic image and function as the real heart of the City..."

The key environmental issues facing decision-makers are impacts on water quality and habitat, contribution to air emissions, land use compatibility and policy consistency, aesthetics and visual character, changes to public facilities and transportation corridors and associated traffic patterns, balance of increased transit and auto circulation and potential noise impacts, the potential of redevelopment and capital plans to affect cultural resources, changes to public services and demand for them, and the need to upgrade water and sewer infrastructure.

1.6. Significant Unavoidable Adverse Impacts

1.6.1. Natural Environment

If City regulations and recommended potential mitigation measures are implemented, no significant unavoidable adverse impacts are anticipated in connection with either the No Action Alternative or the Proposed Alternative.

1.6.2. Air Quality

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities. The regulations and Proposed Alternative features described above are adequate to mitigate any adverse impacts anticipated to occur as a result of study area population increases.

1.6.3. Land Use Patterns/Plans and Policies

Both the Proposed Alternative and the Planning Commission Recommendation Alternative would result in greater intensity of land use and greater employment and housing in the study area than the No Action Alternative. However, the changes to

land use patterns under all alternatives would generally conform to the City's Comprehensive Plan direction for the downtown activity center. Changes to the study area, under the Proposed Alternative and Planning Commission Recommendations, could have impacts on land use compatibility, but these impacts could be mitigated with implementation of the form-based code and other existing city codes that would be retained.

Any identified conflicts with plans and policies would require amendments in a future comprehensive plan docket cycle. With application of mitigation measures and amendments, there are no significant unavoidable adverse impacts on plans and policies.

1.6.4. Aesthetics

The overall character and significance of visual impacts on the study area depends in large part on the quality of the architectural and urban design features incorporated into the development and the values of those viewing the changes. New development and redevelopment would result in a change to the current aesthetic conditions of the study area. The alternatives would potentially increase the amount of ambient light and glare produced in the study area. The alternatives differ with regard to the scope, intensity, and location of these changes. With application of existing and proposed plans and regulations, and other identified mitigation measures, no significant unavoidable adverse impacts are anticipated.

1.6.5. Transportation

Implementation of either the Proposed Alternative or No Action Alternative would result in increased traffic in the study area. The increased traffic with planned improvements can meet City concurrency standards for the study corridor (SR 522). Although the effects of additional vehicles on traffic congestion can be mitigated to varying degrees through the proposed transportation improvements, the actual increase in traffic under either alternative is considered a significant unavoidable adverse impact.

1.6.6. Noise

The increased bus volume on NE 185th Street and 98th Avenue NE could result in significant unavoidable adverse noise impacts on existing and future homes adjacent to bus stops on NE 185th Street and 98th Avenue NE, if there is no feasible noise abatement measure to reduce the noise levels.

1.6.7. Cultural Resources

The impacts on cultural resources caused by new development associated with either of the two proposed alternatives could be significant and unavoidable, depending on

the nature of the proposed development project. Mitigation measures set forth in Section 3.7.3 would address potential impacts on cultural resources, reducing them to less-than-significant levels.

1.6.8. Public Services

Under either alternative, the City of Bothell and the study area are anticipated to experience significant growth during the planning period. Given the length of the planning period and the amount of time required for redevelopment of the study area, the City and service providers have an opportunity to update plans and respond appropriately.

The Proposed Alternative has the potential for greater increases in the demand for police and fire protection, as well as greater localized demand for educational services and recreation opportunities. However, given the planning horizon and assuming the application of existing and proposed plans and regulations, no significant unavoidable impacts are anticipated.

1.6.9. Utilities

The studied alternatives are anticipated to increase demand for water, wastewater, and solid waste services. Increased residential and employment population in the area has the potential to exacerbate water and wastewater system existing deficiencies. With application of mitigation measures that include both regulatory and capital improvements, no significant unavoidable adverse impacts are anticipated.

Chapter 2. Description of the Alternatives

2.1. Introduction

The future of Downtown Bothell is currently directed by the City's existing *Imagine Bothell... Comprehensive Plan* (City of Bothell 2004) and the associated subarea plans and implementing regulations that apply to downtown. The City has entered into a new Downtown Subarea planning process to more directly and fully address future land use, transportation, and civic activities in Downtown Bothell. This planning process would amend existing plans and regulations.

In addition, as part of the downtown planning process, and consistent with the State Environmental Policy Act (SEPA) rules, the City is considering a Planned Action Ordinance, which would streamline environmental review for development consistent with the proposed downtown plans and regulations. The basic steps in designating planned action projects are:

1. Prepare an environmental impact statement (EIS).
2. Designate the planned action projects by ordinance.
3. Review permit applications for proposed projects as consistent with the designated planned action.

The intent is to provide more detailed environmental analysis during formulation of planning proposals, rather than at the project permit review stage.

This Draft EIS, addressing step one identified above, analyzes the environmental impacts of two primary alternatives: the Proposed Alternative—adoption of the *Downtown Subarea Plan and Regulations* (Freedman Tung and Bottomley 2008) and a Planned Action Ordinance—and the No Action Alternative—continuation of the

City's current Comprehensive Plan and subarea plans applicable to downtown without amendment. The analysis of the Proposed Alternative addresses variations within the alternative, for example where a public facility could be sited in different locations, and where zone districts may have different extents.

The Planning Commission, in its review of the *Downtown Subarea Plan and Regulations*, has recommended a number of changes. This Draft EIS qualitatively compares these Planning Commission Recommendations with the primary alternatives. The recommendations are consistent with the general concept and vision of the Proposed Alternative, varying somewhat in the details, and are within the range of the two primary alternatives.

Because this Draft EIS addresses the City's Comprehensive Plan and regulations and potential amendments to them, Section 2.2, "Background," discusses the aspects of the current plans and regulations that relate to downtown. Section 2.3 describes the EIS alternatives in more detail. Section 2.4 provides information on past and current environmental review processes.

2.2. Background

A comprehensive plan provides a road map for how a city will grow: identifies compatible land uses, a range of housing and employment choices, an efficient and functional transportation network, and adequate public facilities; and protects environmental and historic resources. A comprehensive plan can be an effective management tool for a city, providing an opportunity for community-defined direction and greater predictability for property owners.

Development regulations, which implement aspects of comprehensive plans, govern such factors as allowable uses, size and location of buildings and improvements, and standards for environmental protection.

2.2.1. Growth Management Act

The Growth Management Act (GMA) identifies a comprehensive framework for managing growth and development within local jurisdictions. The City of Bothell is required to plan in accordance with GMA. Comprehensive plans for cities planning under GMA must include the following elements: land use (including a future land use map), housing, transportation, public facilities, parks and recreation, economic development, and utilities. Additional elements such as subarea plans may be added at the option of the local jurisdiction. A GMA comprehensive plan must provide for adequate capacity to accommodate the city's share of projected regional growth. It must also ensure that planned and financed infrastructure can support planned growth at a locally acceptable level of service. Development regulations are required to be consistent with and implement the comprehensive plan.

2.2.2. City of Bothell Comprehensive Plan

As required under GMA, the City’s current Comprehensive Plan and corresponding regulations were prepared and adopted to guide future development and fulfill the City’s responsibilities. The Comprehensive Plan contains all required elements and many optional elements as shown in Table 2-1.

Table 2-1. Elements Contained in Current Comprehensive Plan

Elements	Subarea Plans
Annexation	Brickyard Road/Queensgate
Capital Facilities	Canyon Creek/39th Ave SE
Community Services	Canyon Park
Economic Development	Country Village/Lake Pleasant/527 Corridor
Historic Preservation	Downtown/190th/Riverfront
Housing	Fitzgerald/35th Ave SE
Land Use	Hollyhills/Pioneer Hills/Morningside
Natural Environment	Maywood/Beckstrom Hill
Parks and Recreation	North Creek/NE 195th St
Shorelines	Queensborough/Brentwood/Crystal Springs
Transportation	Shelton View/Meridian/3rd Ave SE
Urban Design	Waynita/Simonds/Norway Hill
Utilities and Conservation	Westhill

The Comprehensive Plan directly addresses the downtown area in the following ways:

- Recognizes downtown as an activity center providing “shopping, personal and professional services, dining, and entertainment opportunities on a city-wide scale.”
- Includes the following policies and action in the Economic Development Element:
 - **ED-P18.** Explore ways in which the downtown retail shopping area might be further enhanced and linked to the Sammamish River. Measures to be explored may include but not be limited to the construction of pedestrian overpasses or a deck over SR 522 and offering incentives for incorporating retail space in structured parking.
 - **ED-P19.** Explore ways in which the UW Bothell/Cascadia Community College campus might be linked to the downtown activity center to promote economic opportunity for downtown businesses and a greater sense of community for UW/CCC students, faculty, and staff.
 - **ED-A4.** Prepare a master plan for Downtown to provide a template for redevelopment that would meet the City’s economic development, land use, historic preservation, transportation, and urban design goals.

- ED-A24. Work with the local Chambers of Commerce, merchants, property owners, and local citizens to develop a “Downtown Revitalization Implementation Plan,” based on the anticipated updating of the Downtown Subarea Plan scheduled for 2005.
- Addresses most of the proposed Downtown Subarea in the “Downtown/190th/Riverfront Subarea Plan” and the eastern part of the Downtown Subarea in the “North Creek/195th Subarea Plan.”

The City adopted its original GMA Comprehensive Plan in 1994. Since then, the City has made periodic amendments to reflect new growth targets, changed community conditions, and citizen requests. A major update occurred in 2004; the most recent amendments occurred in 2007.

2.2.3. Development Regulations

The City manages development throughout Bothell, including downtown, through the following regulations:

- Title 11, Administration of Development Regulations
- Title 12, Zoning
- Title 13, Shoreline Management
- Title 14, Environment
- Title 15, Subdivisions
- Title 17, Transportation
- Title 18, Utilities Infrastructure
- Title 20, Buildings & Construction
- Title 21, Methods to Mitigate Development Impacts
- Title 22, Landmark Preservation

The regulations guide land use, building location and height, parking, landscaping, urban design, environmental protection, infrastructure, and historic preservation, as well as other topics, all of which are important for Downtown Bothell.

2.3. Alternatives

2.3.1. Introduction

This section identifies the study area and objectives that apply to the alternatives studied in this Draft EIS.

Study Area

The study area (Figure 2-1) reviewed in this Draft EIS consists of approximately 529 acres of land in the center of the southern portion of the City of Bothell. The boundaries are generally defined on the north by segments of Ross Road, NE 186th Street, and commercial-zoned properties running along SR 527; on the east by the eastern boundary of the University of Washington Bothell/Cascadia Community College Campus (UWB/CCC); on the south by the Sammamish River corridor; and on the west by property and zoning lines generally dividing the upper and lower slopes of Westhill.

Objectives

The City's objectives for the future of downtown are described in the proposed *Downtown Subarea Plan and Regulations* "Vision Statement." This proposed downtown vision was created through a community-based process in 2006 and 2007.¹ The EIS alternatives are analyzed in this Draft EIS in the context of these objectives:

It is the intention of the City of Bothell and the purpose of this Plan to provide a policy framework to positively affect the evolution of the downtown and its environs, to reverse the forces of disinvestment in its historic center, and to fully restore and heighten the vitality, character and civic beauty of the district, reviving and enhancing its iconic image and function as the real heart of the City. More specifically, it is the community's intention to:

1. Give the community "A Place to Go" in the heart of the City—one that is meaningful to community members, provides for daily needs as well as special events, and appeals to families and Bothell citizens of all ages.
2. Enhance the essential "publicness" of downtown—its wide range of public places, civic buildings, and community services. Make downtown the welcoming place to go to meet, be at the center, and feel a sense of shared common ground in Bothell.
3. Revitalize the economic fortunes and visual character of downtown, and particularly of the City's historic Main Street.
4. Maintain downtown's distinctive regional character as a town center set amidst forested hills.
5. Link the downtown core to the Sammamish River and the Park at Bothell Landing.
6. Link the Downtown Core to the University of Washington Bothell/Cascadia Community College campus.
7. Enhance mobility and connectivity to and through the district via automobile, transit, bicycle and pedestrian travel.
8. Protect the character of residential neighborhoods at the edges of downtown.
9. Support sustainable, environmentally responsible development.

¹ The City Council appointed a Downtown Stakeholders Resource Group (DSRG) and Downtown Visionary Committee (DVC), made up of downtown and nearby residents, business and property owners, institutional representatives, and developers. The DSRG and DVC along with the Planning Commission, Landmark Preservation Board, Parks and Recreation Board, Shoreline Hearings Board, Library Board, and citizens participated in a series of roundtable discussions on downtown topics, which formed the foundation of the resulting Vision Statement. The Vision Statement underwent City Council deliberation and subsequently received its endorsement in 2007.



Source: City of Bothell (2008); King County (2008); NAIP (2006)

-  Study Area
-  Parcel
-  Water Feature
-  Piped Stream

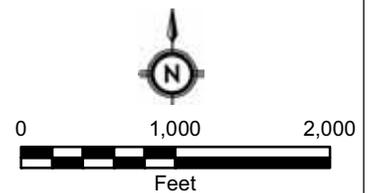


Figure 2-1. Study Area
Downtown Bothell Planned Action EIS

December 2008

2.3.2. Comparison of Alternatives

This section describes the alternatives studied in this Draft EIS.

Overview

The Proposed Alternative would amend the City's Comprehensive Plan and development regulations through the adoption of the *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance. The City and its citizens have been working on the *Downtown Subarea Plan and Regulations* since 2006. The plan would create a land use and transportation framework and implement a form-based development code to revitalize downtown. Council adoption of the plan and regulations is anticipated by the end of March 2009.

Concepts include roadway rerouting, new streets, mixed-use redevelopment, and civic investment. SR 522 would be realigned to the south and SR 527 would be extended southward to intercept SR 522 at a "T" intersection. The new SR 527 would be a multiway boulevard that would allow for through lanes and access lanes. Northshore School District (NSD) and Safeway properties would be redeveloped into a compact, walkable mixed-use area. Pop Keeney Stadium would be revised and updated. Main Street would be revitalized and extended with streetscape improvements. City Hall would be redeveloped at its current location, or relocated to a property south of the realigned SR 522, or to the NSD property.

To help facilitate the application of the *Downtown Subarea Plan and Regulations*, the Proposed Alternative includes the adoption of a Planned Action Ordinance. If adopted pursuant to WAC 197-11-164 to 172, the Planned Action Ordinance would indicate that this Draft EIS, when completed, adequately addresses significant impacts of the Proposed Alternative. It would also exempt from future SEPA threshold determinations and EISs those projects that are consistent with the parameters analyzed in this Draft EIS.

The No Action Alternative would retain the current Comprehensive Plan and development regulations. While some aspects of the proposed downtown vision would be implemented, such as many elements of the major road improvements, the zoning, design standards, and other features would not change and would not accommodate the growth stimulated by infrastructure investment in a manner most conducive to the downtown vision. The SEPA review process would not be streamlined via a Planned Action Ordinance; standard review would be required on a per-project basis.

The two primary alternatives represent "bookends" for a range of possible growth levels and locations in the study area. The Planning Commission Recommendations represent a "hybrid" of the two alternatives; they are qualitatively addressed in this Draft EIS, because they are within the "bookends." The Planning Commission, in its

review of the proposed *Downtown Subarea Plan and Regulations*, has proposed a number of changes; these changes are consistent with the general concept and vision of the Proposed Alternative, but vary somewhat in detail. Specifically, it recommends overall reductions in the permitted building heights (but not number of stories) in the heart of the study area. It also proposes retention of current zoning designations around the periphery of the study area, to preserve the single-family residential character of the surrounding neighborhoods. To compensate somewhat for these reductions in allowed density, it proposes expansion of the Downtown Neighborhood District in a few areas. These recommendations are compared with the two primary alternatives in Table 2-2 and more fully described in Section 2.3.4.

Comprehensive Plan

In order to better accommodate forecast growth in a manner consistent with the downtown vision, the Proposed Alternative includes amendments to the City's current Comprehensive Plan. The Proposed Alternative would revise the 2004 Land Use Element with new land use designations described more fully below. Policies that anticipate a "master plan" would be revised to reflect the new plan adoption (e.g., Economic Element Actions A4 and A24). The Downtown/190th/Riverfront Subarea Plan would be replaced with the proposed *Downtown Subarea Plan*, and the adjacent subarea plan boundaries for North Creek/195th and Waynita/Simonds/Norway Hill would be amended to reflect the boundaries identified in the *Downtown Subarea Plan*. As described in Section 3.3, "Land Use Patterns/Plans and Policies," further amendments may be appropriate.

The No Action Alternative retains the current Comprehensive Plan. Thus, policies and actions identifying the need to address a new downtown plan would not be implemented.

The Planning Commission Recommendations are similar to the Proposed Alternative described above. Further information is provided in Section 2.3.4.

Table 2-2. Comparison of Primary Alternatives and Planning Commission Recommendations

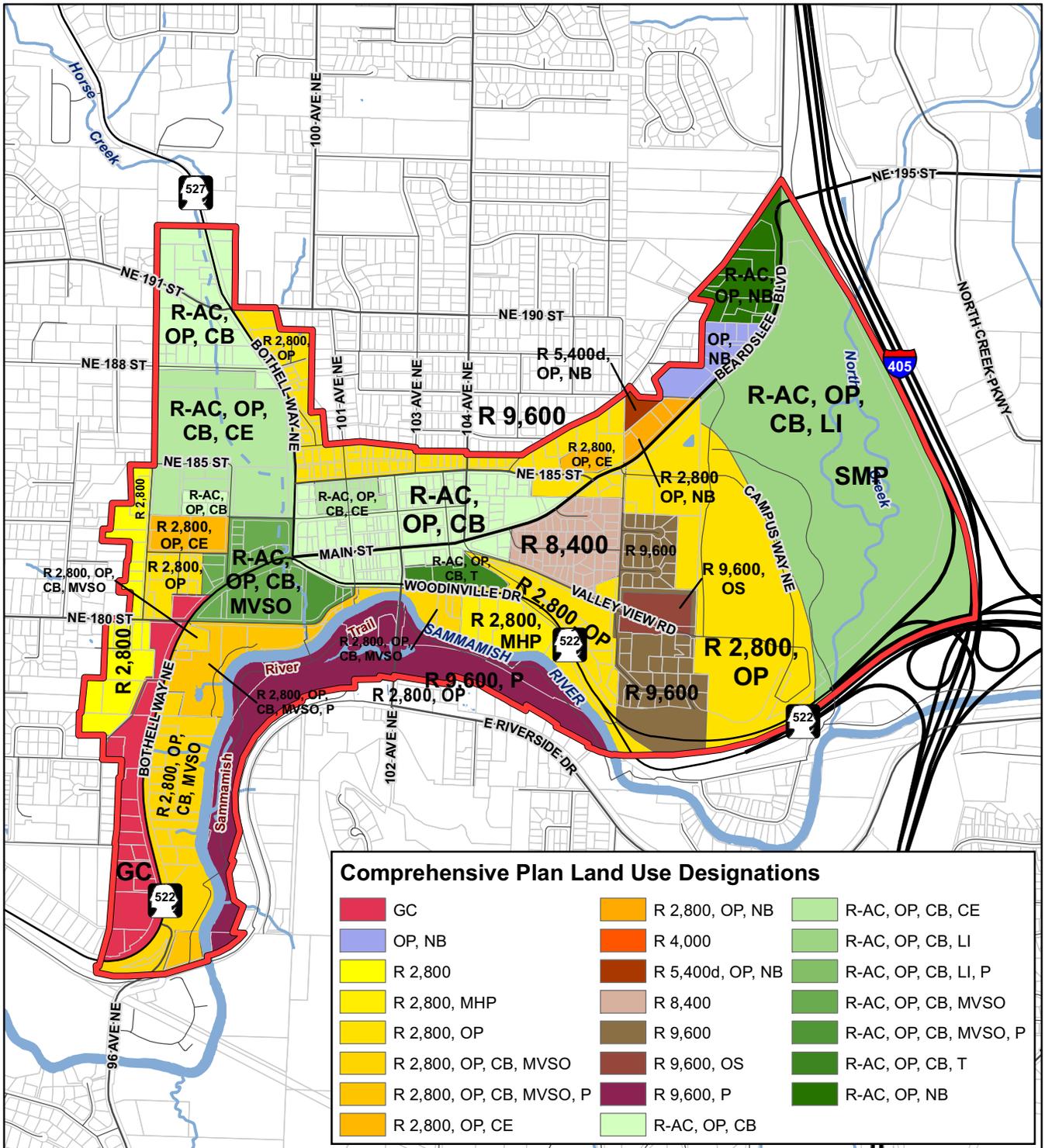
Feature	No Action Alternative	Proposed Alternative	Planning Commission Recommendations
Comprehensive Plan	Maintains the adopted Comprehensive Plan last amended between 2004 and 2006. Subarea plans in the study area include: Downtown/190th/Riverfront and North Creek/195th.	Revises the 2004 Land Use Element with new land use designations. Amends subarea plan boundaries. See Section 3.3, <i>Land Use Patterns/Plans and Policies</i> , for additional discussion of other plan amendments.	Very similar to the Proposed Alternative.
Comprehensive Plan Land Use Designations	Retains current designations in study area, which include mixed-use, office, commercial, multifamily, and single-family designations. In some locations, multiple designations with multiple intents apply to the same properties (e.g., RAC/OP/CB as a group all apply on Main Street east of SR 527).	New mixed-use, residential and public designations are proposed in the study area. The land use plan creates a hierarchy of designations that build up to a central core. The designations provide unique intents for the different designations and a coherent land use pattern. For example, on Main Street, each parcel is given one designation, predominantly Downtown Core, with some areas of Downtown Neighborhood.	Same as Proposed Alternative, except as follows: <ul style="list-style-type: none"> Preserves No Action land use designations on the periphery of the study area. Shortens the Downtown Core District. Expands the Downtown Neighborhood District.
Zoning Designations	Same as above.	Same as above.	Same as above.
Zoning Standards	Provides for a somewhat traditional zoning approach where code focuses more on land uses and less on design (although the code has been modified over the years to include a number of design requirements and guidelines). Current height, bulk, and coverage standards apply. Parking standards are retained. Applies present moderate design standards.	Proposes a form-based code that focuses on design of buildings and relationship to streets. Applies core list of land uses. Amends height, bulk, and coverage standards by district. Some areas would have lesser heights than present regulations and others would have greater heights than present. Parking standards would be reduced in some districts, accounting for a more transit- and pedestrian-friendly environment. New development regulations would apply to ensure compatibility and desired character.	Create a mix of new form-based districts and current zones in the study area.
Planned Action Ordinance	Maintain standard SEPA review process for individual site-specific development proposals.	Designates the Downtown Subarea as a Planned Action and allows streamlined environmental review of individual development proposals that are consistent with the Planned Action. Facilitates future development permit procedures with advanced environmental review by adopting a Planned Action Ordinance.	Same as Proposed Alternative.
Capital Improvements (civic/transportation projects)	Includes the Downtown civic and transportation improvements identified in the City's Comprehensive Plan Capital Facilities Element, Transportation Element, and Capital Facilities Plan. The transportation improvements represent a subset of those identified under the Proposed Alternative.	Includes the projects listed under the No Action Alternative with the addition of the SR 527 Multiway Boulevard Treatments, Main Street Enhancements, NE 185th Street/98th Avenue NE Connector, several transit improvements, and public parking.	Same as Proposed Alternative.

Comprehensive Plan Land Use Designations and Zoning Designations

Under the No Action Alternative, the current Comprehensive Plan Land Use Map (Figure 2-2) and Zoning Map (Figure 2-3) designations would be retained. These designations are listed below.

- CB—Community Business
- CE—Civic Educational
- GC—General Commercial
- LI—Light Industrial
- MHP—Mobile Home Park
- MVSO—Motor Vehicle Sales Overlay
- NB—Neighborhood Business
- OP—Office-Professional
- P—Park
- R 2,800—Residential, one dwelling unit per 2,800 square feet of net buildable area
- R 5,400d— Residential, 5,400 square-foot minimum lot area (only detached units permitted)
- R 8,400—Residential, 8,400 square-foot minimum lot area
- R 9,600—Residential 9,600 square-foot minimum lot area
- R-AC—Residential-Activity Center (no specific density; number of units controlled by site and building envelope regulations)
- T—Transportation Facility

Presently, several of the Comprehensive Plan land use and zoning designations are applied in a grouped manner (e.g., R-AC/OP/CB all apply to the parcels between NE 185th Street and SR 522).



Source: City of Bothell (2008); King County (2008)

- Study Area
- Parcel
- Water Feature
- Piped Stream

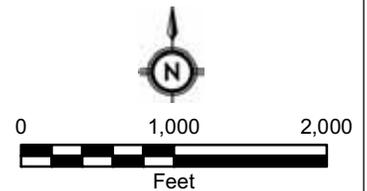
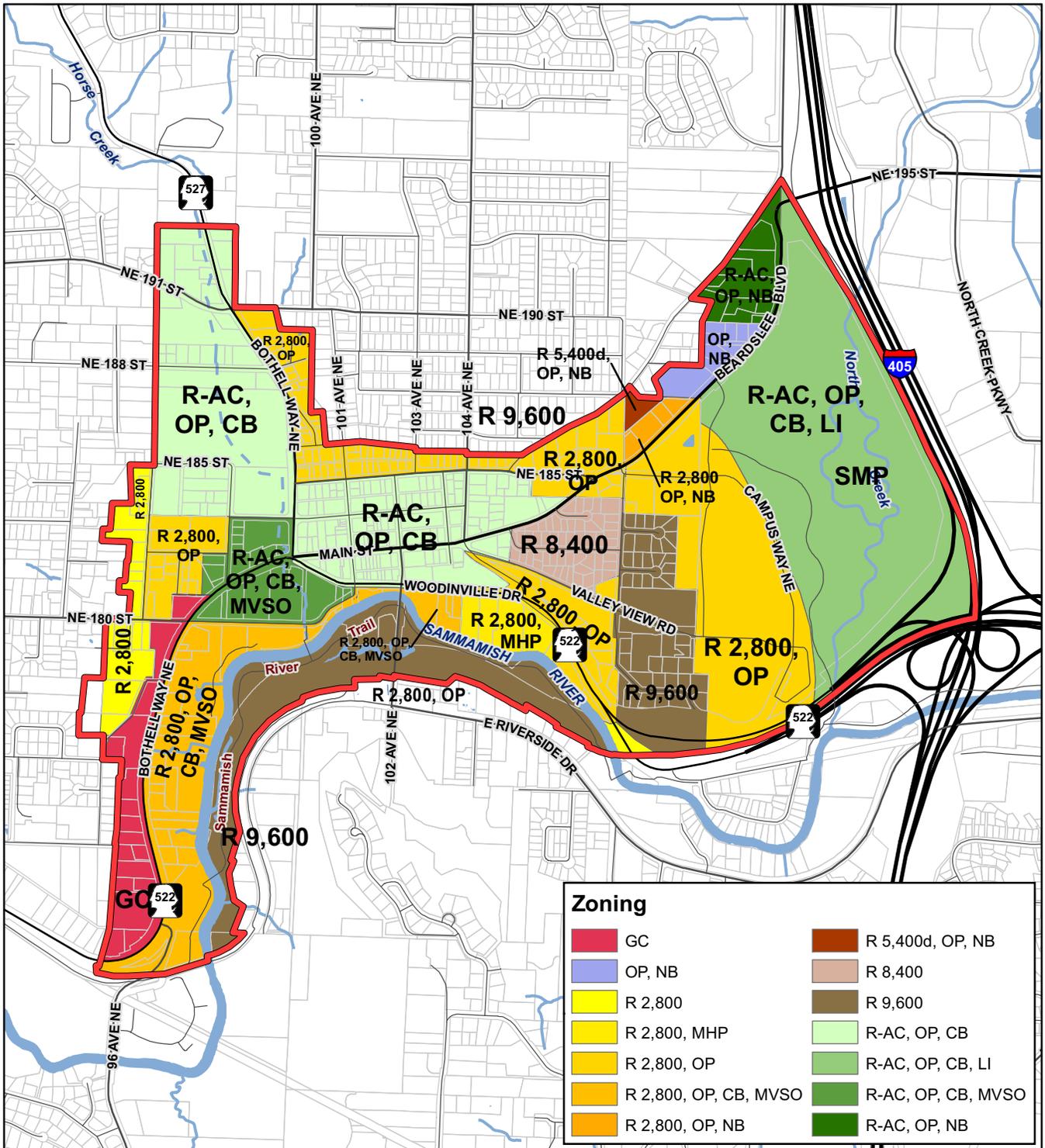


Figure 2-2. Current Comprehensive Plan Map
Downtown Bothell Planned Action EIS

December 2008



Source: City of Bothell (2008); King County (2008)

- Parcel
- Water Feature
- Piped Stream
- Study Area

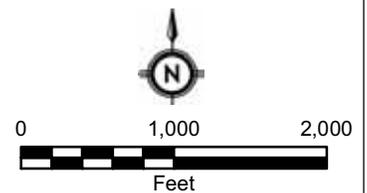


Figure 2-3. Current Zoning Map
Downtown Bothell Planned Action EIS

December 2008

In contrast, the Proposed Alternative would apply a single set of Comprehensive Plan land use and zoning designations, called districts. Each district is unique and together the districts present a clearer hierarchy: from a central, dense core with greater heights in a traditional, vertical mixed-use pattern; to districts that offer more horizontal mixed-use and single-purpose buildings at moderate scales; to traditional single-family residential districts; to civic, educational, and recreational districts. These districts, shown in Figure 2-4, are as follows:

- Downtown Core
- Downtown Neighborhood
- Downtown Transition
- SR 522 Corridor
- General Downtown Corridor
- Sunrise/Valley View Neighborhood
- Campus
- Park and Public Open Space
- Special Riverfront Overlay
- Neighborhood Center Overlay
- Mobile Home Park Overlay

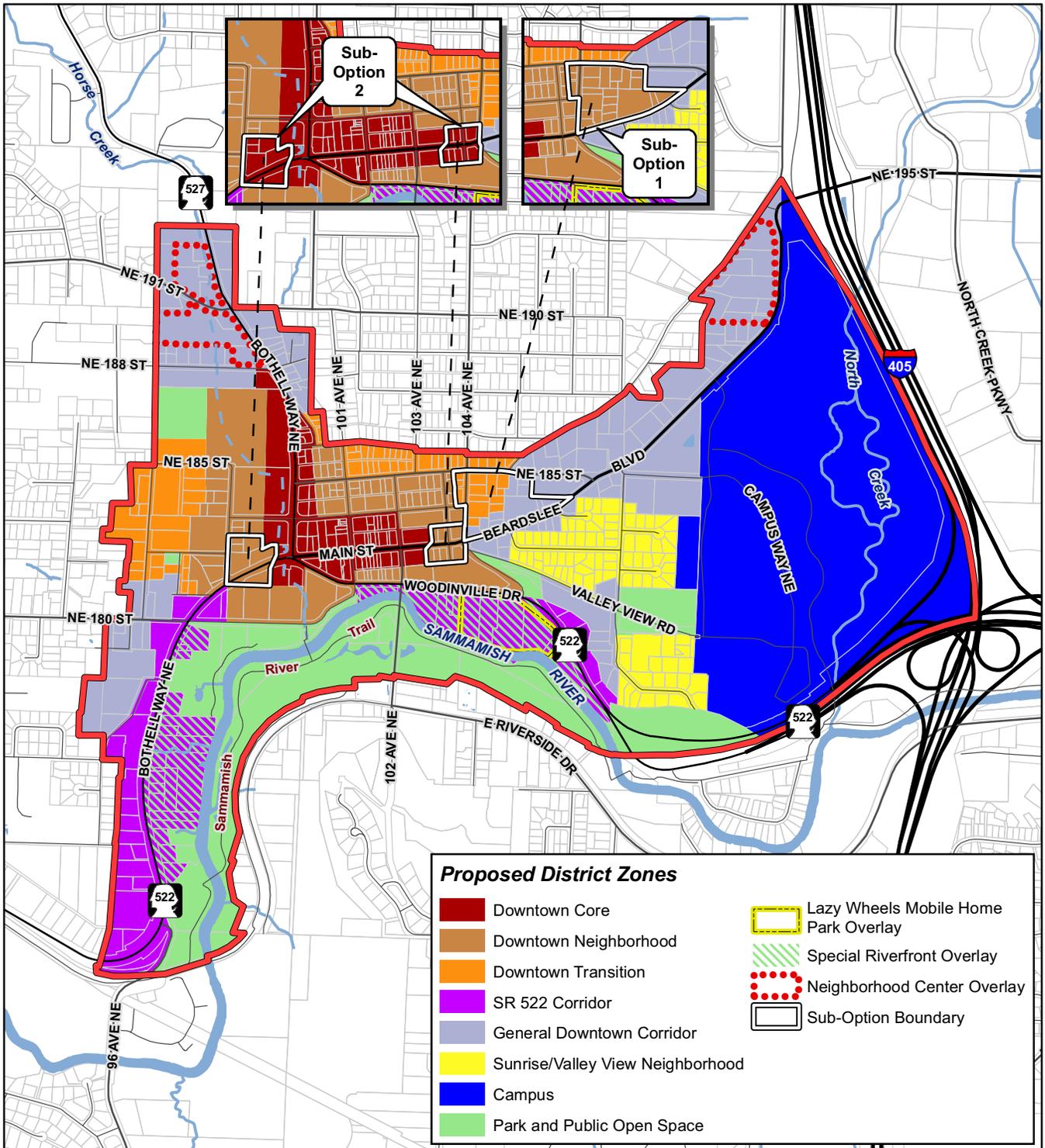
There are two sub-options included under the Proposed Alternative (Figure 2-4):

Sub-Option 1. Extend the Downtown Neighborhood District east between Beardslee Boulevard and NE 185th Street into an area that would otherwise be partially Downtown Transition District and partially General Downtown Corridor District.

Sub-Option 2. Extend the Downtown Core District east several properties along either side of Main Street and west along the future extension of Main Street into areas that would otherwise be Downtown Neighborhood District.

The Planning Commission recommendations, described in detail in Section 2.3.4., are similar to the Proposed Alternative, except as follows:

- No Action land use designations are preserved on the periphery of the subarea.
- The Downtown Core District is shortened.
- The Downtown Neighborhood District is expanded.
- The General Downtown Corridor and SR 522 Corridor extents are smaller.



Source: City of Bothell (2008)

- Study Area
- Parcel
- Water Feature
- Piped Stream

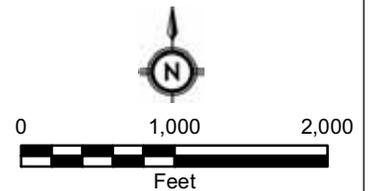


Figure 2-4. Proposed Land Use and Zoning Districts
Downtown Bothell Planned Action EIS

December 2008

Zoning Standards

The Proposed Alternative proposes more emphasis on form-based regulations than the existing zoning code in place under the No Action Alternative. The current zoning focuses on compatibility of land uses as well as building location and size; design is addressed by guidelines and requirements. Form-based codes focus on creating a predictable urban form, and emphasize building and public space standards. Land use is addressed in a form-based code but the focus is on compatibility of urban form.

Based on the hierarchy of districts, the Proposed Alternative amends height and bulk standards by district to achieve the desired mixed-use or single-use purpose, to provide an urban character with less visible parking, and to increase access to and use of alternative modes of transportation (transit or non-motorized travel).

Planning Commission Recommendations would create a mix of new form-based districts and current zones in the study area.

Under the Proposed Alternative, maximum heights in the study area would vary from 30 to 76 feet, with most areas at 54 feet. This would not apply to UWB/CCC, which would continue to be controlled by the original Planned Unit Development land use approval. Some areas would have lesser heights than present regulations and others would have greater heights than present regulations. Impervious surface coverage allowed would range from 70 to 100%. Commercial parking standards in some districts would allow outright the reductions currently available for areas served by transit. Residential parking standards in the central districts, based on the number of bedrooms, would be somewhat lower in most development scenarios. New development regulations would apply to ensure compatibility and desired character.

The No Action Alternative would retain current height and bulk standards. In the core of the downtown area, these include maximum heights of 35 to 65 feet. The maximum height of 65 feet is allowed subject to compliance with additional site development standards such as the provision of a specified amount of structured parking and externally oriented, ground-level commercial space. Impervious surface coverages range from 80 to 100%. Required landscaping would effectively mean impervious coverages of about 95% at the upper end. Current parking standards would be retained throughout the study area.

Basic commercial parking ratios are currently higher than under the Proposed Alternative; however, since transit-based parking reductions are allowed under the No Action Alternative, the parking ratios are considered similar under both alternatives. Residential parking ratios in the downtown core, based on the number of units, would be somewhat higher in most development scenarios. Present design regulations would apply; these regulations are less specific than under the Proposed Alternative and would result in less certain design outcomes.

The Planning Commission Recommendations for zoning are similar to the Proposed Alternative, except regarding maximum height limits. In comparison to Proposed Alternative, the Planning Commission recommends 65-foot limits in place of 76-foot limits, 55-foot limits in place of 65-foot limits, and 35- to 45-foot limits in place of 54-foot limits. See Section 2.3.4 for additional discussion.

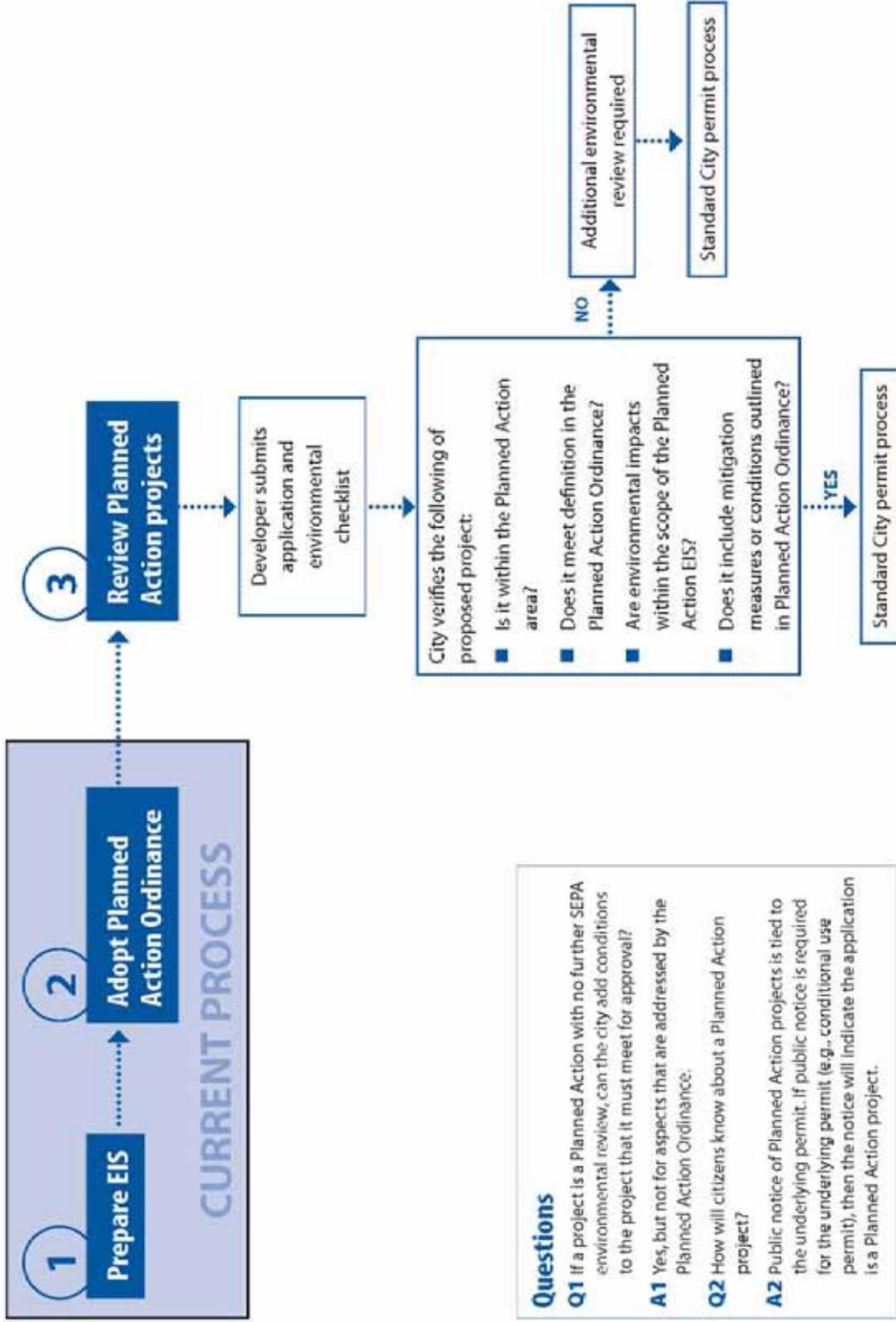
Planned Action Ordinance

The Proposed Alternative includes adoption of a Planned Action Ordinance, which is expected to encourage redevelopment and revitalization of Downtown Bothell, by streamlining the project review process (Figure 2-5). This Draft EIS will help the City to identify impacts of development and specific mitigation measures that developers will have to meet to qualify as a Planned Action project.

According to WAC 197-11-164, a Planned Action is defined as a project that has the following characteristics:

- is designated a Planned Action by ordinance;
- has had the significant environmental impacts addressed in an EIS;
- has been prepared in conjunction with a comprehensive plan, subarea plan, master planned development, phased project, or with subsequent or implementing projects of any of these categories;
- is located within an urban growth area;
- is not an essential public facility; and
- is consistent with an adopted comprehensive plan.

Under the Proposed Alternative, the Planned Action would be established by an ordinance (A draft of the ordinance is provided as Appendix A). This Draft EIS analyzes the *Downtown Subarea Plan and Regulations*, which would amend current City plans and regulations and thus would be consistent with the Comprehensive Plan. Planned Action projects would include new residential, retail, and office development, whether public or private, as well as local streets such as the proposed NE 185th Street/98th Avenue NE Connector described below.



Questions

Q1 If a project is a Planned Action with no further SEPA environmental review, can the city add conditions to the project that it must meet for approval?

A1 Yes, but not for aspects that are addressed by the Planned Action Ordinance.

Q2 How will citizens know about a Planned Action project?

A2 Public notice of Planned Action projects is tied to the underlying permit. If public notice is required for the underlying permit (e.g., conditional use permit), then the notice will indicate the application is a Planned Action project.

Figure 2-5. Review Process for Planned Action Projects
Downtown Bothell Planned Action EIS
December 2008

The Planned Action Ordinance would exclude essential public facilities consistent with SEPA rules. Essential public facilities are defined under GMA as including “those facilities that are typically difficult to site, such as airports, state education facilities and state or regional transportation facilities as defined in RCW 47.06.140, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020.” (RCW 36.70A.200) In the study area, the SR 522 improvements and UWB/CCC are considered essential public facilities. SR 527 is not a highway of statewide significance, and, thus, not an essential public facility, but is undergoing separate design and environmental review. SR 522, SR 527, and UWB/CCC facilities are described in this Draft EIS and considered as part of its cumulative analysis because they facilitate and support the downtown vision. However, these facilities are or will be addressed in their own SEPA or NEPA EISs, and will not be undergoing the streamlined environmental review process for Planned Action projects.

WAC 197-11-168 requires that the Planned Action Ordinance include:

- a description of the components of the Planned Action;
- a finding that the probable significant environmental impacts of the Planned Action have been identified and adequately addressed in an EIS; and
- the identification of mitigation measures that must be applied to a project for it to qualify as a Planned Action project.

Following the completion of the EIS process, the City would designate the Planned Action by ordinance. A draft ordinance is included in this Draft EIS as Appendix A. The City proposes to designate as a Planned Action the *Downtown Subarea Plan and Regulations*, pursuant to SEPA and implementing rules. The Planned Action projects would include those studied in this Draft EIS, excluding essential public facilities and SR 527. The draft ordinance identifies mitigation, as described in this Draft EIS, which would be applicable to future Planned Action projects. Some of the mitigation measures would apply to all study area projects, while others would be applied on a case-by-case basis.

The Planning Commission Recommendations could also be facilitated by a Planned Action Ordinance.

Capital Improvements

The City’s strategic investments and planning for infrastructure are intended to catalyze growth in Downtown Bothell. The Capital Facilities and Transportation elements of the current Comprehensive Plan identify numerous civic and transportation improvements. Recently, the City adopted its *Capital Facilities Plan 2009–2015* (CFP), the implementing tool of the Capital Facilities Element (City of Bothell 2008a).

The CFP provides a guide to public facility investment in Downtown Bothell including public buildings as well as infrastructure. The CFP as well as the Capital Facilities and Transportation elements address transportation improvements. The No Action Alternative was modeled on the Comprehensive Plan elements, which contain some but not all the transportation improvements identified in the CFP. As such, the No Action Alternative represents a more conservative scenario with regard to the extent of transportation improvements.

The following capital improvements in the study area are included under the No Action Alternative.

- **Bothell Crossroads.** This project would eliminate a choke point at the convergence of SR 522 and SR 527, by realigning SR 522 one block to the south to create new “T” intersections at SR 527 and 98th Avenue NE. SR 527 would be extended south from Main Street to the new SR 522 realignment, adding new, highly visible gateway blocks to downtown. The roadway would provide two lanes in each direction with turn lanes as necessary, sidewalks, intersection improvements, traffic signals, utilities, lighting, and landscaping to reduce regional traffic congestion while improving aesthetics and pedestrian facilities.
- **SR 527 Improvements.** This five-lane arterial configuration would provide similar traffic capacity but fewer pedestrian amenities and less landscaping than the SR 527 Multiway Boulevard Project under the Proposed Alternative.
- **Main Street Extension.** In conjunction with Bothell Crossroads, this project would improve the connectivity of the current shopping district to the new commerce areas. An extension of the existing road would link the historic Main Street to the Bothell Regional Library, one block to the west from SR 527 to 98th Avenue NE. This activity would create a new block north of the realigned SR 522.
- **SR 522 Wayne Curve Improvements.** The SR 522 Wayne Curve project would improve capacity and enhance the west entrance to Bothell via SR 522. Improvements include the addition of transit queue lanes in each direction and improvements to the 96th Avenue NE intersection. Additional project elements include sidewalks, traffic signals and transit signal priority, access management, drainage, water quality features, utilities, landscaping, and street lighting. Future stages would extend improvements east and west of Wayne Curve.
- **Beardslee Boulevard Widening East of NE 185th Street.** Beardslee Boulevard is a key access road to the downtown area from Interstate (I) 405 and the North Creek business area. It is also a key transit route for buses to access I-405 and the UWB/CCC Campus. It is planned for widening to a five-lane capacity with bike lanes between NE 185th Street and I-405. This project is implemented as development occurs and is not a City provided capital project.
- **104th Avenue NE Bike Lanes.** This includes completion of bike lanes from NE 185th Street to Main Street or Valley View Road and should be undertaken with any reconstruction or adjacent redevelopment projects during the plan period.
- **Valley View Road Improvements.** This project should be designed to promote the use of Valley View Road as a key connection between downtown Bothell and the

UWB/CCC campus for bicycles and pedestrians. This project is implemented as development occurs and is not a City-provided capital project.

- **Purchase of NSD Property for Public Amenities/Facilities.** The NSD Board has announced plans to surplus 18 acres downtown, which provides space for an envisioned private mixed-use development as well as new public gathering spaces and facilities. The City has entered into a Memorandum of Understanding with NSD related to a purchase of the site. The City would use a portion of the property for public use and surplus the remaining land for private development.
- **City Hall/Dawson Replacement.** A new City Hall would consolidate department staff now inadequately housed among several buildings. Three sites are being considered for the new building. One option, rebuild City Hall at its present location, would create a civic campus with the existing police and municipal court buildings and provide an anchor in close vicinity to Main Street. A second option, the Anderson Building located on the NSD property, would keep this iconic building under public use. A third option, the Beta Bothell Commercial Site, would place the new City Hall at the convergence of the realigned SR 522 and SR 527 on land north of the Park at Bothell Landing, with additional public amenities to enhance public park use on the riverfront that connects to the King County/Sammamish River Trail System.
- **Pop Keeney Stadium.** NSD plans to retain Pop Keeney Stadium and improve its seating and support facilities to create a unique and dynamic downtown opportunity. The facility has the potential to bring many more year-round recreational uses to downtown.
- **Public Space Planning.** This project would evaluate opportunities to design and construct public spaces in conjunction with downtown development. In addition, opportunities for a community center, possibly located with proposed potential aquatics center, will be explored.
- **SR 522 East of Wayne Curve.** This project is the continuation of the SR 522 Wayne Curve between 96th Avenue NE and NE 180th Street. The project will improve overall mobility, vehicular and pedestrian safety. Key elements will include installation of curb and gutters. Other potential elements include street illumination and landscaping. The project is currently partially funded.

The Proposed Alternative includes all of the improvements identified in the CFP, the Transportation Element, the Capital Facilities Element, and the *City of Bothell Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan* (Pertee Inc. 2008a). Thus, in addition to the projects described above for the No Action Alternative, the Proposed Alternative would include the following improvements.

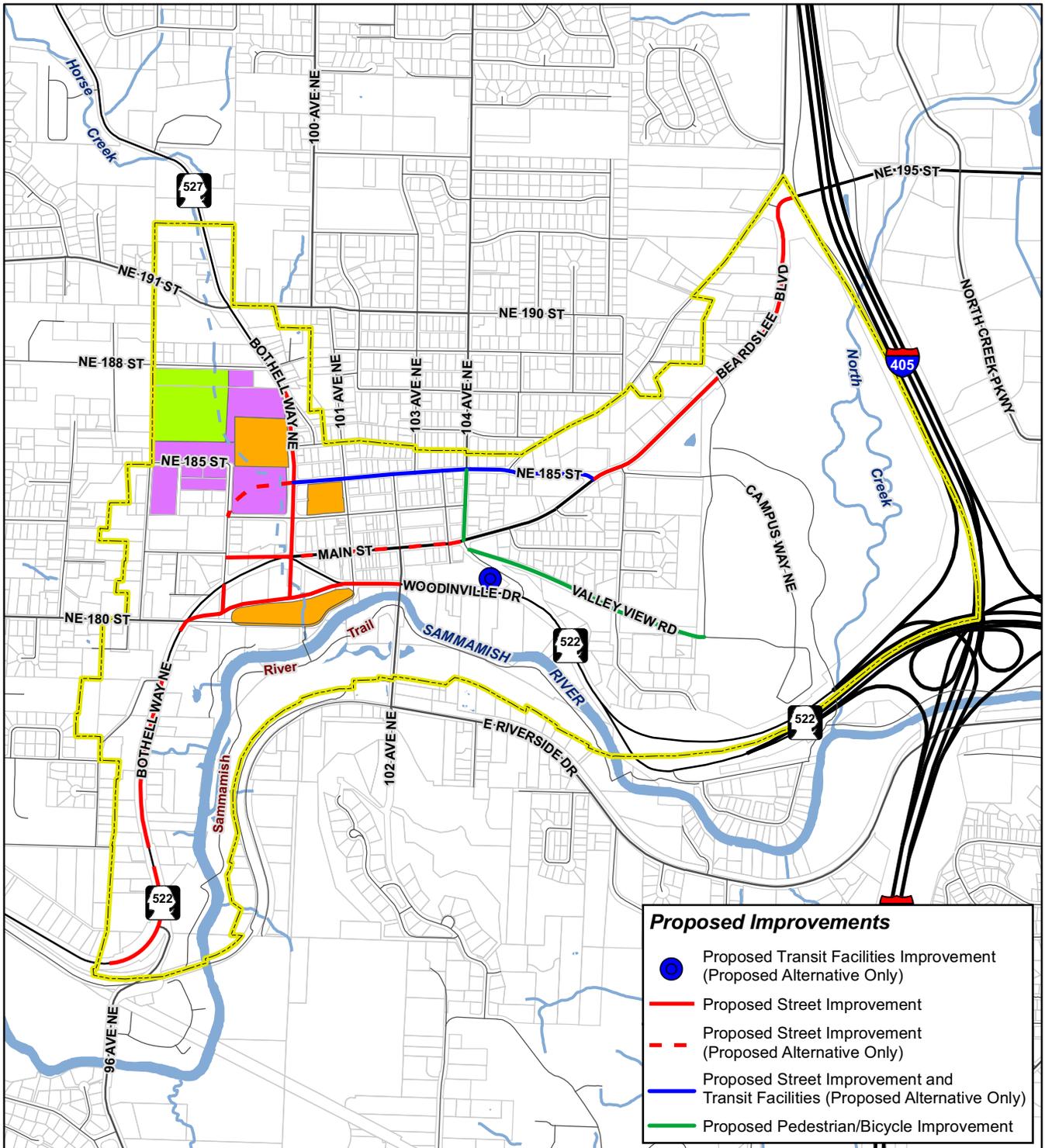
- **SR 527 Multiway Boulevard Treatments.** This project balances the competing needs of roadway capacity, local access, street parking, urban density, and pedestrian comfort. It provides for vehicle mobility through five travel lanes (two lanes in each direction with alternating left-turn lanes); incorporates enhanced tree-lined medians bordering the vehicle lanes that serve as an initial buffer between fast-moving vehicles and the slow-paced, pedestrian realm; and accommodates a full pedestrian realm complete with a slow-moving access lane, parallel parking

stalls, and a gracious tree-lined, wide sidewalk. This configuration provides a wide buffer between the auto-oriented arterial traffic and pedestrians. The side-access lanes would accommodate bicycle users as well.

- **Main Street Enhancement.** This project would prepare existing Main Street businesses to more successfully compete as new commercial development occurs on revitalized lands. The makeover of the streetscape includes parking and sidewalk improvements and provides a pedestrian-friendly atmosphere while maintaining smooth traffic flow. Downtown amenities and urban elements, such as lighting, landscaping, benches, trash receptacles, way-finding signage, and bicycle racks, would brighten and strengthen economic health in this unique and historic commerce district.
- **NE 185th Street/98th Avenue NE Connector.** This project, extension of NE 185th Street to connect to 98th Avenue NE, would provide a strong east-west connection between SR 522, new development on the NSD site, and the east side of downtown including the UWB/CCC campus. This connection could also serve as the primary transit route. Where possible, park-and-ride facilities along this route would be used to support other community needs or redevelopment.
- **NE 185th Street Transit-Oriented Street.** This project includes widening of NE 185th Street from SR 527 to Beardslee Boulevard with wider sidewalks and enhanced transit passenger amenities at key stop locations. Transit signal priority may be appropriate at traffic control signals along the route.
- **NE 185th Street Downtown Transit Facilities and Park-and-Ride Facility.** It is expected that renewed applications for funding from Sound Transit for transit facilities on NE 185th Street or elsewhere in the study area will be made during the planning period. This center could include one or more new park-and-ride facilities with capacity for up to 250 to 300 parking spaces. This Draft EIS assumes that this project would be located on NE 185th Street.
- **Kaysner Park-and-Ride/Transit-Oriented Development.** When a new park-and-ride lot is developed at the proposed NE 185th Street Transit Facilities or elsewhere in the study area, the existing Kaysner site should be redeveloped with shared-use parking and transit-oriented development while retaining approximately 100 park-and-ride spaces, as needed to serve north-south transit routes along I-405.
- **Public Parking.** Additional public parking lots or garages may be warranted if a downtown cash-in-lieu-of-parking program is implemented. Such garages may be built in conjunction with civic projects such as a new City Hall or with other partners, such as NSD for shared use with Pop Keeney Stadium.

The Planning Commission Recommendations include the same improvements as the Proposed Alternative, but would expand the cash-in-lieu-of-parking program for other districts in close proximity to the core. City Council will determine whether to proceed with a cash-in-lieu-of-parking program.

Figure 2-6 provides a map of the proposed capital facilities projects described above. Table 2-3 summarizes the capital improvement assumptions for each alternative.



Source: City of Bothell (2008)

- Study Area
- Pop Keeney Stadium
- Parcel
- Proposed City Hall Siting Option
- Water Feature
- Proposed Northshore School District Property Purchase Area
- Piped Stream

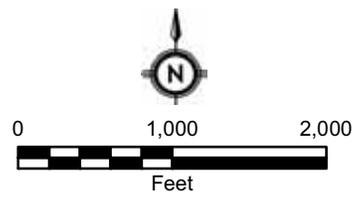


Figure 2-6. Proposed Capital Facilities Downtown Bothell Planned Action EIS
December 2008

Table 2-3. Proposed Capital Improvements by Alternative

Improvement	No Action Alternative	Proposed Alternative	Planning Commission Recommendations
Bothell Crossroads	X	X	X
SR 527 Improvements	X		
SR 527 Multiway Boulevard Treatments		X	X
Main St Extension	X	X	X
Main St Enhancement		X	X
SR 522 Wayne Curve Improvement	X	X	X
SR 522 East of Wayne Curve	X	X	X
Beardslee Blvd Widening East of NE 185th St	X	X	X
104th Ave NE Bike Lanes	X	X	X
Valley View Road Improvements	X	X	X
NE 185th St./98th Ave NE Connector		X	X
NE 185th St Transit-Oriented Street		X	X
NE 185th St Downtown Transit Facilities and Park-and-Ride		X	X
Kaysner Park-and-Ride/Transit-Oriented Development		X	X
Public Parking		X	X
Purchase of NSD Property for Public Amenities/Facilities	X	X	X
City Hall/Dawson Replacement	X	X	X
Pop Keeney Stadium	X	X	X
Public Space Planning	X	X	X

2.3.3. Growth Forecasts

Proposed Residential, Housing, and Employment Growth

The civic and infrastructure investments described above, together with the proposed *Downtown Subarea Plan and Regulations*, are expected to attract more development to the study area than City plans presently forecast. Table 2-4 identifies existing population, housing, and employment in the study area and the Bothell vicinity; net additional growth based on City and regional forecasts for the No Action Alternative; and net additional growth under the Proposed Alternative (ECONorthwest 2007). The Bothell vicinity includes Puget Sound Regional Council (PSRC) analysis zones (based on U.S. Census tracts) that encompass the City, its urban growth area, and some adjacent areas (Figure 2-7).

Table 2-4. Population, Housing, and Employment Comparison

	2000		2007		Net Additional Growth 2000–2035			
	Bothell Vicinity ¹	Study Area ¹	Bothell Vicinity ²	Study Area	No Action Alternative		Proposed Alternative	
					Bothell Vicinity ¹	Study Area ¹	Bothell Vicinity ¹	Study Area ¹
Population	44,974	2,302	49,314	2,534 ³	30,514	3,051 ^{3,6}	31,183	6,019 ^{3,6}
Housing Units	16,854	862	22,783	967 ⁴	13,870	1,387 ⁶	14,174	2,736 ^{6,8}
Employment (Excluding Colleges)	22,273	2,644	20,505 ^{5,7}	2,338 ^{5,7}	14,440	1,167 ⁶	15,610	1,367–1,644 ^{6,8}
Employment (including Colleges)	22,772	3,143	20,772 ^{5,7}	2,837 ^{5,7}	15,441	2,168 ⁶	16,611	2,368–2,645 ^{6,8}

¹ Estimates compiled by Perteet based on the adopted Transportation Element, Puget Sound Regional Council (PSRC) estimates and forecasts, and, for the Proposed Alternative, City estimates based on the ECONorthwest LIFT application forecasts. For 2000, population is based on the number of housing units multiplied by an average household size of 2.67, based on PSRC compilation of U.S. Census data for the tracts that encompass the Bothell vicinity. For 2035, the estimated household size of 2.2 is an average based on PSRC household and population projections for 2030 and 2040 for the Bothell vicinity.

² Based on PSRC compilation of U.S. Census and building permit data and Washington State Employment Security Department jobs data for the Bothell vicinity. Employment represents jobs covered by unemployment insurance and does not include self-employed workers, proprietors, CEOs, etc., and other non-insured workers.

³ For 2007, an average household size of 2.62 is applied to the number of housing units. Average household size estimate is based on PSRC estimates of household size in the Bothell vicinity. For 2035, the household size is estimated to be 2.2 based on PSRC household and population projections for 2030 and 2040 for the Bothell vicinity.

⁴ Based on King County Assessor information.

⁵ Based on PSRC compilation of Washington State Employment Security Department jobs data. Employment represents jobs covered by unemployment insurance and does not include self-employed workers, proprietors, CEOs, etc., and other non-insured workers.

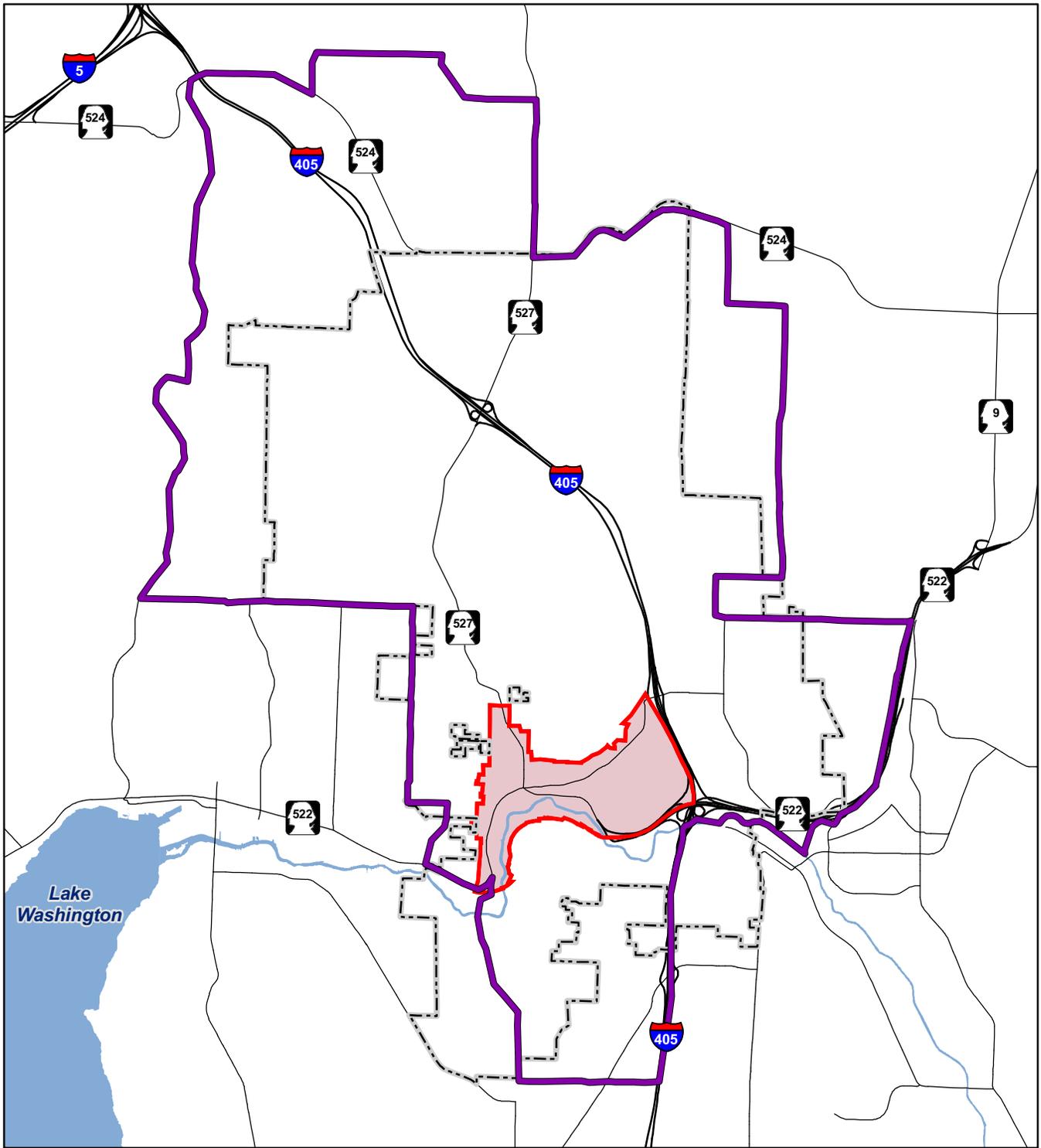
⁶ Represents the net change from 2000 to 2035.

⁷ The difference in downtown jobs between 2000 and 2007 may be a result of differences in data sources, including that the 2007 figures do not include non-insured workers.

⁸ Based on estimates compiled by Perteet derived from the ECONorthwest LIFT application forecasts and PSRC estimates and forecasts.

Under the Proposed Alternative, net new growth in the study area is forecast to include 2,736 dwellings and between 1,367 and 1,644 jobs by 2035. Net new growth under the No Action Alternative is forecast at 1,387 dwellings and 1,167 jobs for the same timeframe.

Forecast additional jobs of approximately 1,644 (excluding colleges) for the Proposed Alternative are based on net additional office and retail square footages as shown in Table 2-5. These square footages together with the 2,736 net new dwelling units, identified in Table 2-4, are considered part of the land use “bank” in the Planned Action Ordinance. Development within these development level estimates would be considered included in the Planned Action, provided mitigation measures are met.



Source: City of Bothell (2008); King County (2008); PSRC (2000)

-  Bothell Vicinity: PSRC Transportation Analysis Zone Boundaries
-  Bothell City Limits
-  Study Area
-  Water Feature

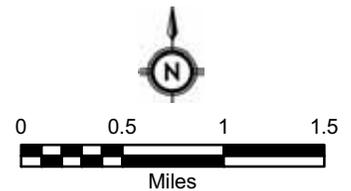


Figure 2-7. Bothell Vicinity
Downtown Bothell Planned Action EIS

December 2008

Table 2-5. Proposed Square Footage and Dwelling Units of New Development through 2035—Proposed Alternative

Use	New Development Forecast 2035 ¹
Office square feet	248,500
Retail square feet	397,000
Residential dwellings	2,736

¹ ECONorthwest forecasts associated with the City's LIFT Application.

The Planning Commission Recommendations are expected to include growth levels similar to the Proposed Alternative and within the range of the primary alternatives, because they propose peripheral land use districts similar to the No Action Alternative and new districts in the heart of the study area similar to the Proposed Alternative. See Section 2.3.4.

Location of Growth

Future growth under each alternative would likely be located on vacant and redevelopable lands. Figure 2-8 provides a map identifying buildable lands, including vacant and redevelopable parcels. Figure 2-9, created as part of the *Downtown Subarea Plan and Regulations*, identifies opportunity sites for new development. Growth may occur on other properties in the study area, but is more likely on these buildable lands or opportunity sites.

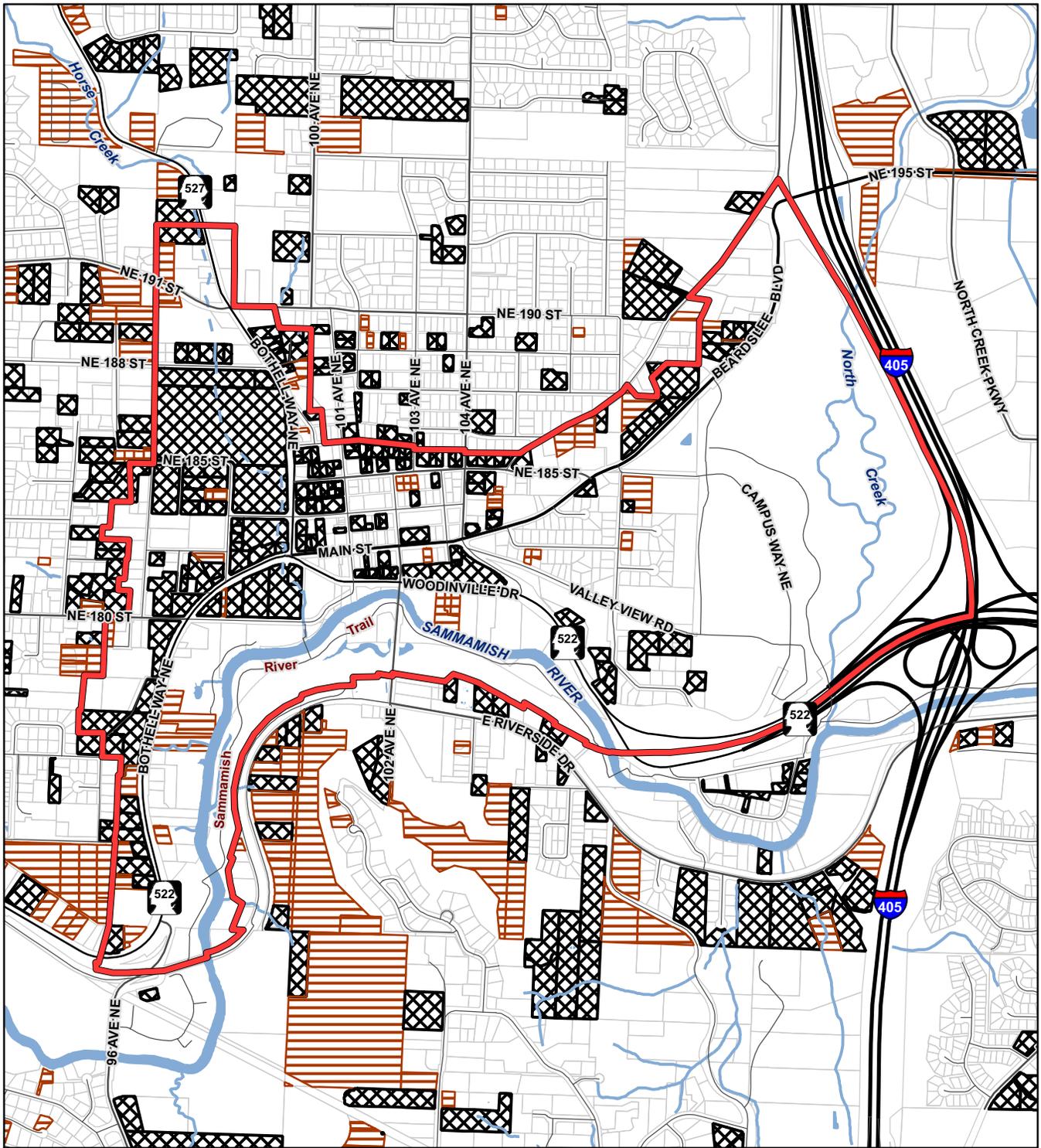
Horizon Year

For the purposes of this Draft EIS, impacts are forecast for the horizon year 2035. This year was selected to achieve greatest consistency with two other major studies: ECONorthwest's *Economic and Fiscal Impacts of a Revenue Development Area in the City of Bothell* (2007), which forecast for 2033, and the analysis for National Environmental Policy Act (NEPA) review of the Bothell Crossroads and SR 527 Boulevard projects, which forecast for 2035.

This analysis is based on development forecasts derived from either the PSRC or ECONorthwest. Forecasts are estimates of growth based on assumptions about future economic conditions, among other factors, and the relative attractiveness of the Bothell community in the region.

This Draft EIS also describes other estimates, such as growth targets and buildable lands. Growth targets are the City's fair share of expected growth as negotiated with Snohomish and King counties through a regional planning process. The City's current growth target is citywide and is applicable through 2025.

No less frequently than every 7 to 10 years the City and respective counties examine growth targets and set a new horizon year. The next update is planned for 2011 and would likely involve setting a new 20-year growth target horizon year.



Source: City of Bothell (2008); King County (2008)

- | | |
|---|---|
|  Study Area | Buildable Lands Status |
|  Parcel |  Redevelopable |
|  Water Feature |  Vacant |
|  Piped Stream | |

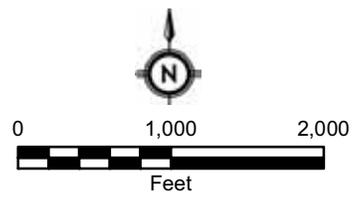


Figure 2-8. Buildable Lands
 Downtown Bothell Planned Action EIS
 December 2008

The City is required to plan for its assigned growth target and demonstrate that its Comprehensive Plan is able to accommodate the growth target such as through a buildable land capacity analysis. Buildable land estimates are reasonable estimates of likely development capacity discounting vacant or potentially redevelopable land by critical areas, future roadways, and other factors, and applying density assumptions based on historic development. The City may use the buildable lands analysis, which is required to be prepared on a countywide basis every 5 years, to help confirm it has the plan capacity to meet adopted targets. Buildable lands capacity is not based on a horizon year or a rate of growth, but on the possible development levels given the land and zoning designations and discount factors assumed at the time it is prepared.

Forecasts, growth targets, and buildable lands are further discussed in Section 3.3, “Land Use Patterns/Plans and Policies.”

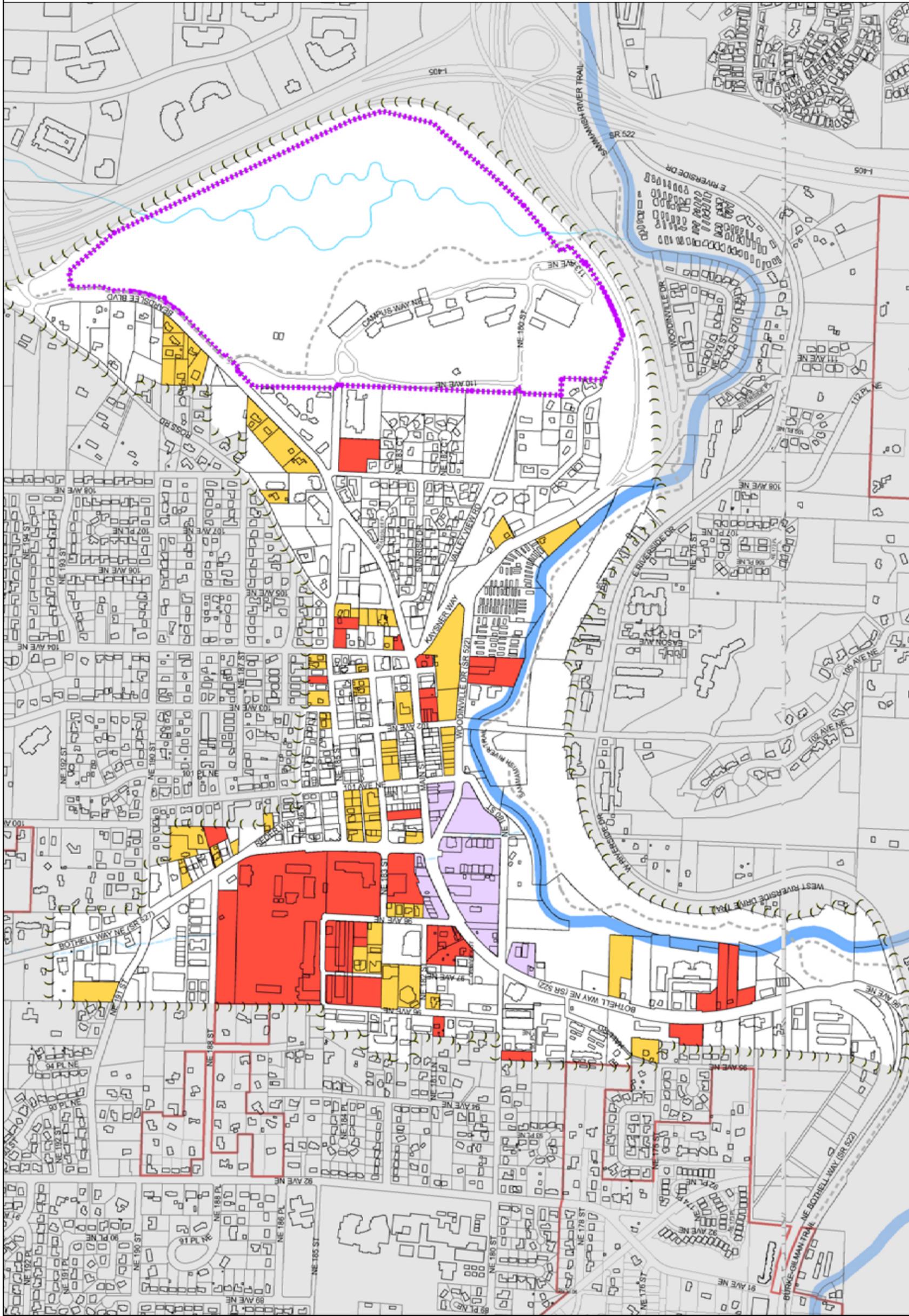
2.3.4. Planning Commission Recommendations

The Planning Commission Recommendations are within the range of the Proposed Alternative and No Action Alternative. They are most consistent with the general concept and vision of the Proposed Alternative, but vary somewhat in terms of maximum heights and district boundaries and extents. The intent of the Planning Commission Recommendations is to provide for greater compatibility in terms of density and height with current development surrounding the study area as well as greater compatibility between districts within the study area.

Compared to the Proposed Alternative, Planning Commission Recommendations include reductions in the permitted building heights (but not number of stories) in the

Table 2-6. Maximum Height Comparison—Proposed Alternative and Planning Commission Recommendations

District	Proposed Alternative	Planning Commission Recommendations
Downtown Core	6 floors and 76 feet	6 floors and 65 feet
Downtown Neighborhood	5 floors and 65 feet	5 floors and 55 feet
Downtown Transition	4 floors and 54 feet	eliminated
SR 522 Corridor	4 floors and 54 feet	4 floors and 45 feet
General Downtown Corridor	4 floors and 54 feet	4 floors and 45 feet
Sunrise/Valley View Neighborhood	30 feet	30 feet



- Legend**
- (---) Downtown Bothell Study Area
 - (---) Bothell City Limits
 - (---) Buildings
 - Opportunity Sites**
 - Short-term Opportunity Site
 - Long-term Opportunity Site
 - Continued Expansion of Campus through year 2020
 - Opportunity for change subject to SR 522 realignment: entire area would be subject to redevelopment (long-term timetable anticipated).

Source: City of Bothell 2006

Figure 2-9. Opportunity Sites
Downtown Bothell Planned Action EIS
December 2008

Similar to the Proposed Alternative, Planning Commission Recommendations promote new districts including the Downtown Core, Downtown Neighborhood, and General Downtown Corridor among others. The Planning Commission Recommendations eliminate the Downtown Transition District, retaining the current zoning designations around the periphery of the study area (e.g., R-2,800, R-2,800/OP, R-2,800/OP/NB, R-2800/OP/CB/MVSO, R-5,400d/OP/NB, and R-AC/OP/NB). Other boundary differences include different extents for the Downtown Core (less extensive on SR 527 north of 185th Street) and Downtown Neighborhood (more extensive on SR 527 north of 185th Street, and along Beardslee Boulevard). The SR 522 Corridor and General Downtown Corridor districts are also less extensive than under the Proposed Alternative by the retention of some current districts. The extended Downtown Neighborhood District is intended in part to compensate somewhat for these reductions in allowed density due to retaining peripheral districts and reducing the Downtown Core District (Table 2-7 and Figure 2-10).

Table 2-7. Districts Comparison—Proposed Alternative and Planning Commission Recommendations

Proposed Alternative Districts	Planning Commission Recommendations
Downtown Core	Downtown Core with alternative boundaries
Downtown Neighborhood	Downtown Neighborhood with alternative boundaries
Downtown Transition District	R-2800,R-2,800/OP
SR 522 Corridor	SR 522 Corridor, R-2800/OP/CB/MVSO
General Downtown Corridor	General Downtown Corridor and ,R-2,800/OP, R-2,800/OP/NB, R-5,400d/OP/NB, and R-AC/OP/NB
Sunrise/Valley View Neighborhood	Sunrise/Valley View Neighborhood with alternative boundaries
Campus	Campus
Park and Public Open Space	Park and Public Open Space, Pop Keeney/NSD Recreation District
Special Riverfront Overlay	Special Riverfront Overlay
Neighborhood Center Overlay	Neighborhood Center Overlay
Mobile Home Park Overlay	R-2800, MHP

The Planning Commission Recommendations support the use of a Planned Action Ordinance for the study area. They also include similar capital improvements as the Proposed Alternative with encouragement of public parking in particular.

This Draft EIS addresses the Planning Commission Recommendations qualitatively, comparing them to the No Action and Proposed alternatives in terms of Land Use Patterns/Plans and Policies and Aesthetics, Sections 3.3 and 3.4. For other topics, Natural Environment, Air Quality, Transportation, Noise, Cultural Resources, Public

Services, and Utilities, the potential impacts of the Planning Commission Recommendations are in the range of the primary alternative and more similar to the Proposed Alternative, and as such are not further addressed in this document.

2.3.5. Other Future Alternatives

The City Council will consider Planning Commission Recommendations and may select options in the range of the “bookends” of the two primary alternatives. The City Council will consider and decide on City actions and certain capital projects, particularly the location of City Hall.

Other future decisions that will have an impact on downtown revitalization include the decision on whether and where to build a new aquatics center, and what type of transit facilities to incorporate into downtown redevelopment and where to locate them. The Proposed Alternative includes placeholders for these facilities.

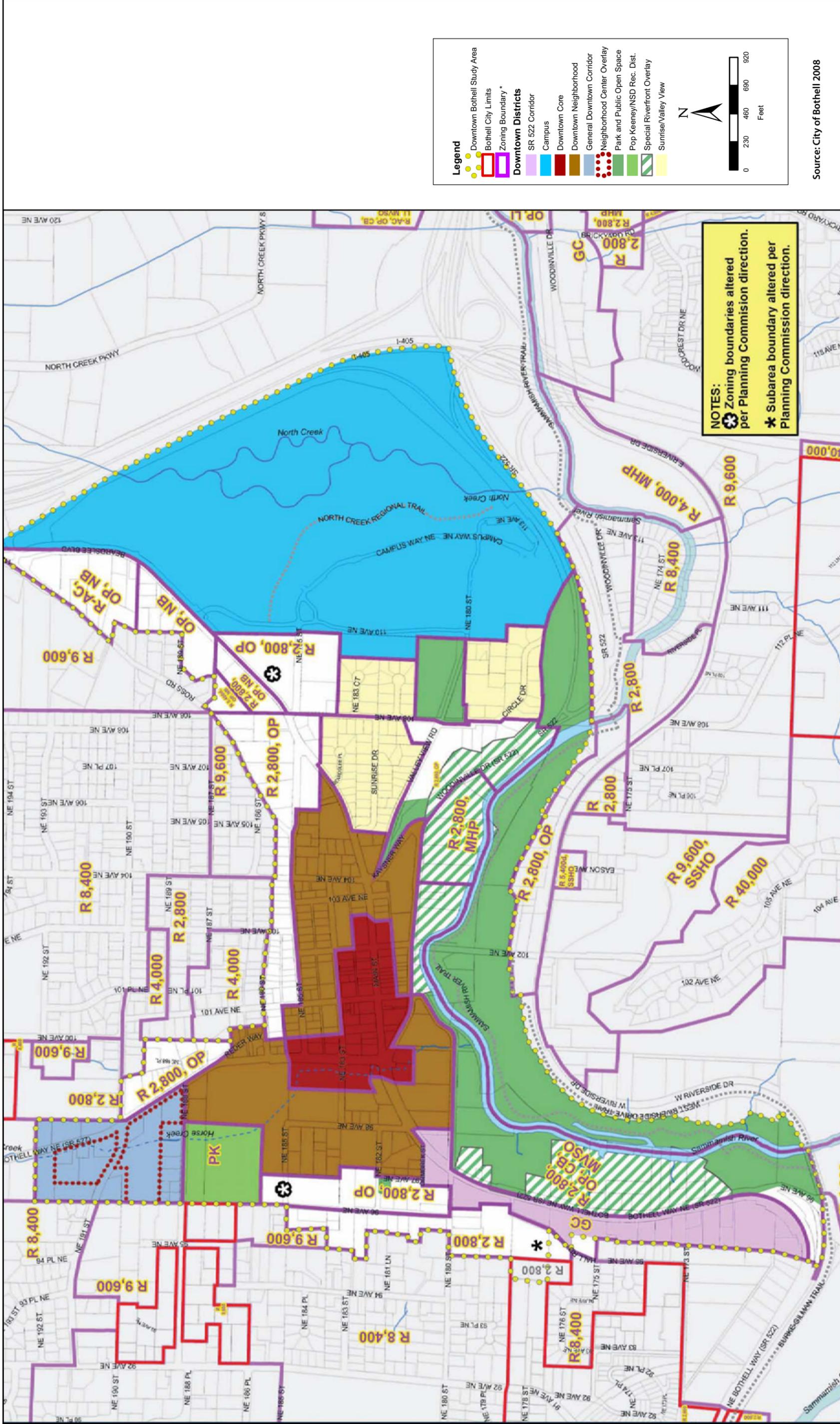
2.3.6. Alternatives Eliminated From Consideration

In the visioning phase of the proposed *Downtown Subarea Plan and Regulations*, a number of concepts were considered, including some that were analyzed and eliminated. Some of the main alternative concepts discussed are listed below.

In 2003, a number of alternative configurations for realigning SR 522 were studied. The preferred concept analyzed in this Draft EIS, was the product of considerable discussion and feasibility and need analysis. A number of factors, including traffic projections, led its prioritization; it is currently fully funded.

Likewise, a number of alternative treatments for SR 527 were discussed and analyzed, including a more traditional treatment and various couplet alignments. The latter options all produced significant challenges. The traditional roadway treatment did not capitalize on the opportunity to create a signature streetscape that would link the new redevelopment opportunity on the NSD site to the traditional downtown on Main Street.

Early discussions about redevelopment of the NSD site included options for more intensive commercial development. Two factors led to eliminating these from further consideration. First, economic projections indicated that there were limits to the amount of commercial development that downtown Bothell could support. Second, there was strong support for building on the existing Main Street retail core, and concern that too much retail development on the NSD site could be detrimental to Main Street business vitality.



Source: City of Bothell 2008

Figure 2-10. Planning Commission Recommended Zoning
Downtown Bothell Planned Action EIS
December 2008

Discussions early on considered the possibility of relocating City Hall outside of downtown. Feedback from citizens and consultants indicated a strong preference and compelling reasons for keeping City Hall downtown, and the alternate locations have been limited to three sites in the civic core.

2.3.7. Benefits and Disadvantages of Delaying the Proposed Alternative

The Proposed Alternative includes the adoption of the *Downtown Subarea Plan and Regulations* and the Planned Action Ordinance. Delaying its implementation would delay the associated potential impacts identified in this Draft EIS, including intensification of growth downtown that would alter current land use; changes in building heights; some traffic and temporary construction impacts, although most of the proposed transportation projects will proceed under both alternatives; noise due to re-routing of buses; and other effects described in Chapter 3. It would also delay development of downtown and reduce the likelihood that downtown would develop in a manner consistent with the downtown vision and eliminate the opportunity for new development and associated review processes to benefit from the analysis developed through this Planned Action process.

2.4. Environmental Review

2.4.1. Purpose

The purpose of environmental review is to provide decision makers and citizens with information about the potential environmental consequences of proposed actions, such as plans, policies, regulations, and permits. SEPA requires that governments consider environmental effects of proposals before taking an action. An EIS provides the greatest amount of information about potential environmental impacts and offers mitigation measures to reduce these impacts.

The City's past and current environmental review process is described below.

2.4.2. Prior Environmental Review

Prior environmental review was conducted for the City's Comprehensive Plan and subsequent amendments, including the following EISs.

- *Final Environmental Impact Statement for the City of Bothell Proposed Comprehensive Plan 1993.*
- 2001 Selected Amendments to the *Imagine Bothell... Comprehensive Plan* and Bothell Municipal Code, an integrated SEPA/GMA document incorporating a Final Environmental Impact Statement, addressed proposed changes in downtown building heights.

- *Imagine Bothell...2004–2005 Comprehensive Plan and Code Update Final Environmental Impact Statement*, addressed citywide policies, critical areas regulations, and land use changes in and outside of downtown. Subsequent Supplemental Environmental Impact Statements were prepared for plan amendments in 2005, 2006 and 2007.
- *SR 522, University of Washington, Bothell/Cascadia Community College south access project: environmental assessment*. 2002. U.S. Department of Transportation, Federal Highway Administration and Washington State Department of Transportation.

Where appropriate, relevant information found in prior EISs is also considered in this Draft EIS.

2.4.3. Current Environmental Review

Pursuant to SEPA Rules (WAC 197-11-408 through 410), the City issued a Determination of Significance and Scoping Notice (Appendix B), on July 22, 2008, initiating environmental review of the proposed *Downtown Subarea Plan and Regulations* and Planned Action Ordinance. Interested citizens, agencies, organizations, and affected tribes were invited to submit comments on the scope of the Draft EIS during the scoping period, which closed on August 12, 2008. Consistent with City noticing requirements, the notice was published in the City’s newspaper of record and mailed to property owners inside the study area and within 300 feet, representing approximately 2,500 addresses. It was also sent to federal and state agencies to which the City sends SEPA notices and determinations. As a courtesy, it was posted on the City’s web site and sent by email to interested parties following the downtown planning process.

As described in the Scoping Notice, the following topics are addressed in Chapter 3 of this Draft EIS:

- Natural Environment (earth, water resources, plants, and animals)
- Air Quality
- Land Use Patterns/Plans and Policies
- Aesthetics
- Transportation
- Noise
- Cultural Resources
- Public Services and Utilities

The supporting SEPA Environmental Checklist (Appendix C) was made available during the scoping process. It addresses environmental topics not further considered in this Draft EIS because their impacts were deemed insignificant or mitigated with

existing or proposed codes. The Environmental Checklist is hereby incorporated by reference.

A total of four written comments were received during the scoping period, which are summarized by topic below, including how they are addressed in this Draft EIS:

- **Land Use Alternatives.** Commenters requested a review of the City Hall siting locations and alternative heights or district boundaries. This Draft EIS addresses the three City Hall siting locations under “Capital Facilities,” above (Section 2.3.2, “Comparison of Alternatives” and in more details in Section 3.3, “Land Use Patterns/Plans and Policies.” This Draft EIS analyzes alternative heights and zoning boundaries for the No Action and Proposed alternatives. The Planning Commission Recommendations, which address alternative heights, districts, and development standards within the range of the primary alternatives, are discussed in Section 2.3.4, “Planning Commission Recommendations.” As stated in Section 2.3.5, “Other Future Alternatives,” the City Council may alter alternatives within the range of the primary alternatives.
- **Surface Water.** Commenters requested that water quality topics be addressed. Surface water, including water quality, is described in Section 3.1, “Natural Environment.” Commenters also indicated a desire to see hydrologic modeling. As downtown is largely developed today and would be highly developed in the future in terms of impervious surfaces, and since the City models hydrologic conditions at a capital project design level, hydrologic modeling is not a part of this Draft EIS. However, impervious surface standards are compared and potential mitigation measures to reduce impervious surfaces are described in Section 3.1, “Natural Environment.”
- **Groundwater.** Commenters requested consideration of groundwater. The SEPA Checklist prepared as part of scoping (Appendix C) noted that the project is unlikely to impact groundwater. Nevertheless, groundwater is discussed briefly in Section 3.1, “Natural Environment,” including potential locations where low impact development techniques may benefit groundwater resources.
- **Toxics.** Commenters requested consideration of how compliance with toxic materials laws may impede future development on sites with hazardous materials. The SEPA Checklist, incorporated by reference into this Draft EIS (Appendix C), identifies the study of the potential contamination of 21 sites in the *Report on Tax Parcel History through 1972*, prepared by the Environmental Coalition of South Seattle (ECOSS). The SEPA Checklist includes a mitigation measure recommended in this report that will require site-specific studies as development occurs. With the requirement to meet numerous state and federal laws, and the recommendation of the subject report, no further review is provided in this Draft EIS.
- **Land Use Patterns.** Commenters requested a review of land use compatibility and use of a form-based code. This Draft EIS studies land use compatibility in Section 3.3, “Land Use Patterns/Plans and Policies.” The differences between modified traditional zoning (No Action) and form-based zoning (Proposed Alternative) are studied in 3.3, “Land Use Patterns/Plans and Policies,” and Section 3.4, “Aesthetics.”

- **Historic Resources.** Commenters requested a review of historic resources. An analysis of archaeological and historic resources is provided in Section 3.7, “Cultural Resources.”
- **Light and Glare.** Commenters requested a review of light and glare. The SEPA Checklist incorporated by reference into this Draft EIS identifies potential light and glare impacts and notes the current and proposed City code that would mitigate the impacts (Appendix C). Although already addressed in the SEPA Checklist, this Draft EIS integrates a discussion of light and glare in Section 3.4, “Aesthetics.”
- **Open Space/Recreation.** Commenters requested a review of open space and recreation. This analysis is included in Section 3.8, “Public Services and Utilities.”
- **Transit Demand.** Commenters requested Information about current and future transit use, including daily potential bus frequency and potential daily transit boardings, is addressed in Section 3.5, “Transportation.”

3.1. Natural Environment

This section evaluates the impacts on natural resources resulting from the alternatives. The natural resources evaluated include earth, water, and biota. Earth resources consist of geological and soil features and processes, including topography, soil, slope stability during erosion, mass failure, and seismic events. Water resources include groundwater as well as surface water resources such as lakes, streams, and wetlands. Biota include plants, wildlife, and fish. The discussion in this section covers all aspects of these resources, but is focused on those resources that are protected by law and regulation, in particular, resources identified in the City of Bothell Critical Areas Ordinance (CAO) (Bothell Municipal Code [BMC] 14.04) and Shoreline Master Program (BMC 13.12).

This analysis focuses on the study area defined in Section 2.3.1 and shown in Figure 2-1. Some resources, such as streams and soil types, may extend outside of the study area. In these cases, the analysis discusses how the alternatives may affect the larger resource.

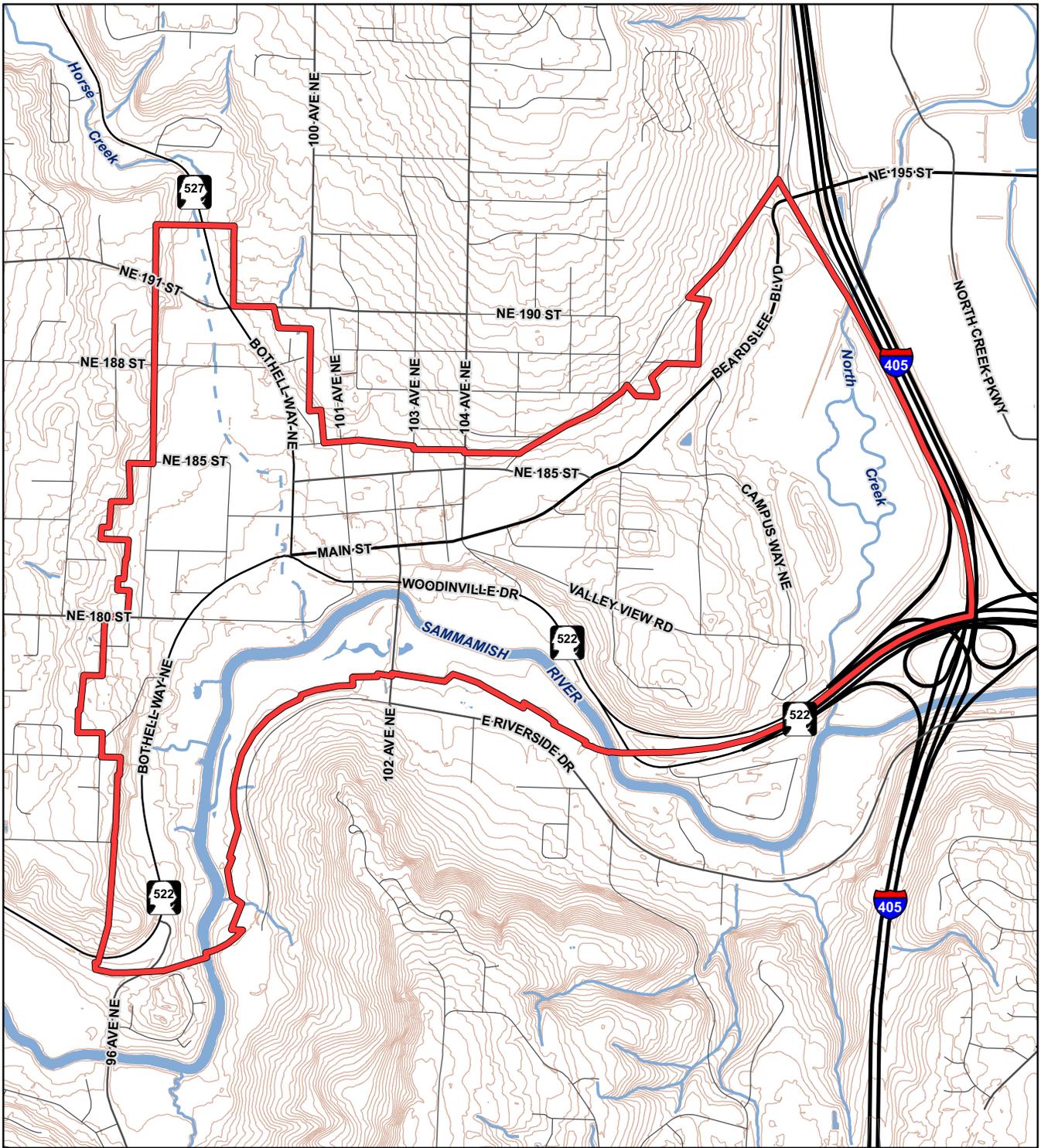
This analysis was prepared using existing information available in public sources or provided by the City. Specific data sources are cited in the text, as applicable.

3.1.1. Affected Environment

Earth

Topography

Bothell is in the Puget Sound region, which includes landforms created by glaciation, subsequent erosion and deposition, and engineered earthworks. Glaciation created the existing topography of the study area (Figure 3.1-1), which is bounded on the south, west, and north by the toe slope of Norway Hill, the flanks of Westhill, and the lower slopes of Beckstrom Hill, respectively, and by the valley of the Sammamish River and its tributary, North Creek, on the east. The Sammamish River flows from east to west through the study area (near the southern boundary of the study area); within the study area it receives two tributaries on its north bank, North Creek on the east and Horse Creek on the west. Within the study area, North Creek flows through a large mitigation wetland constructed between 1998 and 2001, when the University of Washington Bothell/Cascadia Community College (UWB/CCC) campus was established on lower Beckstrom Hill just west of the wetland. Horse Creek is mostly piped within the study area, but is an open stream in most of its headwater area northeast of the study area. The Sammamish River is bordered by wetlands in much of the study area.



Source: City of Bothell (2008)

-  Study Area
-  Water Feature
-  Piped Stream
-  Contour (10-foot)

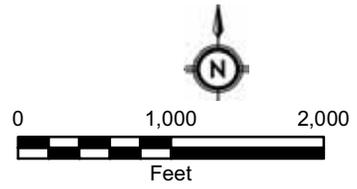


Figure 3.1-1. Topography
 Downtown Bothell Planned Action EIS
 December 2008

Its current channel is largely the product of channel dredging and straightening efforts that were conducted repeatedly between 1916 and the early 1960s; it thus constitutes an engineered landform. The dredging and associated placement of fill material effectively eliminated the river's historic floodplain; except along the North Creek wetlands, little of the study area is currently within an active floodplain.

Geology

Bedrock is not exposed at the surface anywhere within the study area. Instead, surficial deposits consist of a variety of glacial and post-glacial deposits. A University of Washington/U. S. Geological Survey Mapping Study conducted in 2002 identified eight primary geologic units within the study area (Figure 3.1-2):

Qp—Peat Deposits. Soft peat and organic-rich sediment in valley floor areas of North Creek and Horse Creek.

Qf—Alluvial fan deposits. Boulders, cobbles, gravels, and sand deposited in lobate forms; also includes mass-wasting deposits.

Qval—Stream alluvium. Cobble, gravel, pebbly sand, sand, sandy silt, silty sand, silt, and areas or beds of peat along the floodplains of lowland streams and rivers.

Qvr —Late glacial (Vashon) recessional outwash deposits. Stratified sand, gravel, silty sand, and silt deposited by glacial meltwater.

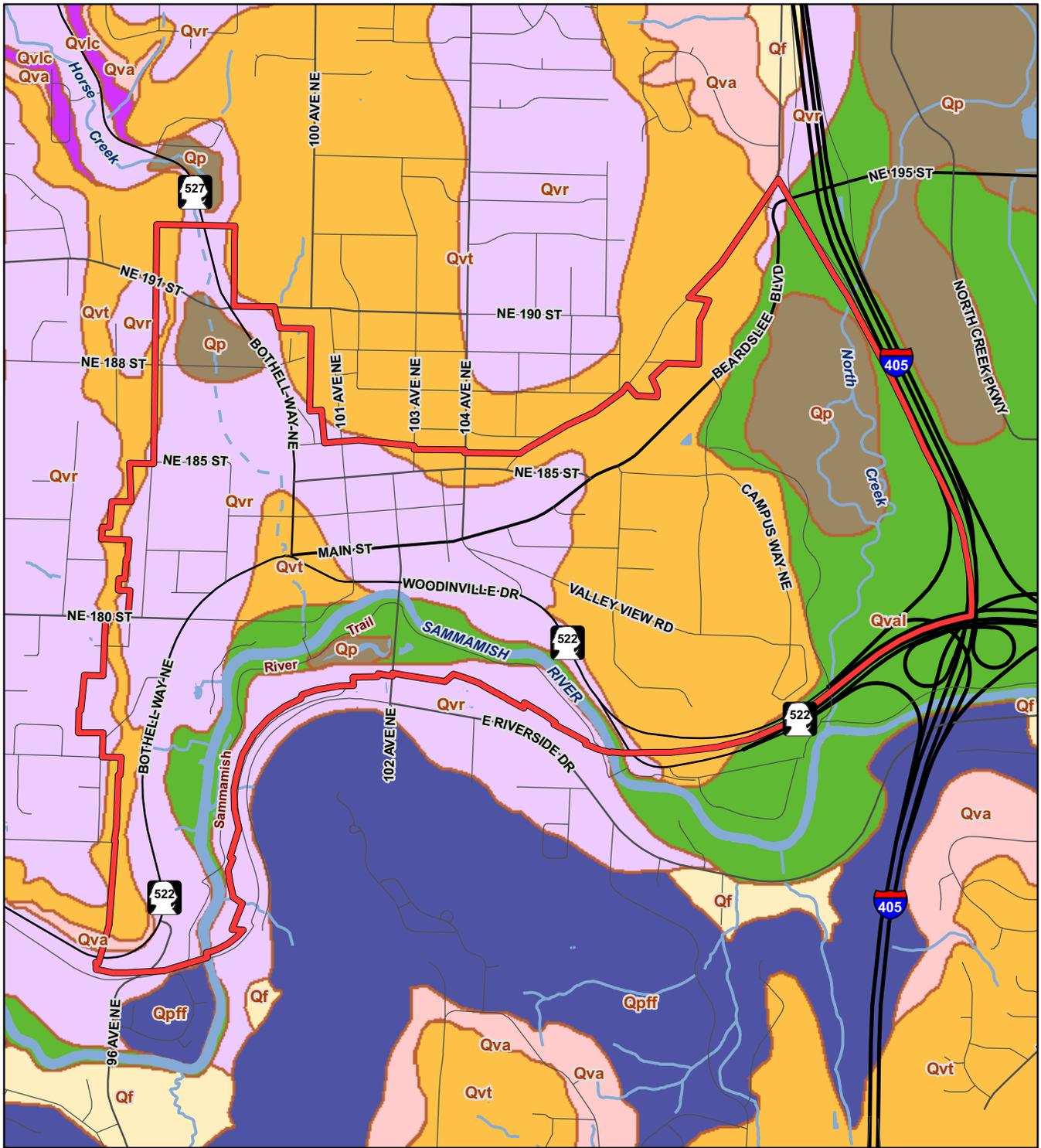
Qvt—Late glacial (Vashon). Compact mixture of glacially transported gravel, sand, and silt; the “hardpan” of local experience.

Qva—Late glacial (Vashon) advance outwash deposits. Well-bedded sand and gravel deposited by streams and rivers issuing from the front of the advancing ice sheet.

Qvlc—Lawton clay. Silt and clay deposited in lakes impounded by the advance of the last major (Vashon) ice sheet.

Qpff—Fine-grained deposits dating to before the last glaciation. Silt with less common interbedded clay, sand, and gravel.

These individual geologic units represent different development constraints and limiting parameters depending on individual site characteristics. Characteristics affecting development potential include: gradient of slope, absence or presence of groundwater hydrology, and the type of soil series present. Certain geologic units found in the study area contain seismic (liquefaction) hazards while other units contain erosion or sedimentation hazards. Each of these different hazards requires a site-by-site evaluation to determine the specific impact and mitigating measures necessary to reduce impacts. These hazard potentials are further discussed below.



Source: City of Bothell (2008); King County (2008)

Geology

- | | | |
|---------------|------|------|
| Study Area | Qf | Qval |
| Water Feature | Qp | Qvrc |
| Piped Stream | Qpff | Qvr |
| | Qva | Qvt |

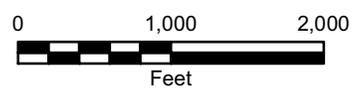


Figure 3.1-2. Geology
Downtown Bothell Planned Action EIS
December 2008

Soils

The study area contains the following 13 soil types, as described by the U.S. Department of Agriculture, Natural Resources Conservation Service (2008), in order of decreasing abundance:

1. Alderwood gravelly sandy loam, 6–15% slopes
2. Everett gravelly sandy loam, 5–15% slopes
3. Snohomish silt loam
4. Puget silty clay loam
5. Indianola loamy fine sand, 4–15% slopes
6. Alderwood gravelly sandy loam, 15–30% slopes
7. Norma sandy loam
8. Arents, Alderwood material, 6–15% slopes
9. Seattle muck
10. Kitsap silt loam, 2–8% slopes
11. Ragnar-Indianola association, moderately steep
12. Indianola loamy fine sand, 0–4% slopes
13. Everett gravelly sandy loam, 15–30% slopes

Soil types 1, 2, 5, 6, 8, 10, 11, 12, and 13 collectively cover about two-thirds of the study area, primarily on sloping-to-hilly terrain. These are moderately to excessively well drained soils with no flooding potential and a typical depth to the water table of at least 24 inches (more than 80 inches for soils 2, 5, 11, 12, and 13). Such soils typically do not have engineering properties that would render them unsuitable for development, and in their unaltered form can support various upland plant communities, usually forest, given the climate in the study area.

Soils 3, 4, 7, and 9 collectively cover about one-third of the study area, primarily on level surfaces near Sammamish River and North Creek. These soils are typical of wetland environments. The depth to the water table is usually less than 12 inches and the soil may contain substantial amounts of organic material, such as peat. Flooding is occasional to frequent in soils 3 and 4, but soils 7 and 9 are only found in higher areas that do not flood. Soils 3, 4, 7, and 9 often place significant engineering constraints on development and, in their unaltered states, typically support forest or nonforest wetland vegetation.

Geologically Hazardous Areas

The City has identified and mapped, in conjunction with the University of Washington, areas of potential geologically hazardous conditions in the study area. The maps identify potential seismic, landslide, and erosion hazard areas based on

existing Bothell regulations and an assessment of available soils and geologic studies. However, these maps do not unconditionally identify all geologically hazardous areas in the study area; any particular site may have characteristics or physical properties that may constrain development activities or make such activities unsuitable. Any determination regarding a property's suitability for development should be made after an analysis of the site's unique features and characteristics.

Erosion Hazard Areas

Erosion hazards occur in the study area (Figure 3.1-3) where there are soil units classified as severely erosive or very severely erosive due to a combination of slope and erodibility (Snyder et al. 1973). They are represented by soils 6, 11, and 13. These soils all occur on slopes steeper than 15% and consist of poorly cohesive sands and gravels derived from glacial outwash. When vegetative cover is lost from these soils, they are easily eroded by heavy rain or flowing water.

Erosion hazard areas may trigger sedimentation of area streams, resulting in impacts on fish habitat and streams as well as reduced effectiveness of storm drainage retention/detention and water quality facilities. For these reasons development occurring within erosion hazard areas is regulated by the City through its critical areas regulations.

Landslide Hazard Areas

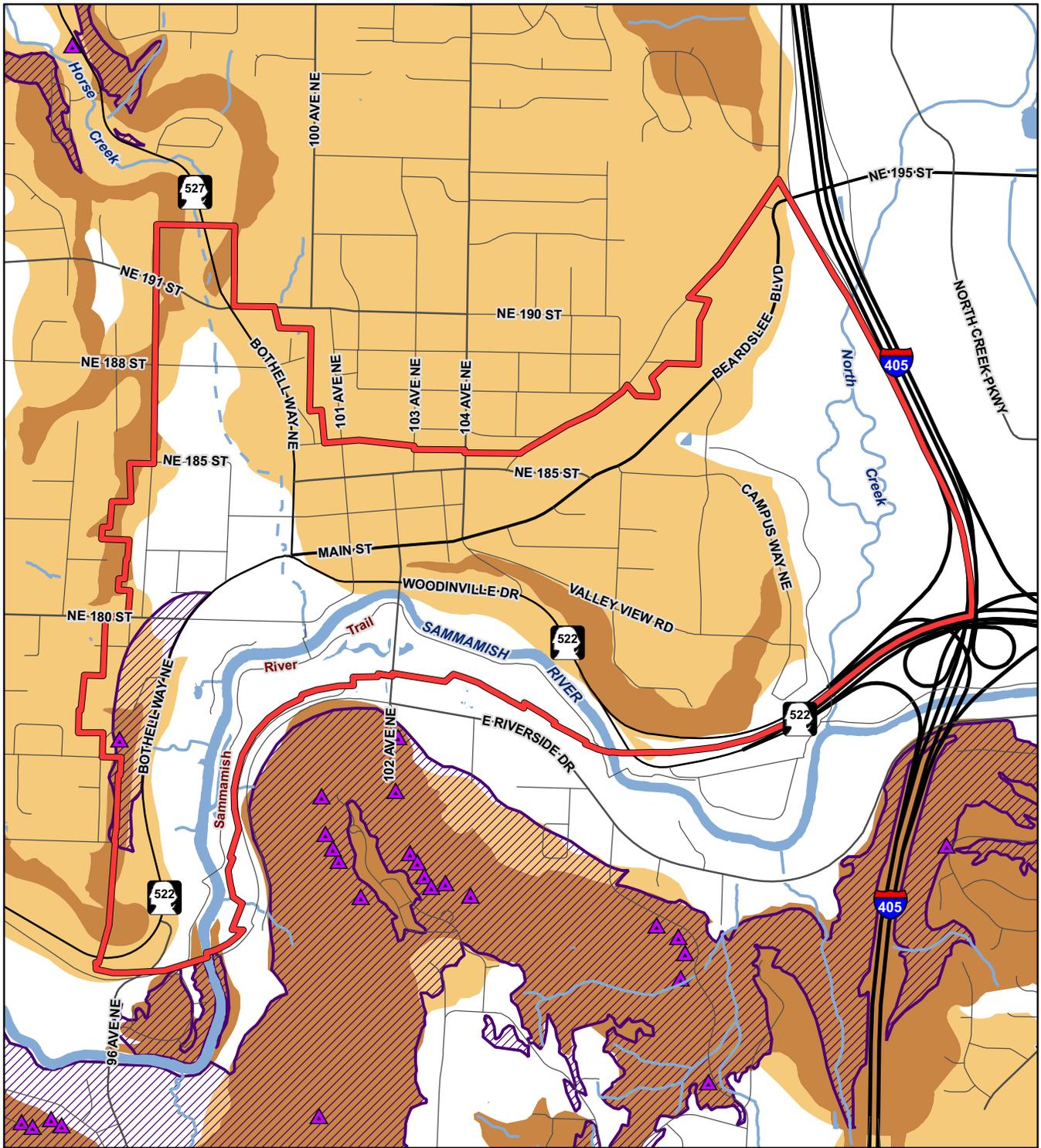
Landslide hazard areas have been identified in the study area (Figure 3.1-3). They are of very limited distribution, primarily occurring on the steep hillside right above Bothell Way at the western edge of the study area. Landslide hazard areas primarily occur on sites with slopes greater than 15%, which contain geologic units having interbedded impermeable and granular deposits (geologic unit Qpff, Figure 3.1-2). Approximately 50 known landslides have been recorded within Bothell since 1992, but only one—near Bothell Way NE—has occurred within the study area (Figure 3.1-3).

Development activities occurring within landslide hazard areas may trigger loss of life or property, disruption of utility systems, blockage of transportation corridors, and other interruptions of needed services. For these reasons, development occurring in landslide hazard areas is regulated by the City through its critical areas regulations.

Seismic Hazard Areas

The principal seismic hazard in the study area is soil liquefaction during prolonged seismic shaking, leading to severe earthquake damage. Liquefaction risk is related to a variety of soil and geologic features including slope, presence of soil organic matter (peat) or clay, high water tables, and soil engineering features.

These features are widespread in the study area (Figure 3.1-4), mainly occurring in valley bottoms, though the eastern slopes of Westhill are also vulnerable to liquefaction.



Source: City of Bothell (2008)

- Study Area
- ~ Water Feature
- - - Piped Stream
- ▲ Known Landslide
- Landslide Hazard Area

- Erosive Soils**
- Severely Erosive Soils
 - Very Severely Erosive Soils

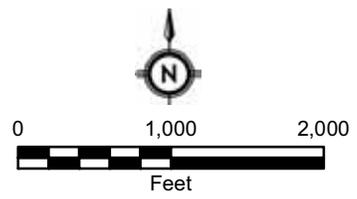
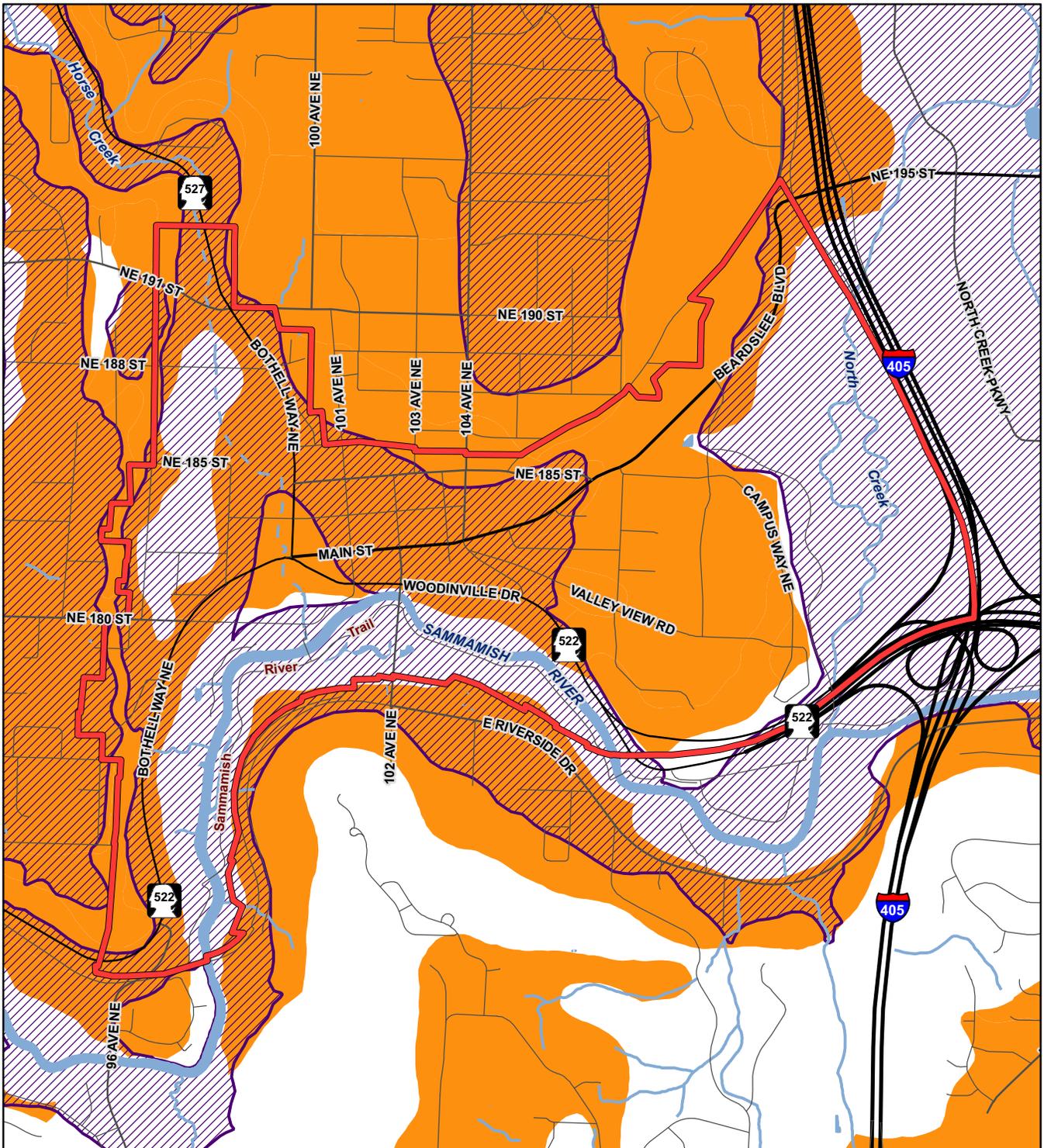


Figure 3.1-3. Erosive Soils and Known Landslides
 Downtown Bothell Planned Action EIS
 December 2008



Source: City of Bothell (2008)

-  Study Area
-  Water Feature
-  Piped Stream
-  Liquefaction Area
-  Highly Permeable Soils

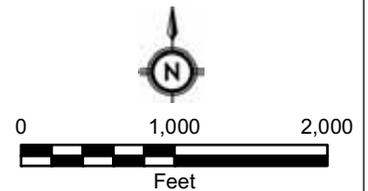


Figure 3.1-4. Seismic Hazard Areas
Downtown Bothell Planned Action EIS

December 2008

In the event of an earthquake, developed facilities in seismic hazard areas may be associated with loss of life or property, disruption of utility systems, blockage of transportation corridors, and other interruptions of needed services. For these reasons, development occurring in seismic hazard areas is regulated by the City through its critical areas regulations.

Water Resources

Groundwater

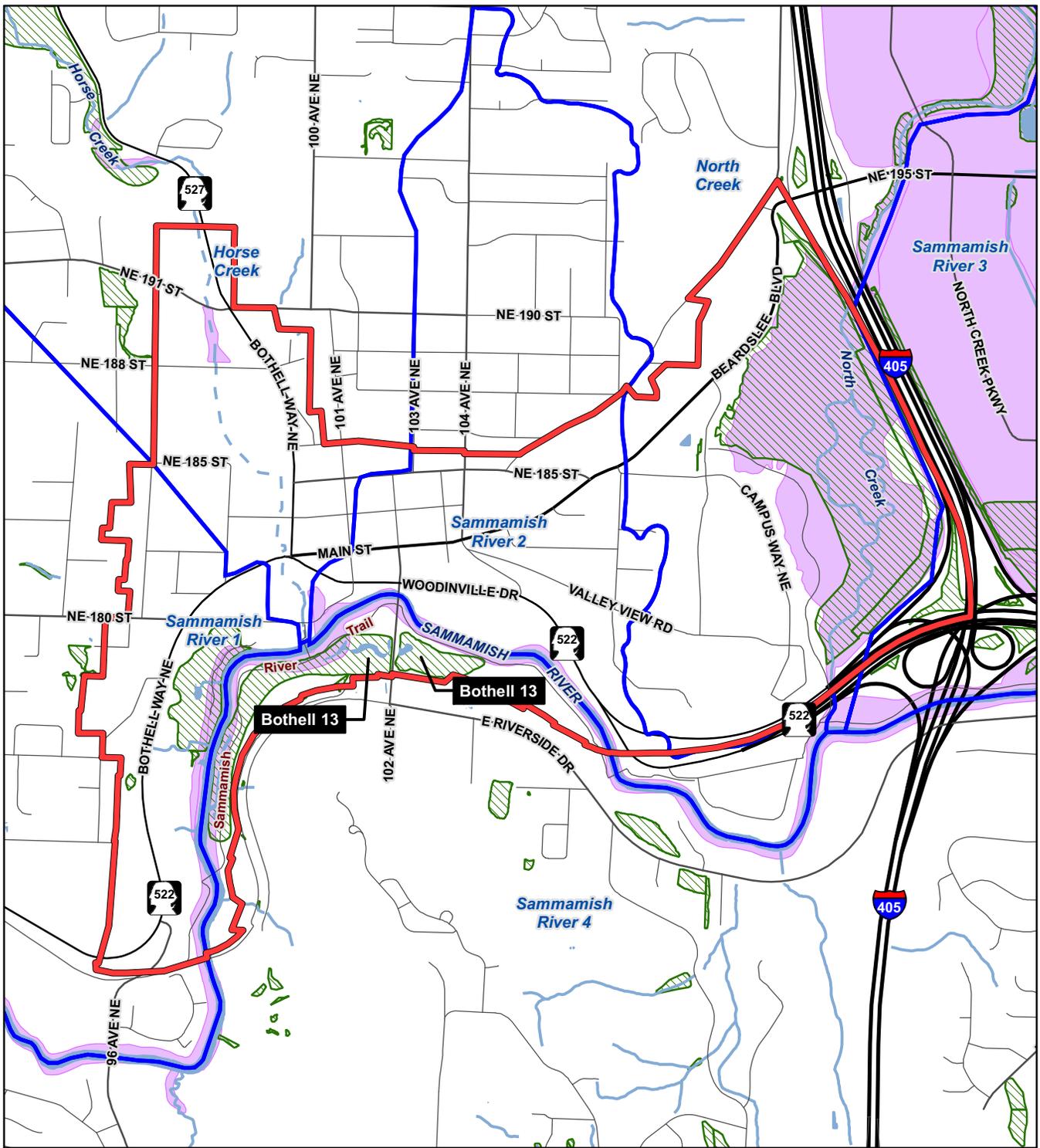
The location of aquifers in the study area is only partially known and has not been mapped or delineated. There are no formal groundwater protection areas identified in the study area, and there are no public water supplies derived from groundwater within the study area. Domestic water is derived from the City of Seattle's Tolt River Pipeline.

Some information about groundwater in the study area can be recovered from review of various well logs and test pit results available from the Pacific Northwest Center for Geologic Mapping Studies on the GeomapNW web site (2008). These results generally show that much of the study area is underlain by: sands and gravels, which are relatively permeable and would likely readily reveal the presence of any groundwater in an excavation; glacial tills, which are much less permeable and could leave a dry excavation unless a period of several days were allowed for groundwater to slowly enter the excavation; and layers of peat, which are usually very wet. Most of the test logs reviewed in the study area describe loose to hard-packed sand and gravel with little or no evidence of groundwater at depths of less than 10 feet below the surface. Groundwater is more common at greater depths and is typically encountered at or somewhat higher than the elevation of the Sammamish River (about 20 feet).

Surface Water

The study area includes portions of the drainage basins of the Sammamish River and two of its tributaries, North Creek and Horse Creek (Figure 3.1-5). The headwaters of all three streams are located outside of the study area. All streams and drainages are within the Greater Lake Washington Watershed, Water Resource Inventory Area (WRIA) 8.

The Sammamish River is Bothell's largest and most significant body of water. Approximately 1.6 linear miles of the Sammamish River are within the study area. The Sammamish River is a shoreline of the state and a core salmonid migratory corridor (according to the WRIA 8 technical committee); it covers a drainage basin of 240 square miles and is approximately 13.8 miles in length from its mouth at Lake Washington to its source at Lake Sammamish. The entire study area is within the Sammamish River Drainage Basin.



Source: City of Bothell (2008); Shannon & Wilson Inc. (2002)

- Study Area
- Surface Water Basin
- Water Feature
- Piped Stream
- Wetland
- FEMA 100-Year Floodplain (1% annual chance flood)

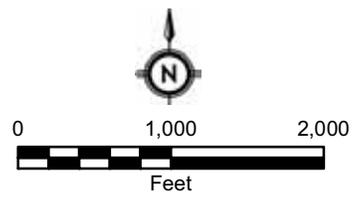


Figure 3.1-5. Surface Water
Downtown Bothell Planned Action EIS
December 2008

North Creek is the next largest and second most significant body of water in the study area. Approximately 0.7 linear mile of North Creek is within the study area. Most of this reach is within the UWB/CCC mitigation wetland. Chinook, coho, and sockeye salmon migrate through North Creek to spawning waters farther upstream beyond the study area.

Horse Creek is a small urbanized stream basin of about 1.2 square miles, about half of which is in the study area. The creek itself is approximately 2 miles in length from its confluence with the Sammamish River to its source, Lake Pleasant; approximately 0.8 mile of the creek is within the study area. The lower half of Horse Creek is conveyed via a culvert located just west of the State Route (SR) 527 right-of-way. The creek was piped in this reach gradually between the 1930s and 1950s, as part of the City's stormwater conveyance system. The creek daylights below SR 527 and discharges to the Sammamish River at the Park at Bothell Landing (HWA Geosciences Inc. 2008). Horse Creek at its confluence with the Sammamish River contains cutthroat trout and stickleback fish and may provide minimal rearing habitat for juvenile salmon (City of Bothell 2004b).

Stream Types

Streams defined by the City in its CAO include year-round or intermittent watercourses or routes. These streams, formed by nature and sometimes modified by humans, generally consist of a defined channel with a bed, banks or sides for a substantial portion of their length. The City uses the Washington stream typing system (WAC 22-16-030) to classify streams. The system is summarized below as it relates to streams in the study area.

- **Type S.** All waters, within their bankfull width, inventoried as shorelines of the state, under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, including periodically inundated areas of their associated wetlands. The Sammamish River and North Creek are Type S waters.
- **Type F.** Segments of natural waters other than Type S waters, which are within the bankfull widths of defined channels, and periodically inundated areas of their associated wetlands; or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat. Horse Creek is possibly considered a Type F water.
- **Type Np.** All segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. No Type Np waters have been identified in the study area.
- **Type Ns.** All segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np waters. No Type Ns waters have been identified in the study area.

Water Quality

Water bodies in the study area exhibit water quality conditions generally associated with suburban and urban areas including elevated temperatures, presence of high

levels of dissolved oxygen, and measurements of fecal coliform that exceed state standards. Water quality limited water bodies in the State of Washington are identified on a statewide list called the 303(d) list, because preparation of such a list is required under Section 303(d) of the federal Clean Water Act. The latest version of the 303(d) list, currently pending approval by the U.S. Environmental Protection Agency, was released by the Washington State Department of Ecology (Ecology) in 2008. The list identifies several categories of water quality limitation, including:

- **Category 1.** Water body that meets tested standards is for clean waters.
- **Category 2.** Water body of concern. There is some evidence of a water quality problem, but not enough to require production of a Total Maximum Daily Load (TMDL) at this time.
- **Category 3.** Water body for which no data are available.
- **Category 4.** Polluted water body that does not require a TMDL.
 - **Category 4a.** Water body that has an approved TMDL in place, which is actively being implemented.
 - **Category 4b.** Water body that has a pollution-control plan in place that is expected to solve the pollution problems.
 - **Category 4c.** Water body that is impaired by causes that cannot be addressed through a TMDL. These impairments include low water flow, stream channelization, and dams.
- **Category 5.** Polluted water body that requires a TMDL. The 303(d) list is the traditional list of impaired water bodies.

Ecology's 2008 303(d) list for the study area is summarized in Table 3.1-1.

Table 3.1-1. 303(d)-Listed Waters in the Study Area

Stream	Category	Limiting Water Quality Parameter
Sammamish River	2	temperature
Sammamish River	5	fecal coliform and dissolved oxygen
North Creek	2	mercury
North Creek	4A	fecal coliform and dissolved oxygen
North Creek	5	temperature
Horse Creek	3	none (no data have been collected)

Source: Washington State Department of Ecology 2008a.

Both the Sammamish River and North Creek are categorized as core salmonid migration and rearing habitat for aquatic life use (WAC 173-201A-602). For such habitat, Ecology has set a water quality criterion that the average daily maximum temperature for any 7-day period may not exceed 60.8 °F. A variety of authorities have identified high summer water temperatures as a significant concern in the Sammamish River. Temperatures as high as 80°F have been measured in late July

(City of Bothell 2004b), exceeding the lethal temperature limit for all salmon species (McCullough 1999).

In 2005, King County published the results of a 2-year assessment of sediment and water quality in the Sammamish River. One sampling station was located in the study area, at the bridge in the Park at Bothell Landing. Two of three samples exceeded the standard for fecal coliform, and three of three samples exceeded the standard for dissolved oxygen. Nutrient concentrations in three of three samples, however, were at levels that would not be harmful to aquatic life. All metals and organic compounds evaluated were measured at concentrations below both chronic and acute criteria for aquatic life.

North Creek has a TMDL for fecal coliform and dissolved oxygen, and is 303(d)-listed for temperature. A TMDL is a water-body-specific management plan designed to limit further water quality impairments and to bring the affected waters into compliance with applicable water quality criteria. The fecal coliform TMDL finds that the principal sources of pollution are agriculture, onsite disposal (septic) systems, and post-development activities attributable to urban development (e.g., domesticated animals). Since North Creek within the study area flows almost entirely within the UWB/CCC mitigation wetland, these pollutants likely originate upstream of the study area. The North Creek TMDL finds that control of the fecal coliform inputs to the creek will also result in improved dissolved oxygen.

Wetlands

Wetlands in Bothell are defined according to the *Washington State Wetland Rating Manual for Western Washington (revised)*, Department of Ecology Document #04-06-025 (Washington State Department of Ecology 2004). This manual contains a form for rating a wetland based on field criteria. Wetlands provide a variety of important functions including wildlife habitat, stormwater retention, floodwater abatement, water quality improvement, groundwater recharge, recreational and educational opportunities, and shoreline protection. Several large wetlands are located in the study area along North Creek and the Sammamish River (Figure 3.1-5).

The City defines four categories of wetlands (BMC 14.04.500.B):

- **Category I Wetlands** (i) represent a unique or rare wetland type; or (ii) are more sensitive to disturbance than most wetlands; or (iii) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (iv) provide a high level of functions. These include bogs, mature and old-growth forested wetlands, and wetlands that perform many functions very well (score 70 points or more out of 100 on a completed rating form for the appropriate hydrogeomorphic class).
- **Category II Wetlands** are difficult, though not impossible, to replace and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category

II wetlands score between 51 and 69 out of 100 points, meaning that they perform most functions relatively well or perform one group of functions very well and the other two moderately well.

- **Category III Wetlands** have a moderate level of function (scores between 30 and 50 points out of 100), generally meaning that they have been disturbed in some ways, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.
- **Category IV Wetlands** have the lowest levels of function (scores less than 30 points out of 100) and are often heavily disturbed. These wetlands should be replaceable, and in some cases can be improved. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and also need to be protected.

As shown in Figure 3.1-5, the inventory of known wetlands in the study area consists of :

- a large wetland complex along North Creek;
- a wetland complex along the Sammamish River, with components on the north side of the river in Bothell Landing Park and on the south side of the river in Sammamish River Park; and
- a small wetland west of Bothell Way at the base of Westhill.

These wetlands are further discussed below. If other wetlands are present in the study area, they have not yet been inventoried. Due to the small size of the study area, it is unlikely that any Category I or Category II wetlands remain uninventoried.

North Creek Wetland Complex

The majority of the North Creek wetland complex was constructed in between 1998 and 2001 as a 58-acre mitigation wetland providing compensation for wetland impacts that occurred in association with the construction of the UWB/CCC campus. At the time it was a showpiece mitigation project, incorporating sophisticated hydrologic and geomorphic design principles, and intended to develop to full function over a period of decades. A post-construction inventory in 2004 found that the wetland was being used by eight native fish species including chinook and coho salmon. A 2006 functional assessment found substantial improvement over pre-project conditions in almost all aspects of wetland function. The wetland has not been rated using the City rating system, but based on compliance with its design parameters, would likely rate as a Category II wetland.

Sammamish River Wetland Complex

The Sammamish River wetland complex consists of a number of interconnected wetlands on both sides of the Sammamish River, within the Park at Bothell Landing and Sammamish River Park. Partial wetland rating and assessment have been performed for these wetlands (Pentec Environmental 2001; Shannon & Wilson 2002). One of the wetlands, wetland "Bothell 13" (Shannon & Wilson 2002), is separated from the river by a railroad berm that is pierced by several culverts and is

several feet higher than the river. It contains forest, scrub-shrub, and emergent vegetation types and was assessed as having moderate to high function for water quality and hydrologic functions, and low to moderate function for fish and wildlife values. As such, it would likely be a Category II (possibly Category III) wetland under the City rating system. Wetlands in the Park at Bothell Landing and Sammamish River Park are described by Pentec Environmental (2001) as having forest and scrub-shrub vegetation types with a strong dominance by invasive species, mainly Himalayan blackberry (*Rubus armeniacus*) and reed canarygrass (*Phalaris arundinacea*). No formal functional assessment was performed, but based on the descriptions given, these wetlands would likely be Category III under the City rating system, with potential improvement to Category II via restoration activities such as weed control and facilitation of fish access.

Small Bothell Way/Westhill Wetland

No information was located on this small wetland. Based on aerial photography of the site, it is a forested wetland, probably with culverted drainage to the Sammamish River, not accessible to fish, seasonally dry, and likely a Category III wetland under the City rating system.

Small Bothell Way/180th Street Vicinity

As a result of the Bothell Crossroads project review, a small wetland appears to be present on the south side of the alignment before the Bothell Bike and Ski up to 180th Street. More information is being developed for the National Environmental Policy Act (NEPA) process that is required for the Bothell Crossroads project.

Frequently Flooded Areas

The study area contains two water bodies that have been included in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP)—Sammamish River and North Creek. According to the FEMA Flood Insurance Rate Map, areas along the Sammamish River and North Creek are capable of flooding and a base flood elevation has been established. The maps identify the 100-year floodplain as generally confined within the banks of the Sammamish River; in the study area, the only remaining portions of the river's natural floodplain are existing wetlands such as those in the Park at Bothell Landing wetland complex. Along North Creek, only the North Creek wetland complex is within the floodplain. Sammamish River and North Creek also have defined floodways, which are areas within the floodplain that convey floodwater discharges during high flow events. Floodways and floodplains are regulated through the critical areas regulations (BMC 14.04 article XIII). The Bothell Shoreline Master Program regulates activities in the floodway and within 200 feet of the Sammamish River and North Creek, and their associated wetlands.

Minor, localized flooding problems in the study area have been documented by the City in the *Flooding Mitigation Response Report*. These flooding issues primarily

arise during intense rainfall events and are predominantly related to undersized or blocked conveyances such as catch basins and culverts. The identified problems in the study area are listed in Table 3.1-2. The City has prioritized the problems and identified potential solutions. Where solutions require greater study, the City is conducting analyses and hydrologic modeling to design appropriate solutions.

Table 3.1-2. Localized Flooding and Drainage Problems and Solutions

ID Number	Location	Priority	Comments	Potential Solutions
46	18819 Beardslee Blvd	3—Low Priority	single-family residential	Private property owner.
49	191st St–184th St	1—High Priority	stream-exited culvert	Reconstruct storm drainage system in downtown, adding capacity in the Horse Creek system.
50	18305 NE 184th St	3—Low Priority	leaking roof	Monitor leaf build-up on roof monthly.
51	10605 NE 185th St	2—Medium Priority	commercial	Observe these areas during future storm events to ensure adequacy of storm systems.
54	SR 522/ SR 527	0—Project in Progress	Culvert inlet at NE 188th St is undersized for most heavy rain events.	Consider inlet capacity along with upgrades to Horse Creek piping.
55	NE 180th St/ SR 522	3—Low Priority	amphitheater— three steps deep	Amphitheater was designed to flood during high levels in the Sammamish River.

Source: City of Bothell 2008b.

On September 22, 2008, the National Marine Fisheries Service (NMFS) issued a biological opinion (BO) on the operation of the NFIP throughout Puget Sound. The BO finds that NFIP has been implemented in a manner that jeopardizes the continued existence of species protected under the Endangered Species Act (ESA), including Puget Sound populations of chinook and chum salmon, as well as the killer whale. The BO requires certain changes to the NFIP, called the “reasonable and prudent alternative,” to avoid violation of the ESA. Changes to floodplain management as a result of the BO are expected to affect over 270 Puget Sound communities including Bothell.

When a local jurisdiction achieves compliance with the “reasonable and prudent alternative,” such as by amending regulations (e.g., requiring compensatory storage and low impact development), it can issue permits for floodplain development without the threat of ESA lawsuits. In the interim, development permits may be issued under the current floodplain requirements and prior to the implementation of

new regulations, but such development must provide "appropriate mitigation" for any degradation of channel or floodplain habitat.

Currently, FEMA has mapped only a limited portion of the study area immediately abutting the Sammamish River and North Creek within the 100-year floodplain. Most of this area consists of public park land and open space that are unlikely to experience development in the future, so the future regulations are not expected to substantively affect the study area as a whole. However, part of the "reasonable and prudent alternative" includes revision of FEMA floodplain maps using more current data and hydraulic models, and such revision could result in larger areas of designated floodplain within the study area.

Biota

Vegetation

The study area is largely urbanized, and the predominant land cover type is unvegetated urban surfaces (predominantly pavement and roofs). Existing plant communities are predominantly young, but include a variety of habitat types including landscaping, terrestrial-ruderal, riparian, and wetland. These habitat categories are described in the City's Shoreline Master Program and CAO.

The landscaped areas are predominantly terrestrial, although they include landscaped areas along streams and the margins of wetlands. Species in these areas are predominantly nonnative trees and shrubs, ornamental herbs, and grass (lawns). Such areas are environmentally important because they constitute pervious surfaces where stormwater can infiltrate. However, they represent nonpoint pollutant sources because of the chemicals commonly applied during landscape management and because of the presence of pet feces. Landscaped areas may support a variety of wildlife species, some of which may be socially undesirable (e.g., rats).

Terrestrial-ruderal areas are very similar to landscaped areas, except that they are not actively managed. There is very little such land in the study area, but it can be found in outdoor storage areas, vacant lots, unused portions of commercial lots, etc. Terrestrial-ruderal areas tend to be dominated by nonnative herbs and shrubs such as cat's-ear (*Hypochaeris radicata*) and Himalayan blackberry, sometimes with fast-growing native trees such as red alder (*Alnus rubra*). The environmental importance of such areas is similar to that of landscaped areas.

Riparian vegetation grows near streams and rivers. The City's CAO has established buffer widths on streams that are intended to protect riparian functions; the buffer widths were established on the basis of a Best Available Science review that considered riparian areas that currently exist in Bothell (Steward and Associates 2005).

Buffers are 100 feet for all streams in the study area (BMC 14.04.930-D.2). Riparian vegetation along North Creek and the wetland portions of the Sammamish River are discussed below. In other areas along the Sammamish River, riparian vegetation contains very few trees and in most areas is less than 50 feet in width.

The predominant species are weeds such as Himalayan blackberry and reed canarygrass. In recent years, some areas have seen efforts to establish more native vegetation and to plant native trees such as Douglas-fir, but these projects have not yet established forest cover (Steward and Associates 2005). Riparian areas have great environmental importance for their role in maintaining water quality, stream channel conditions, and fish and wildlife habitat (Steward and Associates 2005).

Wetland vegetation grows in wetlands and wetland buffers and generally consists of plants that are tolerant of prolonged flooding during the growing season. Wetland buffer vegetation includes both flooding-tolerant plants and other plants; wetland buffers may actually be very dry during certain times of the year.

The City has established wetland buffers on the basis of a Best Available Science review that considered existing wetlands (Steward and Associates 2005). The buffers are set between 75 feet and 125 feet for all known wetlands in the study area (BMC 14.04.530-F.1), and would be between 100 and 125 feet for the North Creek and Sammamish River wetland complexes.

Vegetation in these areas includes emergent, scrub-shrub, and forested wetland vegetation types, along with wetland buffer vegetation that includes each of the different vegetation types described above. As noted above, the Sammamish River wetland complex has little forest and a strong predominance of invasive weedy species such as Himalayan blackberry and reed canarygrass. The North Creek wetland complex, an actively maintained mitigation wetland, is dominated almost entirely by a mix of native species, all of which are still relatively young. The environmental importance of wetlands in the study area is related to their ecological functions, which include providing flood storage, filtering sediment and contaminants from stormwater and streamflow inputs, and providing fish and wildlife habitat.

Wildlife

The vegetation types described above support a variety of wildlife species within the study area. These include many bird, mammal, amphibian, and fish species common in the Puget Sound region. Due to the highly urbanized nature of the study area, mammal species are likely to primarily include species tolerant of human activity such as opossums, Pacific moles, big brown bats, beavers, Norway rats, eastern gray squirrels, deer mice, eastern cottontail rabbits, feral cats, river otters, muskrats, raccoons, striped skunks, and perhaps coyotes. However, the study area has a sufficient abundance of forest, riparian, and wetland habitat that the bird, reptile, amphibian, fish, and insect communities are likely dominated by native species.

Common birds are likely to include Canada geese, mallards, California gulls, red-tailed hawks, northern flickers, American robins, and song sparrows. Common reptiles are likely to include Northwestern garter snakes and red-eared slider turtles. Common amphibians are likely to include northwestern salamanders, long-toed salamanders, Pacific tree frogs, and bullfrogs. Some species likely to occur in the study area have special status designations as protected species or species of concern under state and/or federal regulations. Special status species inventoried in Bothell (City of Bothell 2004b) that may occur in the study area are listed in Table 3.1-3. Special status fish are discussed below. Among special status wildlife, none are currently known to breed in the study area, but a bald eagle nest is located approximately 0.7 mile from the study area (Washington Department of Fish and Wildlife 2008). Suitable habitat for all species occurs near the study area, and they could forage in the study area.

Table 3.1-3. Special Status Wildlife that Could Occur in the Study Area

Common Name	Scientific Name	Status	Occurrence in Study Area
Keen's myotis (bat)	<i>Myotis keenii</i>	SC	Uses tree cavities and crevices for roosting; forages over water and open habitats.
long-eared myotis (bat)	<i>Myotis evotis</i>	FCo, SM	Roosts in houses and trees; forages in a variety of habitats.
bald eagle	<i>Haliaeetus leucocephalus</i>	FCo, SS	Nests in mature coniferous forest near large bodies of water. May forage in study area. Bald eagle nest reported active in 2006 occurs 0.7 mile from study area.
osprey	<i>Pandion haliaetus</i>	SM	Nests in large exposed trees or artificial platforms such as power poles or transmission towers; forages on large bodies of water.
turkey vulture	<i>Cathartes aura</i>	SM	Feeds on carrion in open country; has been observed in Bothell.
great blue heron	<i>Ardea herodias</i>	SM	Colonial nester in tall hardwood trees; forages in wetlands, lakes, ponds, streams, and rivers. Has been seen foraging in Bothell; a nesting colony is in Kenmore, 1.3 miles from study area.
bull trout	<i>Salvelinus confluentus</i>	FT, SC	Perennial streams. Known to migrate in the Sammamish River in the study area.
chinook salmon	<i>Oncorhynchus tshawytscha</i>	FT, SC	Perennial streams. Known to spawn, rear, and migrate in North Creek and to rear and migrate in the Sammamish River in the study area.
coho salmon	<i>Oncorhynchus kisutch</i>	FCo	Perennial streams. Known to spawn, rear, and migrate in North Creek and to rear and migrate in the Sammamish River in the study area.
steelhead	<i>Oncorhynchus mykiss</i>	FT	Perennial streams. Known to migrate in the Sammamish River in the study area.

Sources: Streamnet (2008), Washington Department of Fish and Wildlife (2008).

FT = federal threatened, FCo = federal species of concern, SC = state candidate, SS = state sensitive, SM = state monitor.

Fish

Special status fish potentially occurring in the study area are listed in Table 3.1-3. In addition to the use by chinook and coho salmon and bull trout, all streams in the study area may contain rainbow trout, and the Sammamish River and North Creek are known to support spawning, rearing, and migration of sockeye salmon.

Salmonid habitat quality in the Sammamish River and North Creek has received detailed study. Conditions in the Sammamish River are summarized by Tetra Tech (2002). Stream channel function in the Sammamish River has been impaired by historical lowering of Lake Washington and deepening and straightening of the river channel to facilitate navigation and flood control. The stream contains almost no large woody debris, a critical component of salmonids habitat, and has almost no forested riparian areas. This has likely reduced fish survival and production, since terrestrial insects in riparian vegetation can be a significant food source for fish, and shade produced by riparian vegetation can result in cool stream temperatures that are optimum for salmon. The loss of a structurally complex stream channel and a seasonally flooded floodplain with associated wetlands have likely reduced groundwater recharge and thus contributed to higher stream temperatures. Other salmonid habitat condition criteria, such as the scarcity of pool habitat, the scarcity of spawning gravels, and the water quality impairments described earlier, also indicate that fish habitat in the river is generally in a degraded condition.

Fish habitat in North Creek is also functionally impaired, as documented by Fevold et al. (2001). Their assessment considered the entire stream, and was performed prior to construction of the mitigation wetland that comprises most of North Creek in the study area. They found that the watershed as a whole was generally in an impaired condition due to low forest cover and high developed area with high road cover. These conditions contribute to impaired hydrologic response with excessively high peak flows that can cause scouring and instability of the stream channel, as well as high levels of non-point source pollutants due mainly to stormwater runoff from developed areas. These impairments would feed downstream to affect habitat in the study area. Fevold et al. (2001) also found poor fish habitat with regard to indicators such as large woody debris and pool habitat, but these problems were largely addressed during construction of the mitigation wetland. As a result, fish habitat in the wetland is now close to properly functioning conditions, with continued improvement expected as vegetation in the wetland approaches maturity. Some high quality habitat still exists in North Creek upstream of the study area, and maintenance of high quality habitat in the study area is desirable in order to facilitate use of habitat in the study area by fish that spawn upstream.

No assessments of habitat condition have been done for Horse Creek. Within the study area, Horse Creek is largely piped and thus has essentially no habitat quality. The culvert daylights approximately 400 feet upstream of the confluence of Horse Creek with the Sammamish River (Herrera Environmental Consultants 2008). Horse

Creek at its confluence with the Sammamish River contains cutthroat trout and stickleback fish and may provide minimal rearing habitat for juvenile salmon (City of Bothell 2004b).

Environmental Health

As stated in the SEPA Checklist (Appendix C), the *Report on Tax Parcel History through 1972* (Environmental Coalition of South Seattle 2008) analyzed whether contamination or hazardous materials in the soil or groundwater could be present based on previous land uses (e.g., gas stations, auto repair shops, and dry cleaners). The study identifies 21 parcels or sites in the commercial-oriented portions of the study area with historic uses that might be considered as having a “Recognized Environmental Condition” (REC) under a Phase I site assessment. Some of the sites, including the NSD property are undergoing site assessments or clean up actions now. The SEPA Checklist and referenced study are incorporated by reference.

Applicable Regulations

There are numerous existing regulations intended to reduce the potential environmental impacts of development and redevelopment projects. Within the study area, the principal existing regulations that protect wildlife and their habitat include the following.

- **Endangered Species Act.** Federal review applies to any projects performed in the waters of the United States and thus requiring a permit from the U.S. Army Corps of Engineers (Corps). Permit requirements for such projects include, among other things, a detailed review of potential effects on plants and animals protected under the federal Endangered Species Act. Impacts must be avoided and minimized to the maximum extent practicable and in some cases mitigation is required.
- **State of Washington Laws Pertaining to Waters of the State.** State review applies to any project affecting waters of the state and thus requiring review by Ecology and/or the Washington Department of Fish and Wildlife (WDFW). Such projects commonly have to show that impacts have been minimized and permit requirements often include mitigation for irreducible impacts.
- **Shoreline Master Program.** City review applies to any projects in a shoreline management area and thus requiring compliance with the City's shoreline master program (BMC Chapter 13.12). City authorizations commonly include requirements intended to minimize environmental impacts.
- **Critical Areas Ordinance (CAO).** City review applies to projects in an environmentally critical area and thus requiring compliance with the CAO (BMC 14.04). Areas specifically protected under this ordinance include wetlands, critical aquifer recharge areas (none are in the study area), frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas (including streams and riparian areas). City authorizations commonly

include requirements intended to fully disclose impacts in critical areas, and to minimize environmental impacts.

- **Stormwater Regulations.** The City ensures development complies with stormwater standards through the provisions of BMC 18.04 and the provisions of the Comprehensive Stormwater Master Plan (City of Bothell 1994, cited in Pentec Environmental 2001). Currently, all new construction is required to provide stormwater detention and treatment consistent with the 1998 King County Surface Water Design Manual. The City is currently operating under the Western Washington Municipal Phase II stormwater permit, issued by Ecology on January 17, 2007. This permit authorizes the discharge of stormwater to surface waters and groundwater from municipal separate storm sewer systems owned or operated by the City. The City currently expects that compliance with updates to this permit will require the City to adopt the Ecology *Stormwater Management Manual for Western Washington* (stormwater manual) (Washington State Department of Ecology 2005) by mid-2009. Thus, projects and programs evaluated in this EIS would be regulated under the Ecology stormwater manual.
- **Comprehensive Plan.** Through land uses permits, the City ensures project compliance with environmental policies identified in the comprehensive plan and amendments.
- **Environmental Health Regulations.** The Model Toxics Control Act of the State of Washington (MTCA) sets forth prescribed limits of contamination that must be addressed by any disturbance, based on the type of activity and proposed use for a parcel. The standards for voluntary clean up for lower levels of contaminants are incorporated into new development or redevelopment parcels that have been noted to have contamination potential.

These environmental regulations condition development proposals to avoid, minimize, and/or mitigate potential impacts. However, residual impacts commonly remain. For example, an area of upland wildlife habitat may not be protected if it does not qualify for protection under the terms of the CAO.

3.1.2. Impacts

Impacts Common to All Alternatives

The primary alternatives contain plans and regulations that guide the development of property, and include proposed capital facilities that support and attract development. For this reason, this impacts analysis is divided into impacts associated with land use development and impacts associated with particular capital facilities.

The Planning Commission Recommendations represent a hybrid of the No Action and Proposed alternatives (primary alternatives); as such, it is covered by the analysis of the alternatives.

Land Use Development

Because the study area is generally developed and impervious surface on buildable lands is approaching 100%, development under all alternatives would primarily consist of redevelopment. All alternatives involve some level of redevelopment in the study area. Based on existing development techniques, future development and redevelopment projects would likely affect entire parcels, except for parcels containing critical areas.

Numerous regulations exist to reduce the potential environmental impacts of development and redevelopment projects (see “Applicable Regulations,” above). These environmental regulations condition development proposals to avoid or reduce potential impacts. However, residual impacts may still occur.

The following analysis assumes that impacts under all alternatives would arise from projects designed and implemented in accordance with all applicable regulations.

Earth

Impacts on earth resources would result primarily from activities that are vulnerable to or that alter the risk due to geologic hazards. Additionally, impacts associated with toxic substances would be affected greatly by the fate of those substances when buried. Specific types of earth resource impacts include:

- Areas undergoing redevelopment would be subject to erosion hazards until construction has been completed and the disturbed areas permanently stabilized. If excavation is required during the early stages of construction, any sediment deposition on adjacent roadways would need to be mitigated.
- Development in liquefaction areas would require specific engineering studies and exploration and would most probably require engineered foundations.
- Sites containing hazardous materials would require remedial actions in accordance with the MTCA; this may include additional excavations and soil treatments.

Impacts on earth resources would be sufficiently minimized through compliance with MTCA and the City's CAO. Residual impacts would be less than significant.

Water Resources

Impacts on surface waters and stormwater drainage would result primarily from changes in the amount and quality of runoff from impervious surfaces in the study area. Stormwater runoff is generated from precipitation running off of impervious surfaces. In undeveloped areas, the natural ground cover generally consists of vegetation and permeable soils. Precipitation in these areas may be intercepted by vegetation and absorbed by the soils, ultimately contributing to groundwater recharge. This infiltration tempers the amount of stormwater that runs off immediately into streams during the storm event. In developed areas with reduced vegetative cover and increased hard surfaces, the amount of water that runs off rather

than infiltrating the ground is increased, and the runoff carries with it pollutants that have accumulated on impervious surfaces. Pollutants include sediment, oil and gasoline, metals such as copper and zinc, pet wastes, and residue from pesticides, fertilizers, and other chemicals.

Apart from undeveloped critical areas, which would remain undeveloped in the future under all alternatives, the study area has an impervious surface coverage approaching 100%, and essentially all runoff from these impervious surfaces is conveyed via a system of storm drains to surface waters in the study area (i.e., Sammamish River, North Creek and Horse Creek,). All alternatives would retain a comparable impervious surface coverage and would retain existing stormwater discharge points, while adding one stormwater outfall to the Sammamish River (essentially replacing an existing outfall in a wetland area), as part of the SR 522 Crossroads project, discussed below. In the absence of mitigation, the existing volumes of stormwater would change little. This analysis also assumes that stormwater discharge points would remain the same, apart from the one new outfall just mentioned. Any changes in stormwater discharge points would occur within the channel of the receiving water and would require a permit from the Corps along with a determination of project effects on endangered species (primarily fish) potentially affected. The permit would include conditions intended to minimize potential adverse effects. Applicable performance standards are discussed below.

Under all alternatives, the utilization of the study area would increase, with more residential units and more jobs. This growth, which would be greatest under the Proposed Alternative, would likely result in an increase in motor vehicles in the area. Additionally, roadway improvement projects to support land development would result in a greater total area of roadways and parking lots in the study area. All of these factors would normally be expected to result in increased stormwater pollutant loading, compared to current conditions. Pollutant loading increases would be approximately proportional to the increase in the number of vehicles in the area, with greater vehicle trips assumed under the Proposed Alternative. However, one intention of the Proposed Alternative is to focus growth in the heart of the study area, where impervious surface already approaches 100%. Focusing growth in this highly developed area, rather than in less developed areas elsewhere in the City, reduces the potential for increases in impervious surface at a citywide scale. Also, the City anticipates that several municipal programs have the potential to reduce pollutant loading from stormwater discharge, relative to current conditions. These programs include:

- Redevelopment would require compliance with current standards for stormwater treatment and discharge. As redevelopment occurs, more modern stormwater requirements would apply than when Downtown Bothell was originally developed. Improved water quantity and quality controls would help reduce stormwater runoff quantity and reduce pollutants introduced through stormwater runoff compared with existing conditions. The City's current surface water

management standards include use of the *1998 King County Surface Water Manual*, but by mid-2009 the City will be operating under the Ecology stormwater manual (Washington State Department of Ecology 2005), which provides substantially better pollutant detention and treatment.

- The City is currently reviewing its development policies to understand what improvements or changes can be made to encourage and steer new and existing development towards implementation of low impact development (LID) techniques for stormwater runoff and sustainable building practices. Adoption of LID standards in the study area would further reduce stormwater deliveries to surface waters.

Described impacts associated with stormwater runoff to the Sammamish River or its tributaries would likely result in increased pollutant loading in streams that are already water quality limited with regard to fecal coliform and dissolved oxygen, and would also increase pollutant loading of dissolved copper, which is highly toxic to salmonids. This significant impact would be addressed by implementation of various mitigation measures such as LID techniques and improved conventional stormwater treatment, described below (Section 3.1.3). Implementation of these mitigation measures would reduce stormwater-related impacts to a less-than-significant level, and would further reduce the already less-than-significant impacts on groundwater.

Biota

Development or redevelopment in the study area could result in direct and indirect impacts on habitat areas. Direct impacts, which occur within habitat areas such as reduction in wetlands or riparian areas, are likely to be uncommon due to the developed nature of the study area and the location of such remaining habitats in public ownership (e.g., park properties along the river, UWB/CCC wetland mitigation area along North Creek). Protected habitats would be governed by the City's CAO. However, the Bothell Crossroads project, discussed below, may entail some impacts on a wetland buffer area.

Impacts on upland habitat would be less than significant due to the limited distribution and quality of such habitat in the study area. No impacts on wetland habitats are projected; if any were to occur, they would be subject to the avoidance, minimization, and mitigation requirements set forth in federal and state laws and in the City's CAO. These regulatory requirements are sufficient to reduce potential impacts on wetland habitats such that residual impacts would be less than significant. Some projects could affect riparian habitat and would be subject to provisions of the City's CAO; compliance with those provisions would reduce residual impacts to a less-than-significant level.

Indirect impacts on habitat areas result from actions taken outside of the habitat areas. Redevelopment projects in the study area could have indirect impacts on aquatic habitat as a result of increased pollutant loading in stormwater runoff, described above in the "water" subsection. Currently, due to the high impervious

surface coverage, almost all stormwater generated in the study area is conveyed to a stream or river; a small portion infiltrates to groundwater, is taken up by plants, or evaporates.

City regulations to manage stormwater and the impacts of the Alternatives on stormwater quantity and quality are discussed above. The expected increases in stormwater pollutant loading represent a substantial adverse impact on salmonids living in North Creek and the Sammamish River, and potentially in Horse Creek. Certain pollutants commonly found in urban stormwater runoff, such as dissolved copper, have been shown to harm both juvenile and adult salmonids even at extremely low concentrations, well below those found in typical municipal stormwater. To avoid degradation of stormwater runoff quality in association with the increased study area population density and levels of vehicle use anticipated under all alternatives, the City could implement mitigation measures regarding low impact development and improved stormwater treatment described below (Section 3.1.3). Implementation of these mitigation measures would reduce stormwater-related impacts on biota to a less than significant level.

Capital Improvements

Impacts from capital improvements common to all alternatives fall into two broad categories: those related to the roadway projects, and those related to public facility projects. The specific projects are listed and described in Section 2.3.2. Most of these capital improvement projects have no potential to affect the natural environment, except as described above for land use development in general. Impacts that would potentially exceed those described above for land use development are described below.

Earth

Public Facilities. The NSD and Pop Keeney Stadium properties contain areas of moderately erosive soils and soils with high liquefaction hazard potential. Construction in these areas would require careful selection and use of erosion control measures to minimize erosion impacts, and would require engineered design to minimize seismic hazard impacts. These measures are provided for in existing City regulations.

Three sites are being considered for the City Hall Replacement Project: the current building site, the Anderson Building on the NSD property discussed above, and the Beta Bothell site just south of the new SR 522–SR 527 intersection. The conditions and potential impacts and regulations associated with the current building site and the Anderson building site are the same as described above for the NSD and Pop Keeney Stadium properties. Generalized soil mapping indicates that the Beta Bothell site contains hydric soils that are often saturated to the surface and have high liquefaction hazard potential; however, site specific geotechnical analysis indicates that soil stratigraphy in this area typically consists of up to 9 feet of loose- to medium-dense,

silty sand to sandy silt fill with occasional debris over the alluvial soil. A buried soil horizon is present at some locations (HWA Geosciences Inc. 2008). Construction in this area could require engineered design to keep subgrade building areas dry; avoid settling, floatation, or other differential motion; and minimize seismic hazard. Such measures are provided for in existing regulations.

In consideration of existing regulatory protections regarding geologic hazards and other earth resources, residual impacts would be less than significant.

Roadway Projects. Wayne Curve is close to a landslide hazard area and portions of both SR 522 and SR 527 cross areas of highly erosive soils. Much of the entire study area is on soils with high liquefaction potential. In landslide hazard areas, critical areas regulations would only allow activities approved and permitted consistent with an approved critical areas report. Areas disturbed by activity would be subject to erosion hazards until construction has been completed and the disturbed areas permanently stabilized. Erosion hazards would increase while the site soils are exposed and excess soil is hauled away. These actions would be controlled by best management practices specified in the stormwater pollution prevention plan (SWPPP) for the construction project and required for regulatory approval. Development in liquefaction hazard areas would require specific engineering study and exploration and could require engineered foundations. Such measures are provided for in existing regulations.

In consideration of existing regulatory protections regarding geologic hazards and other earth resources, residual impacts would be less than significant.

Water Resources

Public Facilities. The City is proposing to clean up the NSD repair facility site, a portion of which was used as Bothell High School's auto shop. The site is listed on the CSCSL (Site ID 95211555) for petroleum, metals, and polycyclic aromatic hydrocarbon contamination. It is undergoing independent remedial action under Ecology's Voluntary Cleanup Program. This action would benefit stormwater and groundwater quality in the NSD area.

Plans for the NSD redevelopment project could entail relocation of a piped portion of Horse Creek. Work affecting Horse Creek could require permits from WDFW (Hydraulic Project Approval) and the Corps (Section 404 permit). Because the stream is potentially accessible to fish species protected under the federal Endangered Species Act, the work could also require approvals from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). These regulatory mechanisms provide substantial assurance that the work would have minimal adverse environmental impacts.

Minor, localized flooding problems in the study area have been documented by the City in the *Flooding Mitigation Response Report*. These flooding issues primarily

arise during intense rainfall events and are predominantly related to undersized or blocked conveyances such as catch basins and culverts. All such issues can be resolved using mechanisms currently available to the City (e.g., capital facility planning in association with relocated and extended streets), and would likely be addressed to an equivalent degree under each alternative.

Roadway Projects. Construction of roadway facilities within a stream corridor can alter the morphology and flow capacity of the stream. Structures in a channel or floodplain can block conveyance and storage area used by the stream, reducing its flood attenuation properties and increasing downstream flow rates. Construction activities can increase sediment input into a stream when vegetation is removed and bare soil is exposed at the construction site. Stormwater generated from a roadway project can have varied impacts as described above under “Land Use Development.” However, the roadway projects proposed on SR 522 (Bothell Crossroads) and SR 527 follow a different regulatory standard, implemented by the Washington State Department of Transportation (WSDOT) rather than by the City, and thus have a slightly different potential to result in impacts on surface water quality.¹

Proposed work on both SR 522 and SR 527 would potentially affect the pipe that conveys Horse Creek beneath those roadways. Construction of the Bothell Crossroads project would likely bridge a short, currently open part of the Horse Creek channel. Due to existing flooding concerns, it is highly unlikely that these actions would reduce the size of the existing pipe; thus impacts on conveyance capacity are unlikely. In most cases of streams with piped reaches, both the Corps and WDFW assert jurisdiction. As such, work on the piped portion of Horse Creek could require a Hydraulic Project Approval (HPA) from WDFW. The work over the open part of the Horse Creek channel would also require an HPA, and could require a Section 404 permit from the Corps, although this might not occur if the stream were crossed by a bridge that required no work within the stream channel. If a Corps permit were required, the work would also require approvals from NMFS and the USFWS, because the stream is potentially accessible to fish species protected under ESA. Mitigation would likely be required to compensate for the habitat lost as a consequence of covering a portion of Horse Creek. The existing state and federal regulatory mechanisms provide substantial assurance that the work would have minimal adverse environmental impacts.

The Bothell Crossroads project may also entail removal of a small area of wetland buffer and would entail construction of a new stormwater outfall discharging to the Sammamish River (replacing an existing outfall to the river that is located in a

¹SR 527 Improvements under the No Action Alternative do not include the boulevard treatments included in the SR 527 Multiway Boulevard Treatments project under the Proposed Alternative. Because these two different projects affect the same roadway the “Impacts Common to All” discussion would generally apply to both projects; however, since the No Action SR 527 improvements have not yet been designed the enhanced stormwater treatment approach discussed for the Multiway Boulevard would not necessarily apply to the No Action Alternative.

wetland). The stormwater outfall, if constructed within the ordinary high water line, would be subject to review under the Corps permit process discussed above, and would in any case be subject to the WDFW permit process discussed above. The wetland buffer impacts would be subject to the requirements of the City's CAO. Some form of mitigation would likely be required for the wetland buffer and outfall construction impacts.

The stormwater discharged at the new outfall to the Sammamish River would be subject to WSDOT stormwater requirements; water quality treatment is currently designed to include a vault and filters. WSDOT requirements are very close to those of the Ecology stormwater manual (Washington State Department of Ecology 2005) and will result in a treatment quality superior to that which is associated with current runoff. Thus, the project represents a beneficial impact with regard to stormwater discharges. Stormwater associated with the SR 527 Multiway Boulevard project would be subject to similar standards. The treatment proposed for this project includes infiltration on at least one side of the roadway if not both, as well as rain gardens along both sides of the roadway, a treatment process that is especially effective at removing metals and hydrocarbons from road runoff. Thus, this project also represents a beneficial impact with regard to stormwater discharges.

Taken together, the regulations constraining the Bothell Crossroads and SR 527 projects provide assurances that surface water, wetland, and stormwater impacts would be minimized or mitigated as far as practicable. The other roadway projects would have no impacts on streams or wetlands, and would receive stormwater treatment consistent with City requirements. Impacts would be as described above for "land use development." In consideration of existing regulatory protections governing potential project effects on water resources, residual impacts would be less than significant.

Biota

Public Facilities. Plans for the NSD redevelopment project could entail relocation of a piped portion of Horse Creek. Construction activities could have temporary adverse impacts on this habitat. These impacts would be related to water quality, including potential erosion of exposed soils, potential spills from fuel and other construction materials, and potential delivery of pollutants to the stream by stormwater.

Work affecting Horse Creek could require permits from WDFW (Hydraulic Project Approval) and the Corps (Section 404 permit). Because the stream is potentially accessible to fish species protected under the federal Endangered Species Act, the work could also require approvals from NMFS and USFWS. These regulatory mechanisms provide substantial assurance that project construction would have minimal adverse environmental impacts.

Roadway Projects. The proposed Bothell Crossroads project is expected to have direct impacts on Horse Creek, bridging a portion of the stream's channel. Also, the

Bothell Crossroads project is expected to impact part of the buffer of a small wetland, although no direct impacts on wetlands would occur. Proposed work on both SR 522 and SR 527 would potentially affect the culvert that conveys Horse Creek beneath those roadways. The piped reach of Horse Creek does not constitute aquatic habitat, but any water quality impacts on the piped reach could be conveyed downstream to aquatic habitat in the Sammamish River.

As detailed above under “Water,” each of these projects could require a Section 404 permit from the Corps authorizing placement of fill in waters of the United States. The work affecting a wetland buffer would be subject to provisions of the City's CAO, and the work affecting Horse Creek could require an HPA from the WDFW. Because these waters are connected to the Sammamish River, which contains fish species protected under the ESA, the work could also require approvals from NMFS and USFWS. As described above, these regulatory mechanisms provide substantial assurance that adverse environmental impacts from the work would be minimized and mitigated as far as practicable. Due to the limited extent of the impact and the feasibility of effectively minimizing or mitigating impacts, residual impacts from this work would be less than significant.

Relocated and added local roadways (e.g., NE 185th Street/98th Avenue NE Connector) could have indirect impacts on aquatic habitats due to increased pollutant loading from added impervious surface area used by vehicles. Currently, almost all stormwater generated in the study area is conveyed to a stream or river; the remaining, small portion infiltrates to groundwater, is taken up by plants, or evaporates. The expected increases in stormwater pollutant loading represent a substantial adverse impact on salmonids living in North Creek and the Sammamish River, and potentially in Horse Creek. Certain pollutants commonly found in urban stormwater runoff, such as dissolved copper, have been shown to harm both juvenile and adult salmonids even at extremely low concentrations, well below the concentrations commonly found in urban stormwater runoff. To avoid degradation of stormwater runoff quality in association with the increased study area population density and levels of vehicle use anticipated under all alternatives, the City will implement the “Stormwater Treatment” mitigation measure on local road projects.

In consideration of existing regulatory protections governing potential project effects on water resources, as well as the effects of implementing the “Stormwater Treatment” mitigation measure (Section 3.1.3), residual impacts would be less than significant.

Impacts Specific to the No Action Alternative

Impacts under the No Action Alternative are the same as those described above under “Impacts Common to All Alternatives.”

Impacts Specific to the Proposed Alternative

Growth of dwellings, jobs, and vehicle trips in the study area would be greater under the Proposed Alternative than under the No Action Alternative. Although impacts would be greater, however, residual impacts after adherence to existing city, state, and federal regulations would be the same as those described above, under “Impacts Common to All Alternatives.”

Capital improvement projects specific to the Proposed Alternative are listed and described in Section 2.3.2. Most of these capital improvements projects have no potential to affect the natural environment, except as described earlier for land use development in general. Impacts that would potentially exceed those described above for land use development are described below.

Earth

The road alignment of the NE 185th Street Extension traverses an area with moderately erosive soils and soils with high liquefaction hazard potential, based on available mapping. Construction in this area would require careful selection and use of erosion-control measures to minimize erosion, and would require engineered design to minimize seismic hazards. These measures are covered by existing regulations. Residual impacts would be less than significant.

Water Resources

The only surface water along the NE 185th Street Extension is a piped reach of Horse Creek. It is possible that portions of this reach would be relocated. The potential impacts of this work would be the same as those described for other Horse Creek culvert relocations, above under “Impacts Common to All Alternatives.” Residual impacts after mitigation would be less than significant.

Population and housing in the study area are expected to more than double under the Proposed Alternative (Chapter 2). This level of growth would normally be expected to be accompanied by a proportional increase in nonpoint source pollution. However, that increase would likely be less than proportional under the Proposed Alternative, because it incorporates capital development projects that focus more growth in downtown, encourage the use of mass transit, and improve the pedestrian/bicycle environment. The Proposed Alternative would nonetheless likely represent an increase in pollutant loading to stormwater, compared to the No Action Alternative, because the No Action Alternative represents a much smaller increase in population and number of housing units, compared to the Proposed Alternative. Stormwater runoff from the NE 185th Street Extension would be high in pollutant loads and thus subject to the “Stormwater Treatment” mitigation measure (Section 3.1.3). Residual impacts after mitigation would be less than significant.

Biota

The NE 185th Street Extension alignment currently contains no upland, wetland, riparian, or aquatic habitat. Construction of the extension would maintain that condition. Aquatic organisms could be impacted if the work affected waters of Horse Creek, which are conveyed downstream to the Sammamish River. Those impacts on water quality, described above, would be less than significant.

3.1.3. Mitigation Measures

Incorporated Plan Features

At a cumulative level, the No Action Alternative and the Proposed Alternative in particular are expected to attract growth to the City, and in particular to the city's core, within the study area. The City's Comprehensive Plan identifies activity centers including Downtown Bothell within which growth is to be focused (City of Bothell 2004a). Focusing growth downtown allows for development to occur in an area with less environmentally sensitive features, such as plant and animal habitat, than may be found in lesser developed areas on Bothell's periphery. The Proposed Alternative in particular includes a land use plan that is expected to accommodate a greater amount of downtown growth.

Redevelopment within the study area, including the relocation or extension of streets, creates an opportunity for improved drainage systems.

Applicable Regulations and Commitments

Applicable city, state, and federal regulations are described in Section 3.1.1. In addition, City building codes (BMC Title 20) apply and may require site-specific geotechnical studies at the time of building permit submittal. These geotechnical reports address earth, geologic hazards, and groundwater, in order to assure appropriate construction techniques, foundations, and other requirements.

Other Mitigation Measures

Low Impact Development

Nearly all of the study area has already been developed, assuming that the remaining high amenity value parks, wetlands, and streams remain free of development. Developed portions of the study area have impervious surface area approaching 100%. Stormwater from most of this area is collected and conveyed, without treatment or detention, to the Sammamish River and its tributaries. Projected growth in the study area is unlikely to result in increased stormwater runoff volumes, but is likely to result in increased pollutant loading to a water quality-limited water body, the Sammamish River. Pollutant loadings can be decreased if stormwater runoff is reduced. The Ecology stormwater manual (Washington State Department of Ecology

2005) allows flow runoff credits to be applied when LID techniques are used. Flow runoff credits are used in the hydrologic model to better represent various LID techniques so that their benefit in reducing surface runoff can be estimated. Such technologies will be most effective in portions of the study area that have highly permeable soils and a relatively deep water table; these correspond to soil types 1, 2, 5, 6, 8, 10, 11, 12, and 13 described in Section 3.1.1 (Figure 3.1-4). In these areas, incident precipitation can readily be infiltrated to the water table, or taken up by any available plants. In other soil types, characterized by a seasonally high water table and/or relatively impermeable materials, LID technologies would likely be less effective, and conventional stormwater detention and treatment would be proportionally more important in the effort to minimize runoff of toxic stormwater into streams and rivers.

Accordingly, the City will encourage new development in the study area to reduce stormwater runoff by utilizing LID techniques described in currently available manuals (Washington State Department of Ecology 2005; Puget Sound Action Team and Washington State University Pierce County Extension 2005). Flow reduction credits established in the Ecology stormwater manual for use in LID translate into smaller stormwater treatment and flow control facilities over those which use conventional methods. In certain cases, use of various LID techniques can result in the elimination of mitigation facilities.

The LID measures would not apply to the Bothell Crossroads (SR 522) project or SR 527 projects, which are following WSDOT regulatory standards for stormwater treatment and have already been designed to be consistent with those standards. Considering the stormwater currently generated from these roadways, both projects would result in a beneficial impact on stormwater quality. Nonetheless, early plans for the SR 527 Multiway Boulevard project explore the use of raingardens in median areas to treat runoff.

Stormwater Treatment

Currently, stormwater from most of the study area is collected and conveyed, without treatment or detention, to the Sammamish River and its tributaries. Stormwater collected from areas within 0.25 mile of the Sammamish River is moreover exempt from detention requirements. More than half of the study area is within 0.25 mile of the river. New development in the study area must comply with the stormwater provisions of the *1998 King County Surface Water Design Manual*. A considerable amount has been learned about stormwater since 1998, and better guidance is now available. Accordingly, the City will undertake the following actions and condition development accordingly in the study area:

- Comply with the NPDES Phase II Municipal Stormwater Permit for Western Washington (Ecology 2007). As part of this permit, the City will be developing an ordinance regarding controlling runoff from new development,

redevelopment, and construction sites. This is required to be in place by August 16, 2009. The City is planning to adopt the Ecology stormwater manual (Washington State Department of Ecology 2005) in mid-2009. This will improve the effectiveness of stormwater quantity and quality controls in the study area.

- Prior to the adoption of ordinances in conformance with the NPDES Phase II permit described above, apply interim stormwater standards within the study area, allowing the City to condition development to provide post-construction stormwater treatment compliant with the most current stormwater treatment manual provided by Ecology (Washington State Department of Ecology 2005) or an equivalent set of standards approved by the City during the review of the required drainage plans (BMC Title 18) that must be submitted with each development permit.
- Support development of total maximum daily load (TMDL) plans for the Sammamish River and North Creek, and comply with TMDL provisions.
- Monitor dissolved copper concentrations in municipal stormwater discharges and use all known and reasonable technologies to achieve the lowest possible dissolved copper concentrations in those discharges.

The stormwater mitigation measures would not apply to the SR 522 (Bothell Crossroads) and SR 527 projects, which are following WSDOT regulatory standards for stormwater treatment and have already been designed to be consistent with those standards. The stormwater mitigation measures also would not apply to other roadway projects that may occur in the future, if these projects received WSDOT funding and would be subject to WSDOT regulatory standards for stormwater treatment.

Environmental Health

As stated in the SEPA Checklist (Appendix C), it is recommended that the City apply the following mitigation measure:

- Applicants for development on parcels identified as having a potential for contamination in the *Report on Tax Parcel History through 1972* (Environmental Coalition of South Seattle 2008), shall conduct a thorough site assessment to determine if contamination is present from past use.

3.1.4. Significant Unavoidable Adverse Impacts

If City regulations and recommended potential mitigation measures are implemented, no significant unavoidable adverse impacts are anticipated in connection with either the No Action Alternative or the Proposed Alternative.

3.2. Air Quality

This section evaluates the impacts on air quality in the study area that would result from the alternatives.

3.2.1. Affected Environment

Applicable Regulations

Ambient Air Quality Standards

Three agencies have air quality jurisdiction in the project area: the United States Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency (PSCAA). Although their regulations are similar in stringency, each agency has established its own standards. Unless the state or local agency has adopted a more stringent standard, the EPA standards apply.

Air quality regulations are designed to limit emissions from air pollution sources and to minimize concentrations of pollutants in the outdoor air. Table 3.2-1 lists both the national and Washington State ambient air quality standards. The National Ambient Air Quality Standards (NAAQS) consist of primary standards designed to protect public health, and secondary standards designed to protect public welfare (e.g., preventing air pollution damage to vegetation). Washington State has established additional ambient standards for total suspended particulates (TSP) and sulfur dioxide (SO₂), which are more stringent than the federal requirements.

Table 3.2-1. National and State of Washington Ambient Air Quality Standards

Pollutant	Federal		State
	Primary	Secondary	
Carbon Monoxide			
8-hour average ¹	9 ppm	No standard	9 ppm
1-hour average ¹	35 ppm	No standard	35 ppm
Ozone ²			
8-hour average ³	0.075 ppm	0.075 ppm	0.075 ppm
Total Suspended Particles ⁵			
Annual average	No standard	No standard	60 µg/m ³
24-hour average ¹	No standard	No standard	150 µg/m ³
Particulate Matter - PM10			
24-hour average ¹	150 µg/m ⁵	150 µg/m ⁵	150 µg/m ⁵

Pollutant	Federal		State
	Primary	Secondary	
Particulate Matter - PM2.5			
Annual average	15 µg/m ⁵	15 µg/m ⁵	15 µg/m ⁵
24-hour average ¹	35 µg/m ⁵	35 µg/m ⁵	35 µg/m ⁵
Lead			
Quarterly average	1.5 µg/m ⁵	1.5 µg/m ⁵	1.5 µg/m ⁵
Sulfur Dioxide			
Annual average	0.03 ppm	No standard	0.02 ppm
24-hour average ¹	0.14 ppm	No standard	0.10 ppm
3-hour average ¹	No standard	0.50 ppm	No standard
1-hour average ⁵	No standard	No standard	0.40 ppm
Nitrogen Dioxide			
Annual average	0.05 ppm	0.05 ppm	0.05 ppm

Notes:

Annual standards never to be exceeded. Short-term standards not to be exceeded more than once per year unless noted.

ppm = parts per million

PM10 = particles 10 microns or less in size

PM2.5 = particles 2.5 microns or less in size

µg/m³ = micrograms per cubic meter

¹ Not to be exceeded on more than 1 day per calendar year as determined under the conditions indicated in Chapter 173-475 WAC.

² In March 2008, EPA lowered the federal standard for 8-hour ozone from 0.08 parts per million (ppm) to 0.075 ppm to better protect public health.

³ To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm.

⁴ Until 1987, there were federal standards for TSP. In 1987, these were replaced with standards for PM10. In the 1990s, EPA also adopted standards for PM2.5.

⁵ 0.25 ppm not to be exceeded more than two times in 7 consecutive days.

Source: Chapter 173, Sections 470 to 475 Washington Administrative Code (WAC).

Attainment Status

Ecology maintains a network of air quality monitoring stations throughout the state. These stations are placed in areas where there may be air quality problems, usually in or near urban areas or close to large air pollution sources. A limited number of additional stations are located in remote areas to provide an indication of regional background air pollution levels.

Based on measured ambient air quality data from the agencies' network of air quality monitors, EPA and Ecology designate all portions of the state as either attainment or nonattainment with respect to the federal standards, the National Ambient Air Quality Standards (NAAQS). Areas designated as nonattainment have exceeded federal standards for those pollutants. If the measured concentrations in a nonattainment area improve so they are consistently below the federal standards, as is the case in most of the state, Ecology and EPA can reclassify the nonattainment area to a maintenance area. In that case, Ecology and the regional planning agencies are

required to implement a maintenance plan to ensure ongoing emission reductions and continuous compliance with the federal standards. Typical emission reduction requirements specified in maintenance plans include continuation of motor vehicle inspection and maintenance programs that were originally established while the area was designated as nonattainment.

Transportation Conformity

Cars and trucks on public roads are the largest single source of emissions in the Puget Sound region. However, until the early 1990s there were no air quality regulations applicable to public roadway projects. In 1990, EPA and the state legislature enacted new regulations requiring federally or state-funded highway projects to evaluate their local and regional air quality impacts. Transportation projects proposed for construction within nonattainment areas or maintenance areas, and which use either state or federal funding, are subject to the Transportation Conformity regulations specified under federal regulations (40 CFR Part 93) and state regulations (Chapter 173-420 WAC). The permitting agency must demonstrate conformity through the following steps:

- Confirm that the proposed projects are included in the Regional Transportation Plan (RTP) or Transportation Improvement Program (TIP).
- Confirm that the regional emissions (including the proposed projects in the study area) described in the TIP are within the allowable emission budget specified by Ecology.
- Use an EPA-approved air quality dispersion model to conduct a project-level carbon monoxide (CO) hot spot analysis at the most heavily congested intersections in the study area; and confirm that the modeled CO concentrations are below the NAAQS.

Air Quality

Air quality in the study area is affected mainly by emissions from vehicular trips on Interstate (I) 405, State Route (SR) 522, SR 527, and numerous local streets. Local air quality can also be affected by point source emissions from commercial businesses and by wood smoke from residential areas. The vehicular emissions generated during local and regional trips are characteristic of urban commercial and interstate pass-through trips. Local vehicular emissions are related to business, residential, and pass-through regional trips. Secondary sources of emissions are derived from commercial land uses. Additionally, space heating and wood-burning appliance emissions contribute to background air quality.

With vehicular traffic, the air pollutant of major concern is CO. Of the various vehicular emissions, CO is the pollutant emitted in the largest quantity for which ambient air standards exist. Other pollutants generated by traffic include the ozone precursors: hydrocarbons and nitrogen oxides (NO_x). Fine particulate matter

(PM10—particles 10 microns or less in size—and PM2.5—particles 2.5 microns or less in size) also is emitted in vehicle exhaust, and generated by tire action on pavement (or unpaved areas). However, the amounts of PM10 and PM2.5 generated by individual vehicles are small compared with other sources (e.g., wood-burning stoves). Sulfur oxides (SOx) and nitrogen dioxide (NO₂) also are emitted by motor vehicles, but concentrations of these pollutants are usually not high, except near large industrial facilities.

The following paragraphs describe the key air pollutants considered for this analysis.

Carbon Monoxide

CO is a product of incomplete combustion generated by mobile sources, residential wood combustion, and industrial fuel-burning sources. CO is generally of greatest concern when it is emitted by mobile sources at congested urban intersections, because in those cases the emissions occur at ground level in areas surrounded by pedestrians. For those reasons, ambient CO monitoring stations operated by PSCAA and Ecology have generally been placed at congested intersections.

In 1978, the central Puget Sound region (including the study area) was classified as a nonattainment area by the EPA for CO. Exceedances of federal standards for CO were fairly common until the early 1990s. As older, more polluting cars have been replaced with new, highly efficient cars, exceedances are now rare. In 1996, having met the federal standards for several years, the region was redesignated by the EPA as a maintenance area for CO. As a result, PSCAA ceased operation of its only Snohomish County CO monitoring station (in downtown Everett) in the mid-1990s.

Ozone

Ozone is a highly reactive form of oxygen created by atmospheric chemical reaction of NO_x and hydrocarbons, both of which are emitted directly from industrial sources and mobile sources. Because it takes up to a full day for the chemical reactions to take place and the reactions occur best on warm, sunny days when winds are from the north, the highest ozone concentrations in the Puget Sound region generally occur during summertime at the southern part of Pierce County near Mount Rainier. Ozone concentrations exceeding the federal limits were common until the early 1990s, after which date more stringent emission limits on mobile sources and industrial facilities greatly reduced emission rates for the NO_x and hydrocarbon precursors.

In 1978, the central Puget Sound region (including the study area) was classified as a nonattainment area by the EPA for ozone. In 1996, having met the federal standards for several years, the region was redesignated by the EPA as a maintenance area for ozone. The ozone designation was based on historical exceedances of the 1-hour ozone standard; the region always attained the 8-hour ozone standard. In 2005, EPA eliminated the 1-hour ozone standard; since then ozone compliance is based solely on the 8-hour standard. Because the region had always complied with the 8-hour ozone

standard, EPA re-classified the central Puget Sound region as an attainment area for ozone. When EPA lowered its 8-hour ozone standard (from 0.08 parts per million [ppm] to 0.075 ppm), in 2008, to better protect public health, the 3-year average (2006–2008) of the fourth highest values at the Enumclaw ozone monitor in King County exceeded the standard. Therefore, the region will be designated a nonattainment area starting in 2010.

The PSCAA will work with Ecology to make recommendations to EPA about ozone designations. EPA then has until May 2010 to officially designate the region to a nonattainment area. Until then, the region is still designated an attainment area for ozone.

Particulate Matter (PM10 and PM2.5)

TSP is the total amount of particulate matter in ambient air. PM10 and PM2.5 are the most important size fractions of ambient particulate matter, because they contribute the most to human health effects, regional haze, and acid deposition. PM10 and PM2.5 are generated by industrial emissions, residential wood combustion, motor vehicle tailpipes, and fugitive dust from roadways and unpaved surfaces. The highest ambient concentrations generally occur near the emission sources. Until the early 1990s, these sources occasionally caused ambient concentrations at the monitoring station in downtown Everett to approach the federal standard. However, more stringent regulation of industrial facilities and wood stoves improved air quality throughout the region. PSCAA ceased operation of the downtown Everett monitoring station in the mid-1990s.

Nitrogen Oxides and Sulfur Oxides

NO_x and SO_x are emitted by mobile sources and fuel-burning stationary sources. The ambient concentrations of these pollutants have never approached the federal limits in the Puget Sound region due to the relatively small number of large industrial facilities in the region. However, NO_x from regional tailpipe emissions is one of the ozone precursors that has contributed to ongoing ozone concerns near Mount Rainier. Similarly, regional SO_x emissions can react in the atmosphere to form regional haze and acid deposition in the Cascade Mountains.

Greenhouse Gas and Climate Change Issues

The issue of how emissions from human activities may affect the global climate has been the subject of extensive international research during the past several decades. There is now a broad consensus among atmospheric scientists that emissions caused by humans have already caused measurable increases in global temperature and are expected to result in significantly greater increases in temperature in the future. However, there is still considerable uncertainty about the exact magnitude of future global impacts and the best approach to mitigate the impacts.

The United Nations' Intergovernmental Panel on Climate Change (IPCC) published its most recent sets of 5-year progress reports summarizing worldwide research on global climate change in 2001 and 2007 (Intergovernmental Panel on Climate Change 2007). These reports indicated that some level of global climate change is likely to occur and that there is a significant possibility of adverse environmental effects. Several alternative mitigation measures were evaluated by the worldwide scientific community to reduce global emissions, including the first round of worldwide reductions in greenhouse gases (GHGs), as prescribed by the Kyoto Protocol.

Global climate change is a cumulative issue related to worldwide GHG emissions rather than emissions from any individual facility. No single project emits enough GHG to influence global climate change by itself. GHG emitted anywhere on the planet remains active for roughly 100 years and eventually disperses throughout the world. Therefore, future climate change in Washington State would be influenced as much by, for example, new industrial activity in China as it would be by the future development of Downtown Bothell.

In response to growing worldwide concerns, Washington State Governor Christine Gregoire issued Executive Order 07-02, committing the state to reducing its GHG emissions under a staged schedule: 1) reduce emissions to 1990 levels by 2020; and 2) reduce emissions to 50% below 1990 levels by 2050 (Washington State Department of Ecology 2007). In addition, King County has developed its Climate Action Plan, mandating significant reductions in countywide GHG emissions. While the City of Bothell (City) is not currently subject to the emission-reduction goals described in King County's Climate Action Plan or Ecology's GHG regulations, the recent state and county goals illustrate the importance of local action to reduce GHG emissions.

The City has initiated voluntary steps to inventory and reduce its GHG emissions, in advance of any required future measures that are expected to be enacted by state and federal regulations. The City has begun the following steps:

- The City has enacted its own GHG reduction program called "BothellCO₂OL". Detailed information on this program is available on the City's web site at <http://www.ci.bothell.wa.us/dept/CM/SustainCool/index.html>.
- The City adopted Resolution No. 1222 (2008) entitled "Develop a Carbon Reduction and Energy Independence Plan". This resolution focuses on reducing GHG emissions from both City-owned operations and from the general community. Key provisions included in the resolution include:
 - Memorialize design of energy-efficient city municipal buildings according to the Leadership in Energy and Environmental Design (LEED) certification program.
 - Develop a City Fleet Program to foster purchase of fuel efficient and low carbon emitting vehicles.

- Join the U.S. Mayor’s Climate Protection Agreement, to commit to emission reductions by City-owned operations and the general community.
 - Develop incentives to encourage private developers to design new buildings according to LEED certification standards.
 - Continue to support Tree City USA.
 - Establish an interdepartmental City Energy Action Team to implement carbon emission reduction programs.
 - Begin to collect data on all emission sources within the City for both City-owned and community operations.
 - Establish a community outreach program to educate the community on how to reduce emissions.
 - Develop targets, benchmarks and plans for the reduction of GHG emissions by City operations and the community.
- The City has also joined the International Council for Local Environmental Initiatives (ICLEI), and has begun the process to inventory GHG emissions from City-owned and community sources. Based on the results of that upcoming inventory, the City will develop GHG emission reduction targets, and will develop a GHG reduction plan.

3.2.2. Impacts

Common to All Alternatives

Under both alternatives, the study area is expected to experience gradual growth, including the introduction of mixed-use development. Development under either alternative would generate localized air pollutant emissions during construction activities, and would increase regional vehicle travel and tailpipe emissions.

No Action Alternative

Although the No Action Alternative would result in smaller increases in population and employment than the Proposed Alternative, impacts on air quality would be similar to the Proposed Alternative and in some cases greater. The impacts are described and compared in detail under “Proposed Alternative.”

Proposed Alternative

This section addresses the impacts on air quality associated with increased construction activity, commercial activity, and vehicle travel under the alternatives.

Construction Activity

During construction, dust from excavation and grading could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter. Construction activity must comply with PSCAA regulations

requiring reasonable precautions to minimize dust emissions (Regulation I, Section 9.15).

Construction activities would likely require the use of diesel-powered, heavy trucks and smaller equipment such as generators and compressors. These engines would emit air pollutants that could slightly degrade local air quality in the immediate vicinity of the activity. However, these emissions would be temporary and localized, and the resulting construction emissions would likely be far outweighed by emissions from existing traffic around the study area.

Some construction activities could cause odors detectible to some people in the vicinity of the activity, especially during paving operations using tar and asphalt. Such odors would be short-term and localized. Stationary equipment used for the construction activities must comply with PSCAA regulations requiring the best available measures to control the emissions of odor-bearing air contaminants (Regulation I, Section 9.11). In addition, no slash burning would be permitted in association with either alternative.

Construction equipment, material hauling, and detours for excavation and grading could affect traffic flow in the study area. If construction delays traffic enough to significantly reduce travel speeds in the area, general traffic-related emissions would increase.

Commercial Activity

The alternatives would support commercial growth, and both new and existing commercial facilities could use stationary equipment that emits air pollutants (e.g., fumes from gas stations, ventilation exhaust from restaurants, and emissions from dry cleaners). The facilities would be required to register their pollutant-emitting equipment with PSCAA (Regulation I and Regulation II). PSCAA requires all commercial and industrial facilities to use the Best Available Control Technology (BACT) to minimize emissions. The agency may require applicants for high-emission facilities to conduct an air quality assessment to demonstrate that the proposed emissions would not expose offsite areas to odors or air quality concentrations exceeding regulatory limits.

Transportation Conformity Analysis

Cars and trucks on public roads would be the major source of air pollutant emissions associated with the alternatives. Tailpipe emissions from increased vehicles traveling on public roads within the study area could increase localized CO hot-spot concentrations at heavily congested intersections and increase regional emissions in the Puget Sound region.

Conformity with Regional Transportation Plan or Transportation Improvement Program

Major roadway improvement projects proposed under both alternatives include the Main Street Extension, Beardslee Boulevard, SR 527 projects, and the Bothell Crossroads project (SR 522). Roadway improvement projects proposed only under the Proposed Alternative include the SR 527 Multiway Boulevard Treatments, the potential NE 185th Street/98th Avenue NE Connector and Main Street Enhancements. Projects that are partially funded by state or federal funds, such as the SR 527 Multiway Boulevard (seeking funds) and Bothell Crossroads projects are subject to Washington State Transportation Conformity regulations. The two projects are not currently included in the RTP or TIP (Perette 2008b and 2008c); they must be included prior to start of construction to show that they conform to the Puget Sound region's Air Quality Maintenance Plans and would not cause or contribute to regional exceedances of the federal standards. Once included in the RTP or TIP, the projects must meet all transportation conformity requirements and demonstrate regional conformity, as described under "Applicable Regulations."

Conformity with Regional Emissions Budgets

Although the population and localized vehicle travel in the study area would increase under the alternatives, the increase in tailpipe emissions would be very small relative to overall regional tailpipe emissions. Photochemical smog (the regional haze produced by ozone and fine particles) is caused by regional emissions throughout the Puget Sound region, rather than localized emissions. Photochemical smog was a serious concern in the Puget Sound region before the late 1980s, but federal tailpipe emission regulations have reduced vehicular emissions enough so the region is currently a designated attainment area for ozone. To track the reduction of regional tailpipe emissions, Ecology's State Implementation Plan for ozone set allowable emission budgets for Puget Sound regional transportation emissions, with the understanding that as long as regional emissions are below the allowable budgets then photochemical smog impacts are unlikely to resume. Regional transportation emission budgets were set for three pollutants: CO, NO_x, and volatile organic compounds (VOCs). Based on the Puget Sound Regional Council (PSRC) regional modeling efforts (Puget Sound Regional Council 2005 and 2007), forecasted regional emissions for its 2030 planning year are far below the allowable budgets:

- CO: 42% of budget
- NO_x: 15% of budget
- VOCs: 20% of budget

Based on these favorable forecasts, future regional transportation-related emissions within Bothell would have to increase significantly in order for regional photochemical smog to become an air quality concern.

Emissions from Additional Traffic in the Study Area

Population growth and daily vehicle miles traveled (VMT) can be used as indicators of air pollutant emissions. Table 3.2-2 shows the contribution of air pollutant emissions from the Proposed Alternative (over the No Action Alternative) to Puget Sound regional air pollutant emissions. The net increases in population and VMT forecast as a result of the Proposed Alternative are inconsequentially small compared to the Puget Sound regional population and its implied impact on regional emissions and photochemical smog. Therefore, the Proposed Alternative would cause a negligible impact on regional air quality.

Table 3.2-2. Proposed Alternative Contribution to Forecast 2035 Regional Population and Vehicle Miles Traveled

Variable	Proposed Alternative ¹	Region ³	Proposed Alternative Contribution to Region
Population	2,968	4,453,000	0.07%
Daily VMT	59,955 ²	97,759,000	0.07%

Sources: Puget Sound Regional Council 2007

VMT = vehicle miles traveled

¹ Increase above the No Action Alternative

² Based on 20.2 VMT per capita (Puget Sound Regional Council 2007)

³ Puget Sound regional totals for 2025 interpolated from PSRC forecasts for 2020 and 2030.

Carbon Monoxide Hot-Spot Concentration

The alternatives would increase employment and population within the study area and would increase peak-hour traffic volumes at key intersections. Project-level CO hot-spot analyses for the study area intersections were conducted to evaluate localized CO impacts on areas adjacent to heavily congested intersections, using WSDOT Washington State Intersection Screening Tool (WASIST) (Washington State Department of Transportation 2005). WASIST is a computerized screening model used to estimate worst-case CO concentrations near signalized intersections. The results from WASIST are based on inputs from EPA-approved vehicle emission and dispersion models, Mobile 6 version 2.03 and CAL3QHC.

General inputs required for WASIST to describe the study area include analysis year, background concentration, county name, name of CO maintenance area, and land use type surrounding the intersection. Traffic input parameters required to describe the analysis intersections include lane configurations, traffic volumes, approach speeds, and signal timing of each intersection. Receptor inputs required to describe the receptor positions include number of receptors, and distance from the edge of roadways. A receptor is the position where the CO concentration is estimated. The WASIST was run with the following input values:

- CO hot-spot modeling was done for the following signalized intersections within the study area, based on inspection of the forecast level of service and traffic volumes: NE 190th Street and SR 527; SR 522 and SR 527; and SR 522 and

Kaysner Way. Those three intersections represent the most congested intersections with the highest PM peak-hour traffic volumes.

- CO hot-spot modeling for each analysis intersection was performed for 2007 and 2035.
- Background CO concentrations of 3 ppm were used for one-hour and 8-hour averaging periods as specified in the WASIST User's Manual (Washington State Department of Transportation 2005). The modeled one-hour CO concentration was converted to an estimated 8-hour concentration by applying a 0.7 scale factor.
- For purposes of modeling wind patterns around buildings near congested intersections, the WASIST model was run using the land use type "Offices" to represent retail and office buildings in the area.
- The approach speed at intersections was 5 miles per hour (mph) as suggested in the WASIST User's Manual.
- Lane configuration, traffic volume, and signal timing of each analysis intersection were provided from modeling done for the transportation analysis of this report.

Table 3.2-3 shows the CO hot-spot analysis results for 2007 (existing conditions) and 2035 conditions for both alternatives. The modeled CO concentrations apply to the PM peak-hour period. CO impacts for the AM peak-hour period were not modeled, because traffic volumes for the AM peak -hour period are expected to be lower compared to the PM peak-hour period. Therefore, the maximum CO impacts during the AM peak-hour period would also be lower than the federal limits.

The modeled ambient CO concentrations at all intersections are below the allowable federal limits under 2035 conditions for both alternatives. Therefore, the alternatives would have no significant impacts on localized air quality.

Table 3.2-3. Carbon Monoxide Hot-Spot Modeling Results (in ppm)

Alternative (Year)	Concentrations		Federal Limits (NAAQS)	
	1-Hour Interval	8-Hour Interval	1-Hour Interval	8-Hour Interval
NE 190th St and SR 527 (2035 Proposed Alternative LOS = E)				
Existing (2007)	7.3	6.0	35	9
No Action (2035)	7.1	5.9	35	9
Proposed Alternative (2035)	7.2	5.9	35	9
SR 522 and SR 527 (2035 Proposed Alternative LOS = D)				
Existing (2007)	10.3	8.1	35	9
No Action (2035)	7.2	5.9	35	9
Proposed Alternative (2035)	6.7	5.6	35	9
SR 522 and Kaysner Way (2035 Proposed Alternative LOS = D)				
Existing (2007)	10.0	7.9	35	9
No Action (2035)	7.1	5.9	35	9
Proposed Alternative (2035)	7.1	5.9	35	9

Note: all listed values include background concentrations.

Mobile Source Air Toxics

The mobile source air toxics (MSATs) are compounds emitted from highway vehicles and non-road mobile equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline. The EPA has identified six priority MSATs: benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene.

The EPA has issued a number of regulations that will dramatically decrease MSATs by mandating the use of cleaner fuels and cleaner engines. The MSAT regulations were issued under the authority in Section 202 of the Clean Air Act. In its regulations, EPA examined the impacts of existing and newly promulgated mobile source control programs, including the reformulated gasoline program, national low emission vehicle standards, Tier 2 motor vehicle emissions standards, gasoline sulfur control requirements, proposed heavy-duty engine and vehicle standards, and on-highway diesel fuel sulfur control requirements. According to a Federal Highway Administration (FHWA) analysis, even if nationwide VMTs increase by 64%, reductions of 57% to 87% in MSATs are projected from 2000 to 2020 (Federal Highway Administration 2006).

According to the traffic analysis, the future VMT would be higher than existing levels. However, the magnitude of the EPA-projected MSAT emissions reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

There are two highway improvement projects (SR 527 Multiway Boulevard Treatments and Bothell Crossroads) proposed in the study area. The SR 527 Multiway Boulevard would move some traffic closer to the Anderson Building, the only structure within a block of the new east right-of-way alignment that is expected to remain. The Bothell Crossroads project would move some traffic closer to the Park at Bothell Landing, the only uses adjacent to the new south right-of-way alignment expected to remain. In addition, the potential NE 185th Street/98th Avenue NE Connector would move traffic closer to public and residential properties. There may be localized areas where ambient concentrations of MSATs could be temporarily increased with the highway improvement projects. However, the magnitude and the duration of these potential increases cannot be accurately quantified due to the inherent mathematical and validation deficiencies of current emission models. In sum, when a highway is widened and, as a result, moves closer to receptors, the localized level of MSAT emissions could be higher, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). However, on a regional basis, EPA's vehicle and fuel regulations (coupled with ongoing future fleet turnover) will over time cause substantial reductions that will cause region-wide MSAT levels to be significantly lower than today in most cases.

Greenhouse Gas Emissions

This section compares estimated GHG emissions from the study area and from the region. As described below, the Proposed Alternative would reduce regional GHG emissions compared to the No Action Alternative. For the purposes of this analysis, the GHG emission estimates are expressed in terms of their increase between 2000 and 2035. The emissions estimate for Proposed Alternative conditions accounts for GHG emission reductions expected as a result of the inclusion of transit-oriented development (TOD).

TOD is mixed-use residential or commercial development designed to maximize access to public transportation, and often incorporates features to encourage transit ridership. The benefits of TOD are to reduce trip generation, regional VMT, regional fuel usage, and regional GHG emissions. TOD typically has a center with a transit station, surrounded by relatively high-density development with progressively lower-density development spreading outwards from the center. TOD generally is located within a 0.25- to 0.5-mile (0.4 to 0.8 km) radius of a transit stop, as this is considered to be an appropriate scale for pedestrians.

Assumed Land Use Growth for GHG Emission Calculations

Table 3.2-4 shows the land uses assumed for the No Action and the Proposed alternatives in the GHG emission calculations. The total future developed square footage within the study area would be considerably greater under the Proposed Alternative than the No Action Alternative. This analysis considered future land use growth and future emission increases within study area and the Puget Sound region. The proposed square footage in the study area would be higher for most land use categories under the Proposed Alternative than under the No Action Alternative. Therefore, for purposes of comparing the GHG emissions from the alternative, it is important to balance future regional growth outside the study area, as well as future growth within the study area. For purposes of calculating regional GHG emissions, it was assumed that the lower amount of future developed square footage in the study area under the No Action Alternative would be balanced by developers constructing an equal square footage elsewhere in the Puget Sound region, in response to assumed market demand for housing, office, and commercial space. Thus, the total amount of future additional regional square footage was balanced to the same values for No Action and the Proposed alternatives; however, under the Proposed Alternative, more of the construction in the study area would be TOD.

For purposes of estimating GHG emissions, the study area was divided into four general categories of land use:

- **TOD Districts.** These are the areas defined under the Proposed Alternative as the Downtown Corridor, Downtown Neighborhood and Downtown Transition districts. These districts would experience the greatest GHG emission reduction as a result of TOD, compared to “business as usual,” in the absence of any regulatory actions to reduce GHG emissions. The estimates reflect a smaller percentage of GHG emission reduction under the No Action Alternative.
- **Transit Corridor Districts.** These are the areas defined under the Proposed Alternative as SR522 Corridor and General Downtown Corridor districts. These districts would experience some GHG reduction under the Proposed Alternative due to their proximity to existing and proposed bus routes, but the GHG reduction is expected to be less than in the TOD districts. These districts would experience a smaller percentage of GHG reduction under the No Action Alternative.
- **Non-TOD Districts.** These are the remaining districts defined under the Proposed Alternative not included under TOD or Transit Corridor districts above. These districts would not benefit from the GHG emission reductions experienced in the TOD and Transition Corridor districts under the alternatives, compared to “business as usual.”
- **Puget Sound Region.** Regional growth assumed no special GHG emission reduction measures.

Table 3.2-4. Assumed Land Use Growth (2000–2035) for Greenhouse Gas Emission Calculations

Land Use Category	No Action Alternative		Proposal Alternative	
	Study Area	Puget Sound Region	Study Area	Puget Sound Region
Single Family (Units)	7	—	6	1
TOD	0	0	0	0
Transit Corridor	0	—	0	0
Non-TOD	7	0	6	1
Multifamily (Units)	1,379	1,353	2,732	—
TOD	1,367	—	2,417	—
Transit Corridor	6	—	309	—
Non-TOD	6	1,353	6	—
Mixed Use Office (sq. ft.)	182,454	66,047	248,501	—
TOD	173,966	—	(20,738)	—
Transit Corridor	8,488	—	269,239	—
Non-TOD	-	66,047	—	—
Mixed Use Retail (sq. ft.)	185,768	211,234	397,002	—
TOD	177,126	—	(33,131)	—
Transit Corridor	8,642	—	430,133	—
Non-TOD	-	211,234	—	—
Commercial Office (sq. ft.)	82,338	—	—	—
TOD	0	0	0	0
Transit Corridor	0	—	0	—
Non-TOD	82,338	0	0	82,338
Commercial Retail (sq. ft.)	83,833	—	—	—
TOD	0	0	0	0
Transit Corridor	0	—	0	—
Non-TOD	83,833	0	0	83,833

TOD = transit-oriented development. TOD applies to the Downtown Core, Downtown Neighborhood and Downtown Transition districts.

Transit Corridor applies to SR522 and General Downtown districts.

Non-TOD applies to districts other than Downtown Corridor, Downtown Neighborhood, Downtown Transition, SR522, and General Downtown districts.

GHG Emission Calculation Methods

The GHG emission spreadsheet developed by King County was used to estimate life-cycle emissions (King County 2007). Details on the GHG emission calculations are provided in Appendix D. The King County spreadsheet was used to estimate future emissions within the study area, as well as the balance of regional growth outside the study area. The King County spreadsheet estimates GHG emissions to construct the building, and estimates the life-cycle emissions generated by the building occupants over the presumed life of the building. The King County spreadsheet uses statewide estimates for vehicle travel, building occupancy, and space heating, so that spreadsheet is a relevant tool to provide an approximate estimate of GHG emissions

anywhere within Washington State. The King County spreadsheet assumes the office and commercial buildings in Washington State will be occupied for between 58 to 62 years, and estimates life-cycle emissions within that time period. Three types of life-cycle emissions are estimated:

- **Embodied emissions.** These are the emissions generated by construction of the building, including extraction, production, and eventual disposal of the building materials used to construct the structure. These do not include embodied emissions during the operating life of the facility.
- **Energy.** These are emissions generated by space heating and electrical supply to the building during the building's 58- to 62-year lifespan. The spreadsheet incorporates energy intensity factors specific to Washington State.
- **Transportation.** These include tailpipe emissions generated by on-road vehicles used by building occupants, employees, and customers after the building is constructed. Note that the transportation emissions do not account for vehicles passing through the subarea unless they are directly associated with the buildings being evaluated. These emissions account for "upstream" emissions during extraction and refining of the fossil fuel used over the 62.5-year lifespan of the building. For this assessment the King County spreadsheet was first modified to account for anticipated future improvements in vehicle mileage over the life span. For existing conditions, the default King County assumption of a fleet-wide fuel economy of 19.5 miles per gallon was retained. However, for the future Proposed Alternative and future No Action, the spreadsheet was modified to assume a fleet-wide fuel economy of 35 miles per gallon, consistent with EPA's newly-proposed Corporate Automobile Fuel Economy (CAFE) vehicle mileage standard.

Estimated GHG Emission Reductions related to Transit-Oriented Development

It is well understood that TOD will reduce GHG emissions compared to traditional development by reducing vehicle trips and fuel usage. For this assessment the percent reductions in vehicle usage and the corresponding emission GHG reductions for new development in the various districts were derived based on the Sacramento Metropolitan Air Quality Management District (SMAQMD) document *Recommended Guidance for Land Use Emission Reductions* (Sacramento Metropolitan Air Quality Management District 2007). The SMAQMD methodology uses a scoring system to estimate GHG emission reduction for a new development based on the TOD mixed-use density, housing density, and proximity to existing and future bus transit. The SMAQMD methodology estimates GHG reductions only as a result of reduced vehicle trip generation, but it does not attempt to estimate GHG reductions provided by other mitigation measures such as use of recycled building materials, improved thermal insulation, reduced electricity consumption, or reduced waste generation. Details on the GHG reduction calculations are provided in Appendix D. The calculated emission reductions are shown as percentage reductions to future conditions without TOD are summarized in Table 3.2-5.

Table 3.2-5. Calculated GHG Emission Reductions Associated with TOD

District	Percentage Reduction ¹
TOD under Proposed Alternative	17%
Transit Corridor under Proposed Alternative	4.5%
TOD under No Action Alternative	10%
Transit Corridor No Action Alternative	2%

Source: Technical Memorandum: GHG Emission Estimates for Downtown Bothell Subarea Development (Appendix D).

¹ Compared to "business as usual."

Estimated GHG Emissions

Table 3.2-6 lists the life-cycle GHG emission increases caused by future development in the study area under both alternatives. Future increases in developed square footage in the study area under the Proposed Alternative are balanced against corresponding regional growth under the No Action Alternative. The life-cycle emissions correspond to an assumed 60-year building lifetime.

Because the Proposed Alternative would provide TOD in several districts, its overall GHG emission increases are slightly lower than for the No Action Alternative. The overall annualized GHG emission increases (2000 to 2035) are 57,037 metric tons/year under the Proposed Alternative, compared to 62,351 metric tons/year under the No Action Alternative. Thus, the Proposed Alternative represents a net reduction of 5,315 metric tons/year of regional GHG emissions.

Comparison to Washington State GHG Reduction Goals

The Proposed Alternative would reduce regional GHG emissions by roughly 5,314 metric tons CO₂-equivalent per year compared to the No Action Alternative and business as usual. The GHG emission reductions would beneficially contribute to the state's goal of reducing statewide GHG emissions to 50% below 1990 levels by 2050 (Washington State Department of Ecology 2008). Current Washington State emissions are 93 million metric tons CO₂-equivalent per year, so the state's goal is equivalent to an emission reduction of 47 million metric tons/year. The 5,314 metric tons per year reduction in the study area under the Proposed Alternative would be a relatively small fraction of the statewide reduction goal. Regardless, the reductions would incrementally assist in achieving the statewide goal.

Table 3.2-6. Estimated Greenhouse Gas Emission Increases (2000–2035)

Land Use Category for GHG Emission Estimates	60-Year Life Cycle GHG Emission Increase (metric tons CO ₂ -equivalent)		Average Annual GHG Emission Increase During 60-Year Project Lifetime (metric tons CO ₂ -equivalent per year)	
	No Action Alternative	Proposed Alternative	No Action Alternative	Proposed Alternative
TOD Districts	1,737,348	2,314,954	28,956	38,583
Downtown Transit Corridor Districts	22,460	937,959	374	15,633
Non-TOD Districts	169,313	13,705	2,822	228
	1,929,121	3,266,618	32,152	54,444
Subtotal: Combined Districts				
Subtotal: Regional Growth Outside Study Area (Non-TOD)	1,811,915	155,608	30,199	2,593
Total Emission Increase (2000–2035) for Study Area Plus Regional Growth	3,741,036	3,422,225	62,351	57,037
Net Emission Reduction (Proposed Alternative Minus No Action Alternative)		318,811		5,314

3.2.3. Mitigation Measures

Incorporated Plan Features

Transit Facilities

The Proposed Alternative would lead to population and employment growth in the study area and could increase air pollutant emissions from commercial activity and vehicle travel in the study area. However, the Proposed Alternative also focuses on the improvement of public transit, pedestrian access and park-and-ride facilities, such as along the NE 185th Street/98th Avenue NE Connector, the combination of which would likely reduce the vehicle travel in the region by increased transit use.

Therefore, regional tailpipe emissions are expected to be reduced. Although air pollutant emissions in the study area could increase, the CO hot-spot analysis at heavily congested intersections demonstrated that the Proposed Alternative would not cause localized impacts related to increased CO emissions from vehicle tailpipes.

Greenhouse Gas Emission Reductions

TOD under the Proposed Alternative encourages commercial business and residential growth near public transit facilities, reducing regional VMT associated GHG emissions.

Applicable Regulations and Commitments

Air Quality Permitting for Proposed New Commercial Facilities

All stationary emission sources associated with new commercial facilities would be required to register with PSCAA (Regulation I and Regulation II).

Project-Level Transportation Conformity Analyses for Future Roadway and Intersection Improvements

As part of future project-specific NEPA documentation for individual new roadway improvement projects, the City would be required to conduct CO hot-spot modeling (as required under WAC 173-420) to demonstrate that the projects would not cause localized impacts related to increased CO emissions from vehicle tailpipes at congested intersections.

Other Potential Reduction Measures

Construction Emission Control

The City should require all construction contractors to implement air quality control plans for construction activities in the study area as part of plan features of the Proposed Alternative. The air quality control plans should include best management practices (BMPs) to control fugitive dust and odors emitted by diesel construction equipment.

During construction, dust from excavation and grading could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter. The following BMPs would be used to control fugitive dust.

- Use water sprays or other non-toxic dust control methods on unpaved roadways.
- Minimize vehicle speed while traveling on unpaved surfaces.
- Prevent trackout of mud onto public streets.
- Cover soil piles when practical.
- Minimize work during periods of high winds when practical.

Mobile construction equipment and portable stationary engines would emit air pollutants including NO_x, CO, and diesel particulate matter. These emissions would be temporary and localized. It is highly unlikely that the temporary emissions would cause ambient concentrations at adjoining parcels to approach the federal limits.

Typical mitigation measures to minimize air quality and odor issues caused by tailpipe emissions include the following:

- Maintain the engines of construction equipment according to manufacturers' specifications.
- Minimize idling of equipment while the equipment is not in use.

Burning of slash or demolition debris would not be permitted without express approval from PSCAA. No slash burning is anticipated for any construction projects in the study area.

Greenhouse Gas Reduction Measures

The estimated GHG reduction provided by vehicle trip reduction related to TOD under the Proposed Alternative is only one of several ways that future development in the study area could reduce GHG emissions. Additional GHG emission reductions could be provided by using prudent building design and construction methods to use recycled construction materials, reduce space heating and electricity usage, and reduce water consumption and waste generation. Table 3.2-7 lists a variety of additional mitigation measures that could further reduce GHG emissions caused by building construction, space heating, and electricity usage (Washington State Department of Ecology 2008). The table lists potential GHG-reduction measures, and indicates where the emission reductions might occur. The City could require development permit applicants to identify the reduction measures included in their projects, and explain why other measures are not included or are not applicable.

Table 3.2-7. Potential Greenhouse Gas Reduction Measures

	Comments	Emissions Category		
		Direct ¹	Indirect ²	Transportation ³
Site Design				
Plant trees and vegetation near structures to shade buildings	Reduces onsite fuel combustion emissions and purchased electricity plus enhances carbon sinks.	■	■	
Minimize building footprint.	Reduces onsite fuel combustion emissions and purchased electricity consumption, materials used, maintenance, land disturbance, and direct construction emissions.	■	■	
Design water efficient landscaping.	Minimizes water consumption, purchased energy, and upstream emissions from water management.		■	
Minimize energy use through building orientation.	Reduces onsite fuel combustion emissions and purchased electricity consumption	■	■	
Building Design and Operations				
Apply LEED (Leadership in Energy and Environmental Design) standards (or equivalent) for design and operations	Reduces onsite fuel combustion emissions and off-site/indirect purchased electricity, water use, waste disposal	■	■	
Purchase Energy Star equipment and appliances for public agency use.	Reduces onsite fuel combustion emissions and purchased electricity consumption	■	■	
Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	Reduces onsite fuel combustion emissions and purchased electricity consumption.	■	■	
Design street lights to use energy efficient bulbs and fixtures	Reduces purchased electricity.		■	
Construct "green roofs"	Reduces onsite fuel	■	■	

¹ Direct emissions include emissions generated onsite that the proponent of the action has direct control over.

² Indirect emissions include those generated offsite and for which the proponent does not have direct control over. Examples include emissions associated with purchased or acquired electricity

³ Transportation emissions can be either direct (i.e., within the control of the proponent) or indirect (i.e., outside of the proponent's direct control).

	Comments	Emissions Category		
		Direct ¹	Indirect ²	Transportation ³
and use high-albedo roofing materials.	combustion emissions and purchased electricity consumption			
Install high-efficiency HVAC systems.	Minimizes fuel combustion and purchased electricity consumption.	■	■	
Eliminate or reduce use of refrigerants in HVAC systems.	Reduces fugitive emissions. Compare refrigerant usage before/after to determine GHG reduction.	■		
Maximize interior day lighting through floor plates, increased building perimeter and use of skylights, celestories and light wells.	Increases natural/day lighting initiatives and reduces purchased electrical energy consumption.		■	
Incorporate energy efficiency technology such as: super insulation motion sensors for lighting and climate control efficient, directed exterior lighting	Reduces fuel combustion and purchased electricity consumption.	■	■	
Use water conserving fixtures that surpass building code requirements.	Reduces water consumption.		■	
Re-use gray water and/or collect and re-use rainwater.	Reduces water consumption with its indirect upstream electricity requirements.		■	
Use recycled building materials and products.	Reduces extraction of purchased materials, possibly reduces transportation of materials, encourages recycling and reduction of solid waste disposal.		■	■
Use building materials that are extracted and/or manufactured within the region.	Reduces transportation of purchased materials			■
Use rapidly renewable building materials.	Reduces emissions from extraction of purchased materials		■	

	Comments	Emissions Category		
		Direct ¹	Indirect ²	Transportation ³
Conduct 3rd party building commissioning to ensure energy performance.	Reduces fuel combustion and purchased electricity consumption.	■	■	
Track energy performance of building and develop strategy to maintain efficiency.	Reduces fuel combustion and purchased electricity consumption.	■	■	
Transportation				
Size parking capacity to not exceed local parking requirements and, where possible, seek reductions in parking supply through special permits or waivers.	Reduced parking discourages auto dependent travel, encouraging alternative modes such as transit, walking, biking etc. Reduces direct and indirect VMT			■
Develop and implement a marketing/information program that includes posting and distribution of ridesharing/transit information.	Reduces direct and indirect VMT			■
Subsidize transit passes. Reduce employee trips during peak periods through alternative work schedules, telecommuting, and/or flex-time. Provide a guaranteed ride home program.	Reduces employee VMT			■
Provide bicycle storage and showers/changing rooms.	Reduces employee VMT			■
Utilize traffic signalization and coordination to improve traffic flow and support pedestrian and bicycle safety.	Reduces transportation emissions and VMT	■		■
Apply advanced technology systems and management strategies to improve operational efficiency of local streets.	Reduces emissions from transportation by minimizing idling and maximizing transportation routes/systems for fuel efficiency.			■
Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	Reduces idling fuel emissions and direct and indirect VMT			■

3.2.4. Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities. The regulations and Proposed Alternative features described above are adequate to mitigate any adverse impacts anticipated to occur as a result of study area population increases.

3.3. Land Use Patterns/Plans and Policies

This section addresses the impacts of the alternatives on land use patterns and on plans and policies.

3.3.1. Affected Environment

For purposes of evaluating land use patterns, this analysis considers the 529-acre study area (Figure 2-1) as well as surrounding land uses just beyond the study area. For purposes of plans and policies, this analysis considers the City's Comprehensive Plan (City of Bothell 2004a), including all subareas that lie within the study area (Downtown/190th/Riverfront and North Creek/195th).

Land Use Patterns

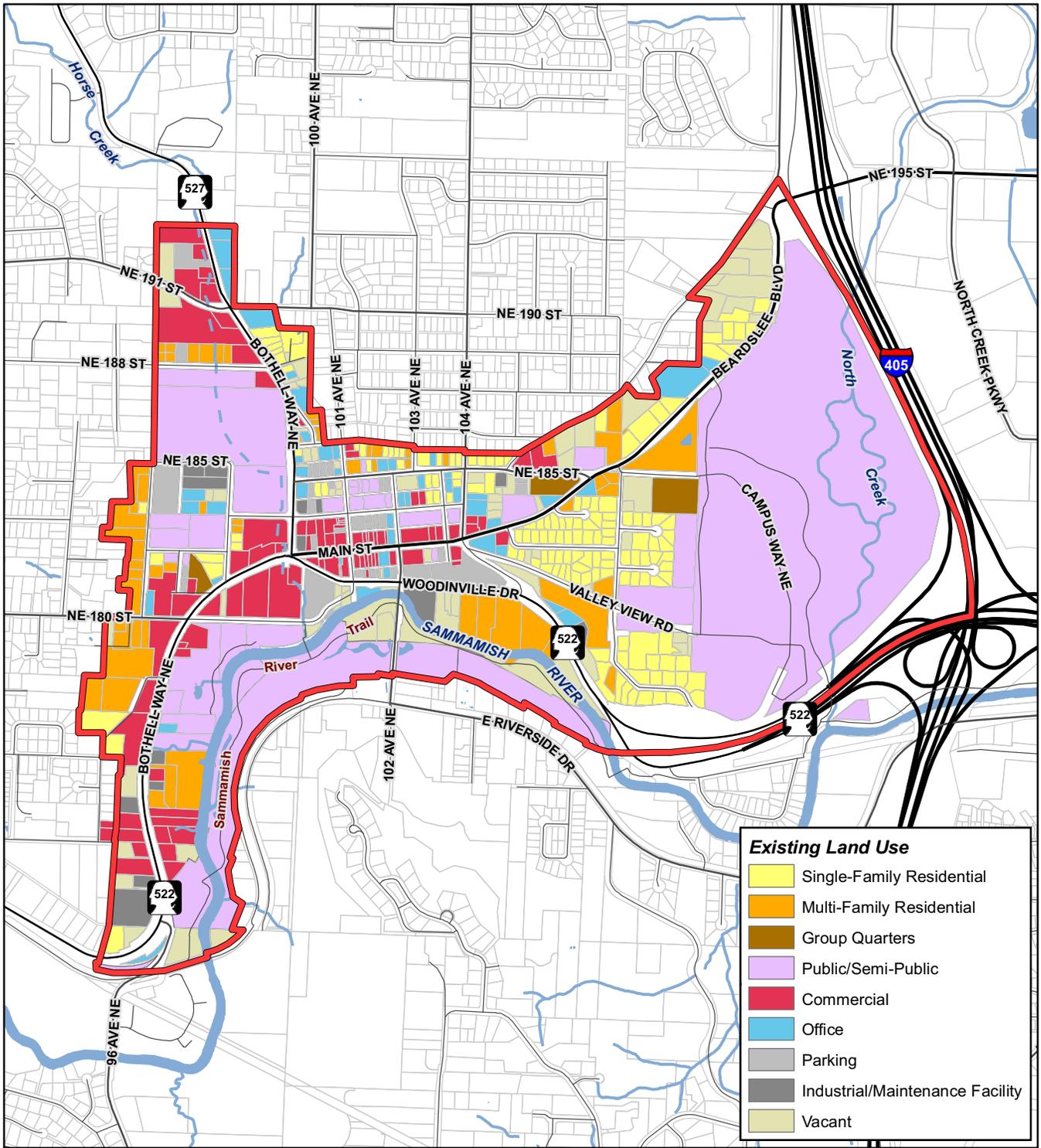
Land Use

In the Study Area

The study area consists of a wide variety of uses including retail, office, civic, institutional, and residential uses (Figure 3.3-1). However, only a small portion of land area within the study area consists of housing. The 967 housing units in the study area—814 multifamily and 153 single-family—are located on 90 acres. There are also 169 beds in a variety of group home facilities within the study area, including a retirement facility, nursing home, and a group home.

Public/semi-public and commercial uses are the most predominant uses in the study area, including civic uses such as City Hall, Pop Keeney Stadium, the Bothell Regional Public Library, Bothell Police Station, and other city buildings and facilities.

Various forms of commercial land uses make up another large portion of land use within the study area. Commercial land uses in the study area as a whole are broken down in Table 3.3-1. In comparison, industrial structures cover only 88,549 square feet of property in the study area. The remainder of the land in the study area is made up of vacant parcels (61 acres) and surface parking areas (10 acres).



Source: City of Bothell (2008); King County (2008)

-  Study Area
-  Parcel
-  Water Feature
-  Piped Stream

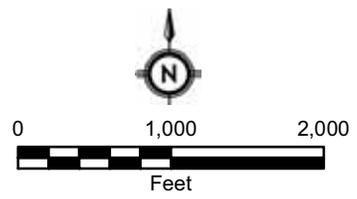


Figure 3.3-1. Existing Land Use
 Downtown Bothell Planned Action EIS
 December 2008

Table 3.3-1. Commercial Land Uses in Study Area

Land Use Category	Square Feet of Commercial Space
Finance, Insurance, Real Estate (FIRE)	124,796
Non-Health	24,873
Health	103,218
Education/Social	155,160
Governmental	108,983
Retail	372,861

Source: King County Assessor Records 2008.

For purposes of reviewing land use patterns in the study area, descriptions are broken down from west to east.

Western Portion. The western portion of the study area is dominated by low intensity, auto-oriented uses: Commercial, auto-oriented uses predominate along the SR 522 and SR 527 corridors, while a mix of multifamily and single-family residential uses cover the western and northern fringes of this portion of the study area. Significant areas of public/semi-public land lie along the Sammamish River corridor on the south end of this portion and at the Northshore School District (NSD) site and the sites of the Regional Library and City office buildings in the central portion. A small number of vacant parcels are located along the Sammamish River corridor west of the intersection of SR 522 and SR 527.

Land development patterns in this western portion of the study area tend to be buildings of one or two stories, although some multifamily residences in this area reach as high as four stories. Buildings in this area are typically set back from streets to accommodate local parking. Newer multifamily structures are generally clustered together on sites with much of the remaining onsite area devoted to parking.

Central Portion—Moving east of the of the SR 522/SR 527 intersection, the central portion of the study area contains historic Downtown Bothell. Downtown Bothell is centered around Main Street between SR 522 and 104th Avenue NE. North of Woodinville Drive (SR 522) is characterized by older development patterns consisting of small lots and a formal street grid pattern. This area contains the largest concentration of individual commercial parcels with some office mixed in. Buildings in this area also tend to be one or two stories in height. However, older commercial buildings in this area are generally not set back from the street, and typically take up the entire lot on which they are located, or at least the street-front portion of their lot. Because buildings in the area were often built without onsite parking, over time a number of building lots were converted to surface parking to accommodate the need for shoppers and employees driving to downtown. This area also contains public/semi-public land, including City Hall, and the Bothell Police Station. Small lot single-family residential is predominant north of NE 185th Street. The area

surrounding Woodinville Drive to the south is characterized by a mixture of multifamily housing, a mobile home park, parking at the Bothell Park & Ride, and public park land along the Sammamish River.

Eastern Portion. Moving east of 104th Avenue NE, commercial development becomes less predominant; while residential—single family in particular—and public uses become more predominant. Single-family houses east of 104th Avenue NE tend to be single-story, cottage- or bungalow-style houses. The small amount of commercial development in this area clusters along Beardslee Boulevard near its intersection with 104th Avenue NE. This area is made up of pockets of single-family neighborhoods, identified as the Sunrise and Valley View neighborhoods, as well as clusters of single-family residences and a new office development located on the north side of Beardslee Boulevard east of 108th Avenue NE. The far eastern part of this area (roughly east of 110th Avenue NE) is dominated by a single public land use, the University of Washington Bothell/Cascadia Community College (UWB/CCC) campus and associated North Creek wetlands. The university and the small amount of multifamily housing in the area tend to consist of taller buildings on larger lots. The UWB/CCC campus contains structured and surface parking, while the multifamily development in the area relies on surface parking lots.

Areas Surrounding the Study Area

Generally speaking, the slopes of hills to the west—Westhill—and to the south—Norway Hill—provide natural boundaries to the study area. In addition, Interstate (I) 405 provides a physical boundary to the east. The northern boundary is characterized by both a hill slope (though more gentle than that of either Westhill or Norway Hill) and a change from predominantly commercial uses to predominantly single-family residential uses. More detail on surrounding land uses treated in a clockwise fashion from West to South is outlined below.

West of the study area, the Westhill neighborhood is physically separated from the downtown by the slope of a hill. The area contains extensive residential development of varying densities, though most of the area abutting the study area is lower density, single-family. Portions of the area include pockets of unincorporated King County.

North of the study area, large lot residential and vacant parcels line the west side of the SR 527 corridor, making a clear distinction with the commercial development along the corridor in the study area. East of SR 527, the neighborhood is characterized by multifamily residential proximate to SR 527, while land uses become predominantly lower density single-family residential moving up hill to the Maywood/Beckstrom Hill neighborhood east of 100th Avenue NE. The portion of this neighborhood north of the study area and south of NE 190th Street consists of some of the oldest single-family homes in Bothell, interspersed with small multifamily developments. These homes are on small lots with a well-defined street grid pattern typical of development patterns of the early 20th Century. East of 108th

Avenue NE, large lot residential development dominates, with significant amounts of trees and open space preserved.

East of the study area I-405 (between the NE 195th Street and SR 522 interchanges) serves as a physical barrier between the study area and the mix of low intensity office park and sports field development.

South of the study area, east of the SR 522/Woodinville Drive intersection is a small, physically isolated single-family residential community surrounded on three sides by the Sammamish River. A small, two-story apartment building is also located in this area. Moving west, as the study area boundary crosses to the southern side of the Sammamish River, the area south of the study area consists of land uses surrounding East Riverside Drive at the base of Norway Hill. These land uses are a mix of older single-family homes on small lots, newer multifamily senior housing and a small amount of commercial. Most of the Norway Hill neighborhood to the south is physically separated from the study area by the steep slope of the hill, even more so than the Westhill boundary to the west. Moving west of where the study area boundary crosses the Sammamish River again, the area south and southwest of the study area, near 96th Avenue NE and SR 522, respectively is dominated by multifamily residences and the Wayne Golf Course.

Current Employment and Housing Mix

A GIS analysis of parcels provided information on commercial square footages and number of dwelling units in the study area. This information was supplemented by City information on downtown businesses, provided in a staff report to City Council (City of Bothell 2007).

Employment

The study area includes commercial and office areas that provide existing employment in Bothell. Much of the existing employment in the study area is found in either the historic downtown area or on the UWB/CCC campus. Additional jobs are found in the commercial properties and the few offices along SR 527 and SR 522 arterials. Unlike Bothell's business parks in the lower North Creek valley and at Canyon Park, most of the businesses in the study area are small. The public sector provides a large number of jobs in the study area via UWB/CCC and various City offices and facilities.

The City's information on businesses in the study area (City of Bothell 2007) found that 477 individual businesses were located in a subarea of the study area that excludes the UWB/CCC campus. Of these 477 businesses, 441 were designated as small businesses.

Housing

Only a small portion of the study area is currently used for housing. The study area contains 153 single-family dwelling units and 814 multifamily dwelling units, for a total of 967 dwelling units. The study area also contains a retirement home, nursing home, and group home in the eastern portion of the study area near Beardslee Boulevard. These facilities provide 169 beds within the study area.

Redevelopment Opportunities

Redevelopment opportunities in the study area are based on a review of City buildable lands data and potential opportunity sites identified in the *Downtown Subarea Plan and Regulations* (Freedman Tung and Bottomley 2008).

Bothell's buildable lands methodology identifies redevelopable land in commercial, industrial, or mixed-use zones as having an improvement value to land value of less than 0.5, or of being an existing single-family use in a commercial or mixed-use zone. Using this methodology, the study area contains a large amount of redevelopable land west of SR 527 and north of SR 522. Among these redevelopment opportunities is the NSD site, which is approximately 26 acres. This site contains several facilities that NSD considers obsolete, including the old school administration building, the bus parking and maintenance facility, and the school buildings near Pop Keeney Stadium. Other redevelopment sites include the Safeway grocery store site at the intersection of SR 527 and SR 522, and many smaller parcels of land located along SR 522 in the southwest portion of the study area. The entire block containing City Hall—between NE 183rd and NE 185th streets and between SR 527 and 101st Avenue NE—is considered a redevelopment opportunity, as well as the Bothell Park & Ride and other smaller parking lots located throughout downtown.

Plans and Policies

Existing Comprehensive Plan

This section identifies the plans and policies in the City's Comprehensive Plan relevant to land use (City of Bothell 2004a).

Future Land Use Designations

The City's Comprehensive Plan applies future land use designations to all parcels within the city limits and the Bothell Planning Area outside the city limits. Bothell Land Use Policy LU-P4 states that land use designations of the Comprehensive Plan are intended to be utilized separately where only one type of land use is determined to be appropriate, and in combination where more than one type of land use is determined to be appropriate. Since the study area is intended to provide a mix of uses, most of the study area is applied a combination of future land use designations.

Figure 2-2 illustrates the following Comprehensive Plan land use designations in the study area, either as a single designation, or in combination with other designations pursuant to Comprehensive Plan Policy LU-P4:

- R-9,600—Residential 9,600 square foot minimum lot size
- R-8,400—Residential 8,400 square foot minimum lot size
- R-5,400d—Residential 5,400 square foot minimum lot size detached
- R-4,000—Residential, one dwelling unit per 4,000 square feet of net buildable area
- R-2,800—Residential, one dwelling unit per 2,800 square feet of net buildable area
- R-AC—Residential–Activity Center
- MHP—Mobile Home Park
- OP—Office-Professional
- NB—Neighborhood Business
- CB—Community Business
- GC—General Commercial
- MVSO—Motor Vehicle Sales Overlay
- LI—Light Industrial
- CE—Civic Educational
- P—Park
- OS—Open Space
- T—Transit facility

R-9,600, R-8,400, and R-5,400. These designations are intended to provide for detached residential development at the various lot sizes identified in their titles (e.g., R-9,600 requires a 9,600-square-foot minimum lot size). These designations are generally applied to land already in single-family residential use with the exception of land located convenient to principal arterials and/or business and community activity centers, where higher densities may be warranted.

R-4,000 and R-2,800. These designations provide for attached or detached residential development at the rate of one dwelling unit per 4,000 or 2,800 square feet of net buildable area, and compatible uses such as schools, churches, and day care centers. Generally, these designations are appropriate for land located convenient to arterials and to business and commercial activity centers.

R-AC. This designation provides for multifamily residential development in designated activity centers, and is intended to promote a variety of housing types in sufficient numbers to support a range of shopping, dining, and entertainment

opportunities within those centers. No density is prescribed. Instead, the number of units which may be constructed on an individual property or within the center is controlled by site and building regulations concerning height, parking, landscaping, setbacks, and other development parameters.

MHP. This designation is assigned to mobile home parks, and is intended to promote retention of such uses as a source of affordable detached single-family housing.

OP. This designation includes personal and professional service businesses which are commonly located in office buildings (e.g., banks, medical and dental clinics, accounting, law, real estate, insurance, and travel agencies).

NB. This designation provides for retail and service businesses to serve the limited-item, convenience shopping and personal service needs of the immediate surrounding neighborhood.

CB. This designation includes retail, dining, entertainment, and similar businesses that are conducted primarily indoors (e.g., grocery, drug, furniture, clothing, book, and music stores; restaurants; movie theaters; and bowling alleys).

GC. This designation includes more intensive retail and service uses than described under the CB designation. GC uses typically require outdoor display and/or storage of merchandise and tend to generate noise as a part of their operations (e.g., auto, boat and recreational vehicle sales lots; tire and muffler shops; equipment rental; mini-warehouses; and vehicle storage).

MVSO. This designation is an overlay that allows motor vehicle sales on properties designated CB in specified locations where such development has been determined to be appropriate due to location along major streets, presence of other intensive retail, and incorporation of a landscaped buffer.

LI. This designation provides for non-polluting manufacturing and processing, wholesaling, warehousing and distribution, and other similar activities.

CE. This designation includes but is not limited to such public facilities as schools, libraries, community centers, police stations, fire stations, and municipal or school district administration buildings.

P. This designation includes public neighborhood, community, and regional parks and recreation facilities.

OS. This designation is assigned to land that has been preserved as undisturbed natural open space through purchase by the City or other public entity, acquisition of development rights, or other mechanism.

T. This designation includes transit facilities including but not limited to park-and-ride lots, transit centers and stations, and dedicated transit rights-of-way.

Land Use Goals and Policies

The City's Comprehensive Plan Land Use Element was reviewed to identify the goals and policies most relevant to the study area.

Goals

LU-G4. To provide for development first in areas already characterized by urban growth that have existing public facility and service capacities to serve such development, and second in areas already characterized by urban growth that will be served by a combination of both existing public facilities and services and any additional needed public facilities and services that are provided by either public or private sources.

LU-G6. To accommodate the amount of population and employment growth forecasted by the state Office of Financial Management, King County and Snohomish County for the City of Bothell over the term of the Plan.

LU-G7. To preserve open space corridors within and at or near the boundaries of the Bothell Planning Area in order to provide for aesthetic needs of the citizens of Bothell, to protect critical areas including flood prone land, and to conserve fish and wildlife habitat.

Policies

LU-P5. Promote the integration of housing and commercial development in locations where combining such uses would be mutually beneficial.

LU-P6. Preserve the character of established neighborhoods and protect such neighborhoods from intrusion by incompatible uses. Infill development in established neighborhoods should be sensitive to and incorporate to the maximum extent possible those features which impart to each neighborhood a unique identity and sense of coherence...

LU-P10. Pursue the establishment of a network of open space corridors (urban separators) within and on the boundaries of the Planning Area and especially along the Sammamish River and North Creek corridors through acquisition of property, reservation of easements, or other means subject to criteria as contained in the City's Long Range Parks, Recreation and Open Space Action Program and elsewhere in this element.

LU-P11. Protect and preserve tree-covered hillsides and hilltops—particularly the feathered edge ridgeline image so valued by the community—for their visual and aesthetic benefits to Bothell, as well as for their functions as habitat, erosion control, and runoff retardation.

Economic Development Goals and Policies

The Economic Development Element of the Comprehensive Plan emphasizes how to maintain, and where possible, enhance the favorable business climate that currently exists in Bothell, while protecting the residential areas from intrusion of incompatible uses. The goals and policies in this element are intended to enhance the long-term viability of Bothell's retail, service and employment areas by making them more attractive to customers through design and access improvements. This element classifies economic development within the Bothell Planning Area into six categories, the most relevant of which are the two categories contained within the study area: Regional Activity Center and Community Activity Center.

The Economic Development Element identifies the UWB/CCC campus as part of the North Creek Regional Activity Center. This regional activity center also includes business park development and a small amount of retail development further to the north and east of I-405 straddling the King/Snohomish county line and outside of the study area. Regional Activity Centers provide employment and shopping opportunities over a multi-county area.

Much of the remaining study area is contained in the Downtown Bothell Community Activity Center, described in the ED Element as comprising 111 acres in Bothell's historic central business district, located along SR 522 and SR 527 from Wayne Curve north to about NE 190th Street, and east of SR 527 along Main Street and Beardslee Boulevard to I-405. According to the Economic Development Element, Community Activity Centers are designated to provide shopping, personal and professional services, dining, and entertainment opportunities on a city-wide basis.

Goals

ED-G1. To develop and maintain a strong, diversified and sustainable economy, while respecting the natural and cultural environment and preserving or enhancing the quality of life in the community.

ED-G2. To improve the quality of life and create places where people can live, work, learn, shop and play.

ED-G8. To cultivate businesses which foster increased tourism and shopping in Bothell.

Policies

ED-P3. Identify and facilitate key public or private development projects with a high likelihood of market success and the potential to stimulate additional development. Examples of this type of catalyst project that have already been identified include the following:

- Potential redevelopment of properties along the west side of the Bothell-Everett Highway, north of SR 522; and
- Potential development of a pedestrian bridge over SR 522 and retail development on 1.86 acres of City owned property east of Bothell landing which could successfully link Main Street businesses and the Sammamish River.

ED-P4. Designate a commercial and scenic transportation route through Bothell which would serve the purposes of establishing a commercial identity for Bothell and linking the retail, office, commercial, and industrial activity centers within the City. Along the route business areas would alternate with natural open space for a pleasing driving, bicycling, walking or transit riding experience...

A figure in the Comprehensive Plan identifies SR 527 from the north study area boundary to Main Street; Main Street and NE 185th Street from SR 527 to Beardslee Boulevard; and Beardslee Boulevard to NE 195th Street interchange at the eastern study area boundary as part of the transportation route designated in Policy ED-P4.

ED-P18. Explore ways in which the downtown retail shopping area might be further enhanced and linked to the Sammamish River. Measures to be explored may include

but not be limited to the construction of pedestrian overpasses or a deck over SR 522 and offering incentives for incorporating retail space in structured parking.

ED-P19. Explore ways in which the UW Bothell/Cascadia Community College campus might be linked to the downtown activity center to promote economic opportunity for downtown businesses and a greater sense of community for UW/CCC students, faculty, and staff.

Actions

ED-A4. Prepare a master plan for Downtown to provide a template for redevelopment that would meet the City's economic development, land use, historic preservation, transportation, and urban design goals.

ED-A24. Work with the local Chambers of Commerce, merchants, property owners, and local citizens to develop a "Downtown Revitalization Implementation Plan," based on the anticipated updating of the Downtown Subarea Plan scheduled for 2005.

Housing Policies

The Housing Element provides policy direction on how the City intends to meet its housing goals, including those for affordable housing.

HO-G2. To encourage the preservation of the existing housing stock.

HO-P6. Encourage the preservation of existing housing stock.

HO-P9. Promote residential development in the downtown and other commercial areas where combining such uses would promote the vitality and economic viability of the area.

HO-P11. Promote the retention of existing mobile/manufactured home parks throughout the City as a source of affordable detached single-family housing, both for rental and ownership, through assignment of a special mobile/manufactured home park land use designation (see Land Use Element).

HO-P15. Promote an appropriate supply and mix of densities and housing types to meet the needs of people who work and desire to live in Bothell, especially near existing and planned transportation and employment centers.

HO-G5. Encourage the availability of affordable housing to all economic segments of the population of the City.

Natural Environment Element

The Natural Environment Element provides direction for the protection and preservation of Bothell's critical areas, which include wetlands, critical aquifer recharge areas, fish and wildlife habitat areas, floodplains, and geologically hazardous areas.

NE-P1. Encourage the concentration of urban land uses in areas with minimal environmental constraints in order to reduce the amount and/or rate of urban intrusion into natural areas.

NE-P8. Preserve, protect, restore and enhance the Sammamish River and North Creek and their tributaries as fish and wildlife habitat by implementing the goals and policies as contained in this Element, the Parks and Recreation Element, the Shoreline Master Program Element, the Land Use Element, best available science...

NE-P14. Protect, preserve, and, where possible, enhance water quality in the Sammamish River, Horse Creek, North Creek, and their tributaries. Retrofit existing surface water quality facilities to current surface water quality standards whenever re-development or expansion of existing development occurs.

Parks and Recreation Element

The Parks and Recreation Element provides policy direction on City acquisition, development, and maintenance of parks as well as provision of recreation facilities.

PR-P10. Continue the acquisition of land for the public along the Sammamish River parkland corridor to preserve a visual corridor, increase parklands and expand trail linkages and river access.

PR-A6. Continue efforts to acquire and develop parkland and open space along the Sammamish River parkland corridor through Bothell.

PR-A9. Connect the Park at Bothell Landing to the King County pedestrian bridge on the west side of the Sammamish River and north of Wayne Curve with an easement and a minimum 10-foot wide urban trail to provide an alternate route and a loop for walkers and joggers.

PR-A10. Acquire the land north of the King County trail bridge near Brackett's Landing for parking and greenbelt planting along the north side of the river, if such land becomes available due to realignment of SR 522.

PR-A21. Develop a plan for interconnecting each park site (present and future) with pedestrian and recreational bicycle corridors.

Shoreline Master Program Element

The Shoreline Master Program Element contains policy direction for how Bothell's water bodies governed by the Shoreline Management Act should be treated, including land use designations, development, conservation, and restoration goals and policies. Both the Sammamish River and North Creek and associated wetlands are classified as shorelines within the study area.

The portions of North Creek and associated wetlands within the study area are designated Urban in the Shoreline Master Program. The Sammamish River within the study area, with the following exception, is also designated Urban: the entire south side of the Sammamish River within the study area and the north side between 101st Avenue NE and approximately south of the intersection of SR 522/Hall Road are designated Conservancy. The Urban shoreline designation allows for a wider range of uses and public access opportunities than the Conservancy designation.

The policies of the Shoreline Master Program are implemented by the City's shoreline regulations contained in Title 13 of the Bothell Municipal Code (BMC).

Policies

SMP-P13. Explore ways in which the downtown retail shopping area might be further enhanced and linked to the Sammamish River.

SMP-P20. Continue acquisition of land for the public along the Sammamish River in concert with the City's Long Range Parks, Recreation, and Open Space Action Program to preserve a visual corridor, increase parklands, and expand trail linkages.

SMP-P22. A safe and accessible pedestrian linkage should be provided between the Downtown/Main Street retail activity area and the riverfront activity area.

SMP-P28. In providing space for public recreation along Bothell's shoreline, primary emphasis should be given to providing for the local recreational need of Bothell citizens for swimming, bicycling, horseback riding, fishing, picnicking, and other activities benefiting from shoreline access while recognizing Bothell's location along existing or planned regional trail systems. The size and design of recreation areas, other than the Sammamish River, Burke-Gilman, or North Creek trail systems, will be limited to scale down the regional pressure on them.

Transportation Element

The Transportation Element contains information on future transportation improvements and plans, as well as the City's transportation goals and policies.

Policies

TR-P2. Maintain or achieve LOS [level of service] E (based on the highest peak hour) on the following corridors:

- ...3. SR-522 (NE Bothell Way) between 96th Avenue NE and Kaysner Way;
4. Beardslee Boulevard/NE 195th Street between NE 185th Street and 120th Avenue NE;
5. SR-527 between SR-524 and SR-522...

Future improvements to these designated corridors should focus on the construction of all feasible improvements in the corridor with special attention to the intersections operating at the worst level of service within the corridor.

The City shall require new development to mitigate site-specific impacts to the transportation system as required under the State Environmental Policy Act (SEPA). Mitigation may be required on local residential streets and will be coordinated with the Neighborhood Traffic Calming Program...

In accordance with the concurrency requirements of the Growth Management Act (GMA), the City will monitor LOS within these designated corridors and will withhold development approvals for projects which would cause the level of service to decline below the adopted standard, unless improvements or strategies are implemented which maintain the standard. This provision does not apply to the SR-522 corridor since concurrency requirements do not apply to Highways of Statewide Significance. However, the corridor standard of LOS E should be used as a guideline for future improvements to the designated SR-522 corridor.

TR-P7. Any future improvements to the State highways and City arterials designated under the Bothell Boulevard System (refer to Urban Design Element) should include median landscaped islands, landscaping between the street and sidewalks or walkways, a coordinated street tree program and meandering of sidewalks or walkways, if practical....In addition, the design of these improvements should be visually compatible with adjacent land uses and should include pedestrian connections.

The Bothell Boulevard System consists of SR 527, SR 522, Main Street, and Beardslee Boulevard.

TR-P14. Due to the difficult topography within Bothell's neighborhoods and the reality that a grid system within Bothell's residential neighborhoods encourages cut-through traffic, it is the policy of the City of Bothell that the residential street pattern shall not emphasize a grid or connected network of streets that would promote

neighborhood cut-through traffic but should accommodate non-motorized connections and emergency life safety access.

TR-P21. New development in the City activity centers should be designed and built to be transit oriented.

TR-P28. Support land use patterns that reduce the quantity and length of trips by single occupant vehicle trips.

TR-P31. Bicycle access to activity centers such as Canyon Park and Downtown Bothell should be encouraged.

TR-P39. Pedestrian access between residential neighborhoods and employment and commercial areas should be encouraged. Pedestrian access should be provided to activity centers such as Canyon Park and Downtown Bothell.

TR-P44. The Municipal Code shall include building and site design measures, such as reduced setback requirements and through easements for pedestrian and bicycle use which enhance pedestrian access to buildings.

Urban Design Element

The Urban Design Element includes policy direction on physical development issues, including design for new development, streetscapes, and public improvements relevant to the study area.

UD-P1. Improve selected arterials within the Planning Area as landscaped boulevards to visually integrate the community and provide a pleasant driving, transit-riding, bicycling, and walking experience along arterials. This system of boulevards should consist of features including the following:

- Landscaped medians and street tree planning scheme;
- Transit pullouts and architecturally designed shelters;
- Bikeways;
- Meandering walkways and special pavement treatment at crosswalks;
- Noise attenuation walls where appropriate;
- Special landscaping treatments at gateways to the City...;
- Special sidewalk, street furniture, street trees, light fixtures, and other design features should be created for boulevards in community activity centers.

The Urban Design Element provides figures depicting boulevard treatments appropriate for SR 527, SR 522, and Main Street/Beardslee Boulevard within the study area, as well as conceptual boulevard and entry feature treatments for the listed boulevards.

UD-P2. Promote site design features in Bothell's community and regional activity centers and other residential, commercial, and industrial areas which encourage transit, pedestrian and bicycle mobility.

Example site design features are included in the element.

UD-P3. Pedestrian linkages between major activity areas should be provided across built features that act as barriers to safe and easy access. For example, safe and accessible pedestrian linkage should be provided between the downtown/Main Street

retail activity area, the riverfront activity area and the Cascadia Community College/University of Washington, Bothell campus.

Examples of alternative approaches to covering a portion of SR 522 to better link downtown to the Sammamish River are provided in figures UD-12 through UD-14, which are derived from the *Residential Development Handbook for Snohomish County Communities* (MAKERS Architecture and Urban Design for Snohomish County Tomorrow 1992).

UD-P4. Activity centers within Bothell should have a community focal place for public interaction. A focal place may be a park, plaza, shopping streets or other feature which invites interaction. The focal place should accommodate transit service and be linked to residential areas via pedestrian and bicycle facilities.

UD-P11. It is the policy of the City of Bothell to support a connected network of streets within Bothell's community activity centers and other commercial areas so long as these connections do not encourage or promote residential neighborhood cut-through traffic.

UD-P12. Where the Right-of-Way allows, provide street trees on both sides of all streets. Develop street tree plans for activity centers to visually unify and define the boundaries of such centers. Refine the street tree plan for the boulevard system...

UD-P16. New development should accommodate human activity by providing balconies, terraces and yards for residents' use. Entrances, porches, balconies, decks and seating should be located to promote pedestrian use of the street edge by providing weather protection, security and safety.

The Urban Design Element includes detailed design policies related to streetscapes, site planning, and building design. These policies encourage pedestrian orientation of new development, the blending or screening of parking facilities to make them less obvious and prominent features in the community, building orientation and design detail to enhance the pedestrian experience, and sensitive siting and development of infill to help it blend in with the existing neighborhood while achieving other element goals.

Capital Facilities Element

The City's Capital Facilities Element provides policy-based levels of service (LOS) standards for a variety of publicly provided capital facilities and services including but not limited to city offices, fire and emergency service, police, parks, water, wastewater, surface water, schools, and libraries. Many of these LOS standards are based on population. The Capital Facilities Element identifies the non-transportation facility improvements, such as city hall and civic center consolidation, discussed in the *Downtown Subarea Plan and Regulations* (Freedman Tung and Bottomley 2008). This element adopts the City's most recent (2009–2015) Capital Facilities Plan (CFP) by reference for the City's 6-year plans on infrastructure improvements (City of Bothell 2008a). The CFP contains all of the improvements outlined in the *Downtown Subarea Plan and Regulations*. Similarly, all capital improvements contained in the CFP, except the NE 185th Street extension west of SR 527, Main Street

Enhancements and the SR 527 Multiway Boulevard, are included in the list of projects in the Transportation Element of the Comprehensive Plan.

Downtown/190th/Riverfront Subarea Plan

The City's Downtown/190th/Riverfront Subarea Plan addresses the majority of the study area, with the exception of the UWB/CCC campus to the east. The current subarea boundaries also include areas that are not within the study area.

Land Use Policies

The land use policies of this subarea plan provide detailed direction on the application of Comprehensive Plan future land use designations to parcels as identified in Figure 2-2. Policies 1–6, 10–13, and 15–17 apply to the study area and are analyzed below, under Section 3.3.2, "Impacts." It is anticipated that the policies will be replaced and/or augmented by those contained in the new *Downtown Subarea Plan and Regulations*.

Natural Environment Policies

The relevant natural environment policies of this subarea plan include protecting and preserving hazardous slopes and wetland critical areas in the subarea; promoting the extension of sanitary sewers to any developed but unserved portions of the subarea, where warranted, to improve groundwater quality; and identifying that development on non-hazardous slopes in the subarea should be subject to special provisions to reduce disturbance of natural topography and preserve natural vegetation and soils.

Urban Design Policies

Urban design policies are relevant to the subarea plan because they direct development of areas within the subarea that should receive special attention from an urban design perspective, as well as identification of useful urban design tools for development of design guidelines. These policies include:

Policy 1. Identify key properties and intersections within the Subarea for particular emphasis as community focal points.

Policy 2. Identify key corridors for enhancement as linkages between retail and service areas, residential areas and parks.

Policy 3. Develop guidelines and/or conceptual illustrations to assist developers in achieving high quality design.

Policy 4. Ensure that development along the east and west edges of the Subarea is designed with a sensitivity to the steep slopes, wetlands, and Sammamish River which pervade and give character to the Subarea.

Policy 5. Architectural styles, scale and building materials of new development should be compatible with those of the surrounding neighborhood. Site design and layout should reflect the natural topography and vegetation, maximize solar access and energy conservation, and promote the traffic circulation plan.

Policy 6. Design of new developments should be distinctive; exhibit a strong cohesive image while maintaining diversity between projects; reflect the natural features and history of the river valley and surrounding hillsides through use of

natural materials and colors, and historic elements; provide facade modulation, accent colors and window trim; and provide views from the building to the river where practical.

Policy 8. Special lighting guidelines and standards for motor vehicle sales shall be established to allow illumination of vehicle display areas while preventing light spillage onto adjacent properties. Lighting should be of a pedestrian scale which may include low voltage light fixtures with a maximum permitted height.

Policy 9. Motor vehicle dealers located on properties with a community business (CB) designation within the Subarea should install a sight obscuring landscape screen at the side and rear perimeters of all motor vehicle sales, storage, and display areas. Such screening should be designed to create both an immediate screen and long term viability of plant materials.

Transportation Policies

The transportation policies of this subarea element provide detail on future improvements to the transportation system in the subarea, as well as policy guidance and direction for how the transportation system should look and function. The policies most relevant to the study area include:

Policy 3 discusses the proposed Bothell Boulevard system.

SR-522, SR-527, and Main Street/Beardslee Boulevard are part of the proposed Bothell Boulevard system. Any future improvements to these streets should include median landscaping islands, landscaping between the street and sidewalks/walkways, a coordinated street tree program and meandering of sidewalks/walkways, if practical. Improvements to Beardslee Boulevard should be sensitive to the character of Main Street and incorporate a smooth transition in number of lanes where Beardslee Boulevard becomes Main Street.

Policy 4 identifies designated bicycle routes in the subarea

The Sammamish River Trail and SR 527 should be shared use paths, and seven streets are designated as shared signed roadways: NE 180th Street, Beardslee Boulevard, 102nd Avenue NE, East Riverside Drive, 101st Avenue NE, 104th Avenue NE, and Main Street.

Policy 7 directs that alternatives be considered for restoring the historic pedestrian link between Bothell's commercial and residential areas and the Sammamish River. Alternatives identified include a deck or "lid" over SR 522 between 101st and 102nd avenues NE that incorporates a number of functional design features like open space, services, and transit. Other alternatives discussed include pedestrian bridges over SR 522.

Policies 11 and 12 discuss connectivity. Policy 11 indicates that street grids in the subarea that attract cut-through traffic in Bothell neighborhoods should be discouraged, although non-motorized connections and emergency and life safety network should be encouraged. Policy 12 states that a street grid system should be encouraged in the City's community activity centers and other commercial centers.

Policy 14 states that new development in the subarea should be transit-oriented.

Other Relevant Policies

Housing policies for this subarea encourage the promotion of a range of housing alternatives for persons of varying incomes and lifestyles that support the various commercial and business park employment centers. They also encourage preservation and rehabilitation of affordable housing in the subarea and promote compatibility between new and existing development.

Economic development policies promote a vibrant economic climate in downtown through a mix of residential and business uses, and efficient multi-modal transportation system and urban design techniques to attract customers.

Parks and recreation policies relevant to the study area encourage continued acquisition of land along the Sammamish River to enhance the “greenway” along the river within Bothell (Policies 1 and 2). They also identify the creation of a special landscaped promenade to link downtown parks with other public uses—such as the library, Northshore Pool, City Hall, and the Northshore Senior Center—and encourage improvement and expansion of the community-oriented trail and park system in the area.

Historic policies relevant to the study area include promoting preservation and restoration of historic structures in the subarea and preserving the aesthetic and visual integrity of historic resources when development is proposed adjacent to historic structures. Policy 4 states that the City should explore with its Landmark Preservation Board, as part of its Downtown Master Plan, preservation of existing historic properties through the use of a variety of incentives listed in the policy.

North Creek Subarea Plan

The only portion of the North Creek Subarea Plan that is located within the study area is the area between I-405 (generally south of Ross Road) and east of approximately 108th Avenue NE. This area is dominated by the UWB/CCC campus, but also includes some residential and commercial uses surrounding Beardslee Boulevard.

Land Use Policies

This subarea plan’s land use policies provide detailed criteria for application of Comprehensive Plan future land use designations within the subarea. These land use policies are evaluated below, under Section 3.3.2., “Impacts.” The policies most appropriate to the study area are policies 2, 5, 6, and 8.

Natural Environment Policies

The natural environment policies most relevant to the study area include policies on protecting and preserving wetlands, streams, and other critical areas; protecting the water quality and fish habitat of North Creek; and protecting high quality stream and wetland resources.

Urban Design Policies

The following urban design policies are relevant to the study area:

Policy 1. Improvements to Beardslee Boulevard shall be so designed as to provide a pleasing gateway into the City and downtown Bothell. Improvements such as wide sidewalks, boulevard landscaping, special light fixtures, site furniture, and other design elements which create an attractive entry to Bothell should be included as part of any improvements to the Boulevard.

Policy 10. Predominant views, both from and to the hillside areas, shall be preserved in order to retain the natural character and the sense of identity that the hillside areas now impart as well as the "feathered edge" effect. Visual impact studies shall be provided by the developer detailing the effects of grading, tree removal, building and parking placement and streets proposed in the development plans.

Transportation Policies

The following transportation policies are most relevant to the study area:

Policy 2. Beardslee Boulevard/ NE 195th Street and 120th Avenue NE/39th Avenue SE are part of the proposed Bothell Boulevard system. Any future improvements to these streets should include median landscaping islands, landscaping between the street and sidewalks/walkways, a coordinated street tree program and meandering sidewalks/walkways if practical.

Policy 4 identifies the North Creek Trail as a shared-use path bicycle facility and NE 195th Street and Beardslee Boulevard as shared-sign roadway bicycle facilities.

Policies 7 and 8 are the same as policies 11 and 12 of the Downtown/NE 190th St/Riverfront Subarea Plan dealing with street and non-motorized connectivity. These policies discourage street connectivity for automobiles where they result in neighborhood cut-through traffic, but encourage non-motorized and emergency access connectivity.

Policies 12 and 13 address Ross Road. Policy 12 states that only detached residential development will access Ross Road. Policy 13 describes an improvement to the intersection of Beardslee Boulevard/Ross Road/112th Avenue NE/NE 195th Street.

Other Relevant Policies

The housing policy for this subarea plan encourages development of a range of housing choices that meet the needs of persons of varying incomes. Economic development policies encourage regional employment opportunities in the subarea.

Parks and recreation policies encourage acquisition of parks sites and trail connections to serve the residential areas west and east of the business parks in this subarea. Parks policy 2 states that developed and coordinated public access to the North Creek shoreline will be encouraged for passive recreation purposes where such access will not interfere with critical habitat or other functions, and development will provide a pedestrian/bicycle path along North Creek.

Existing Zoning Code

The City's existing zoning for the study area is shown on Figure 2-3. The City's zoning classifications are outlined in BMC Section 12.04 and generally correspond exactly with Comprehensive Plan Future Land Use designations noted above. Similar to the Comprehensive Plan land use designations, multiple city zones may be applied to a single area, particularly in mixed-use areas and under current zoning. Residential zones are generally expressed in terms of the minimum lot area allowed, or the number of dwelling units allowed per net buildable lot area. The exception to this rule is the R-AC zone, which controls the number of units allowed by site and building envelope regulations. Commercial zones are designated by the predominant allowed use. On parcels with a single zoning designation, only the uses and development regulations allowed within the zone apply. On parcels and areas with multiple zoning designations, all the uses and development regulations apply. Where there are conflicts in areas with multiple zones, the less restrictive generally apply.

In addition to the general zoning requirements of the Bothell Municipal Code, each subarea plan is implemented with its own specific zoning regulations. The Downtown/190th/Riverfront Subarea Plan is implemented with zoning contained in BMC Section 12.64, while the North Creek/195th Subarea Plan is implemented with zoning contained in BMC Section 12.56. Subarea zoning regulations are in addition to the general zoning requirements of the code; where subarea zoning is more restrictive, it takes the place of city-wide zoning.

The existing Bothell zoning regulations are use-based in origin, but have been modified to include a number of requirements and guidelines regarding building design and specific form of development.

3.3.2. Impacts

Impacts Common to All Alternatives

This section addressed the impacts common to the primary alternatives. The Planning Commission Recommendations are within the range of the two alternatives, so the common impacts would also apply to them.

Land Use Patterns

Under all alternatives, the study area is anticipated to experience growth, including gradual introduction of multi-story, mixed-use development. The alternatives differ in the intensity and location of this development and subsequent impacts on land use patterns, as well as in the form that development takes. However, under all alternatives: the single-family residential character of the Sunrise and Valley View neighborhoods would be protected; the public open space corridor along the Sammamish River would be preserved; views to the Sammamish River from key areas located between SR 522 and the river would be preserved; and the affordable

housing provided in the Lazy Wheels Mobile Home Park would be preserved. Under all alternatives, land use patterns would follow the planned unit development for the UWB/CCC campus. Publicly owned properties near the Sammamish River would remain public under both alternatives.

Land Use Compatibility

Under all alternatives, the study area is anticipated to experience growth in development that is more intense and includes a greater mix of uses than under existing conditions. Residential uses would likely increase as part of mixed-use development under both alternatives. Land use compatibility at the UWB/CCC campus and publicly owned properties along the Sammamish River are expected to be similar.

Employment and Housing Mix

Under all alternatives, employment and housing would increase. The alternatives differ in the amount of increase and the percentage of increase compared to overall growth within Bothell. The City anticipates meeting its citywide housing and employment targets under both alternatives.

Relationship to Plans and Policies

Under all alternatives, the City would retain most of the elements of its Comprehensive Plan unchanged. In addition, view corridors to the Sammamish River and protections of affordable housing present in the Lazy Wheels Mobile Home Park would be retained under all alternatives.

No Action Alternative

Under the No Action Alternative, growth would continue as guided by the City's existing Comprehensive Plan and zoning regulations. Although construction of capital improvement projects is expected to continue (e.g., the realignment of SR 522 and limited improvements to SR 527), development would not benefit from the detailed policy direction and zoning and design regulations included under the Proposed Alternative. In addition, development would not be spurred by the implementation of a Planned Action Ordinance; development that would occur would require individual project-level State Environmental Policy Act (SEPA) review to meet SEPA applicability under current regulations.

Land Use Patterns

A series of capital improvements anticipated in the CFP (City of Bothell 2008a) and outlined under Chapter 2, "Project Description," are would likely spur redevelopment in the study area. The only major capital projects identified in Chapter 2 that would not occur under the No Action Alternative are the NE 185th Street/98th Avenue NE Connector, SR 527 Multiway Boulevard Treatments, and the Main Street

Enhancements. Under the No Action Alternative, development and redevelopment would continue under the existing Comprehensive Plan, subarea plans, and development regulations that govern the study area. Many of the opportunity sites identified under the Proposed Alternative as well as vacant or redevelopable land near the identified capital improvement projects would be developed. However, development and redevelopment would not be as intensive as under the Proposed Alternative. Retail uses would be allowed in a broader area, and would likely continue to be developed in a more dispersed pattern than promoted by the Proposed Alternative. Development that does occur would be more intense than existing development patterns, with taller buildings and mixed uses with R-AC/OP/CB designations. A larger percentage of the development would likely occur in a form that does not meet the downtown vision, described under Chapter 2, “Objectives,” as closely as under the Proposed Alternative. There would be more single-use type development, development with surface parking located in visible areas, and development with lower building heights in general than under the Proposed Alternative.

Land Use Compatibility

The types of land use being developed—mixed use—would likely be similar under both alternatives, particularly in the central portion of the study area in areas with currently designated R-AC/OP/CB. Other areas, closer to the edges of the study area are expected to contain more single-use development than the Proposed Alternative, including commercial-only development along the GC designation on SR 522 in the southwest portion of the study area, and residential uses or smaller scale office uses in areas designated R-2,800/OP.

Employment and Housing Mix

Under the No Action Alternative, net new growth in employment in the study area is estimated at 1,167 jobs (2,168 including UWB/CCC employment) between 2000 and 2035. This is estimated to be approximately 8% to 15% of the overall Bothell vicinity growth in jobs during this time period, and represents a lower amount of employment growth than anticipated under the Proposed Alternative.

Net housing growth during the same 2000–2035 time period is expected to be 1,387 housing units, or approximately 10% of the overall housing growth in the Bothell vicinity. This growth is less than that anticipated under the Proposed Alternative.

The City is required to plan for its assigned growth target and demonstrate that its Comprehensive Plan can accommodate the growth target, such as through a buildable lands capacity analysis. Buildable lands estimates are reasonable estimates of likely development capacity discounting vacant or potentially redevelopable land by critical areas, future roadways, and other factors, and applying density assumptions based on historic development. The City may use the buildable lands analysis, which is

required to be prepared on a countywide basis every 5 years, to help confirm that it has the plan capacity to meet adopted targets. Buildable lands capacity is not based on a horizon year or a rate of growth, but on the possible development levels given the land and zoning designations and discount factors assumed at the time it is prepared.

The purpose of reviewing buildable lands in comparison to the forecasts is to help determine if the current or proposed land use designations have the capacity to meet the forecasts, or if future development will need to be encouraged in a different manner through policy, code, or other incentives. The analysis is typically conducted citywide; however, for the purposes of this Draft EIS it is addressed for the study area.

The parcels considered vacant and redevelopable in the study area were identified. Properties that were already under development or in the permit process were also included in the analysis. Based on current land use designations and assumptions in the 2007 Buildable Lands Report, results for the No Action Alternative are as follows:

- forecast dwellings: 1,387
- buildable lands net additional dwellings: 1,116
- forecast employment (excluding campus jobs): 1,167
- buildable lands net additional employment (excluding campus jobs): 1,340

Results show that based on a buildable lands analysis there is less capacity for dwellings than forecast, but more capacity for jobs than forecast. This may mean that while there may be demand for additional dwellings, using buildable lands assumptions for the study area alone, the number of dwellings may not be fully accommodated under present plans and regulations. However, since downtown is a mixed-use area, and there is excess job supply, the additional residential demand could occur on property considered likely for commercial activity.

Relationship to Plans and Policies

The No Action Alternative retains the current Comprehensive Plan unchanged. Policies and actions that identify the need to address a new downtown plan would not be implemented.

Elements of the current Comprehensive Plan are consistent in terms of direction and intent for growth management; however, some of the horizon years differ.

As part of the next Comprehensive Plan update cycle, the City should ensure that all elements have consistent horizon years. Currently, most of the elements have a horizon year of 2025, while the Transportation element has a horizon year of 2030.

Although the plans for downtown are similar under both alternatives, the No Action Alternative would not streamline the development review process. While the Proposed Alternative provides for the application of simplified land use districts, the No Action Alternative would retain the more layered zoning, where multiple zones are often applied to a single area.

A more detailed comparative discussion of the alternatives is contained under the next section, “Proposed Alternative.”

Proposed Alternative

The Proposed Alternative, which consists of adoption of the *Downtown Subarea Plan and Regulations* and a Planned Action Ordinance, is expected to spur more redevelopment in conjunction with planned capital improvement projects outlined in the CFP and the proposed *Downtown Subarea Plan and Regulations* than the No Action Alternative.

Land Use Patterns

The Proposed Alternative is expected to have the following land use impacts, divided by the land use districts identified in the *Downtown Subarea Plan and Regulations*.

Downtown Core District. The land use patterns in the Downtown Core District of the study area would likely be more intense than under the No Action Alternative, due to mixed-use, pedestrian-oriented redevelopment that would occur at several identified opportunity sites in the vicinity of the realigned SR 522 and the extended Main Street and SR 527. Allowable building heights would increase by approximately 11 feet. Areas currently characterized by surface parking along SR 527 and portions of Main Street are expected to redevelop into multi-story, mixed-use buildings characterized by ground-floor retail and/or other commercial services with residential or office uses on upper stories. The portions of this district fronting SR 527 would have minimum height requirements of at least two floors and 20 feet, with an exception for retail anchors. Although existing zoning regulations under the No Action would allow a similar range of uses, the southernmost portion of the Downtown Core District, located south of the current SR 522 alignment and the west side of SR 527 north to NE 183rd Street, are expected to become less auto-oriented under the Proposed Alternative, because the new form-based code would eliminate parking between the property line and front of buildings in areas currently within MVSO.

Proposed Alternative sub-option 2 would extend the Downtown Core District a few lots eastward on Main Street and westward along the future Main Street Extension instead of Downtown Neighborhood. Although the Downtown Core District is more intensive in terms of height than the Downtown Neighborhood District, special height limits would continue to apply and building area above the second floor would

be setback at least 20 feet. Historic resource protection regulations would also apply. See Sections 3.4, “Aesthetics,” and 3.7, “Cultural Resources,” for details.

Downtown Neighborhood District. Land use patterns in the Downtown Neighborhood District are similarly expected to become more intense under the Proposed Alternative, as mixed-use development or more intense multifamily development with parking hidden within or behind structures is constructed. Similar to the Downtown Core District, this district is characterized by existing lower intensity, auto-oriented uses west of SR 527 and near the SR 522/SR 527 interchange. These areas among others have been identified as potential redevelopment sites that are expected to redevelop with greater intensity. The intensity is based on the combination of capital improvements, proposed under both alternatives, and the simplified form-based development code under the Proposed Alternative. In addition, this district contains an additional capital improvement project—the NE 185th Street Extension—which is expected to provide additional street frontage attractive to developers. Less intense than the Downtown Core District, heights within this district are equal under the Proposed Alternative and the No Action Alternative with the following exceptions.

- Heights are approximately 30 feet higher in the existing R-2,800/OP zone southwest of the intersection of NE 183rd Street and 98th Avenue NE.
- Heights are approximately 30 feet higher in the R-2,800/OP zone located northwest of the intersection of NE 185th Street and 101st Ave NE.

Sub-option 1 would extend the Downtown Neighborhood District along Beardslee Boulevard in place of some areas of Downtown Transition and General Downtown corridor. Overall, this would allow for a more mixed-use and urban character than the other two districts given the greater allowance for commercial uses and an additional story.

Downtown Transition District. Land use patterns in the Downtown Transition District are less intense than either the Downtown Commercial or Downtown Residential districts under the Proposed Alternative. Minimum setbacks are in place along with provisions for height transitions to existing single-family homes that either abut property in, or are across the street from, this district. This helps limit the intensity of uses and provides a transition between the more intense uses in the study area and neighboring single-family neighborhoods outside of the study area. The maximum height allowed in this district under the Proposed Alternative is 54 feet, 11 feet lower than the maximum allowed in the existing R-AC/OP/CB zoned areas—located roughly northeast of NE 183rd Street/96th Avenue NE and south of NE 185th Street, roughly east of 103rd Avenue NE—under the No Action Alternative. Maximum height under the Proposed Alternative is approximately 19 feet taller in other parts of the district, where OP and R-2,800 zoning currently exists. Overall, this district is expected to experience less redevelopment than the other two districts discussed since it has less overall vacant and redevelopable land. However, due to the

streamlined land use regulations, it is anticipated that it would experience more redevelopment under the Proposed Alternative than the No Action Alternative. Sub-option 1 would allow a smaller area to decrease in height compared to the No Action because a portion of the area currently zoned R-AC, OP, CB between Beardslee Boulevard and NE 185th Street under the No Action would instead be in the Downtown Neighborhood District.

SR 522 Corridor District. Land use patterns with highway commercial uses are expected to remain similar in this district under both alternatives, although the Proposed Alternative's form-based code would promote an improvement in buildings and streetscape. Under the Proposed Alternative, surface parking lots would not be allowed in front of buildings; development in this area would be required to place parking behind or to the side of the building or within a parking structure. The Proposed Alternative would encourage an improvement in landscaping and streetscape, improving the visual character of the corridor environment.

Under both alternatives, special riverfront regulations would preserve view corridors to the Sammamish River and special mobile home park overlay regulations would protect the affordable housing at the Lazy Wheels Mobile Home Park.

General Downtown Corridor District. Land use patterns in this district are expected to intensify somewhat over existing conditions under both alternatives, as redevelopment occurs in response to capital improvements, but to a greater degree with the code simplification under the Proposed Alternative. Maximum building heights are expected to increase by approximately 19 feet in areas currently designated R-2,800 or R-2,800/OP; and decrease by 11 feet in areas of the district currently zoned R-AC/OP/CB. The impact of maximum height increases on existing single-family homes would be mitigated by provisions of the new form-based code that require lower heights for developments adjacent to existing single-family houses. Under the Proposed Alternative parking would be less visible than under the No Action Alternative. (See Section 3.4, "Aesthetics," for more details.) Sub-option 1 would allow a smaller area to decrease in height compared to the No Action Alternative because a portion of the area currently zoned R-AC/OP/CB between Beardslee Boulevard and NE 185th Street would instead be in the Downtown Neighborhood District.

Sunrise Valley/Valley View Neighborhood District. The Sunrise Valley/Valley View Neighborhood District would retain similar regulations under both alternatives. There is very little vacant or redevelopable property in this district and land use patterns are not expected to change dramatically compared to existing conditions.

Campus District. Land use patterns in the Campus District also are expected to remain similar to existing conditions under both alternatives. Development in this district is generally governed by the UWB/CCC campus-approved planned unit development.

Park and Public Open Space District. Land use patterns within the Park and Public Open Space District are not expected to change dramatically. The enhancement of Bothell Landing and other city parks, as well as improvements to Pop Keeney Stadium, which are identified in the *Downtown Subarea Plan and Regulations*, are also anticipated in the CFP under the No Action.

Land Use Compatibility

Generally, the Proposed Alternative represents a big evolutionary step from Bothell's traditional use-based zoning with significant site and building design regulations to a form-based zoning system that is less dependent on uses and more dependent on building form and site layout. Therefore, in some cases, the Proposed Alternative would allow the same types of uses, but would restrict the form in which the use is allowed (e.g., retail still allowed if pedestrian-oriented, but not if auto-oriented with parking in front). A significant goal of the Proposed Alternative, and form-based zoning in general, is to create compatibility between adjacent developments, adding value. Existing zoning, on the other hand, allows a wider range of physical layouts, which can result in a less cohesive development pattern.

See "Planning Commission Recommendations," below, for how the impacts differ from the Proposed Alternative by land use district.

Downtown Core District. Land use compatibility within the Downtown Core District is expected to include a similar mix of uses under both alternatives, with the exception of the areas north and south of the current SR 522, west of SR 527, between NE 180th NE 183rd streets. This area currently allows motor vehicle sales and related uses under the combination of zones allowed pursuant to the City's MVSO regulations; this use would be eliminated in this district under the Proposed Alternative. Another area that differs in terms of land use compatibility is the area east of SR 527 between NE 185th Street and Reder Way. Under the Proposed Alternative, a wider range of retail, entertainment and dining uses would be allowed. The remainder of the Downtown Core District allows a mix of multifamily residential, office, civic and cultural, and pedestrian-oriented retail uses under both alternatives. Generally, retail uses allowed in the Downtown Core District under the Proposed Alternative would need to be pedestrian-oriented with no outside storage and would need to be of a type appropriate for downtown development.

Downtown Neighborhood District. Under the Proposed Alternative, the Downtown Neighborhood District would include a mix of uses similar to the Downtown Core District, with more emphasis on residential, including multifamily with individual ground-floor entrance, and pedestrian-oriented retail only allowed if contiguous with similar uses in the Downtown Core. Commercial uses allowed would be business and personal services and small scale or convenience retail. Auto-oriented retail would not be allowed. Under the No Action Alternative, automobile and boat sales would be allowed in much of this district, which is currently designated with the

MVSO overlay. This MVSO area covers the portion of the district north of NE 180th Street and south of Woodinville Drive or west of Bothell Way NE and south of NE 183rd Street. In addition, the portion of the Downtown Neighborhood District between SR 527 and NE 101st Street and between NE 185th and NE 186th streets would allow more commercial or retail type uses and possibly more dense residential areas than currently allowed by the R-2,800/OP designations. Under sub-option 2, the Downtown Core District would be extended to some of the area described above, allowing more pedestrian-oriented commercial uses with less emphasis on residential along Main Street. However, sub-option 2 still would not allow auto-oriented uses in the portion of this area currently designated MVSO.

Downtown Transition District. The Downtown Transition District allows the same use types as the Downtown Neighborhood District only with less intense landform (e.g., shorter maximum building heights) and no pedestrian-oriented retail. Use types allowed in this district would change to allow limited commercial uses in areas south of NE 185th Street and west of 96th Avenue NE. Sub-option 1 extends Downtown Neighborhood into a portion of this area between Beardslee Boulevard and NE 185th Street, which would allow more intense landform and pedestrian-oriented retail.

SR 522 Corridor District. The SR 522 Corridor District would allow a wide range of auto-oriented retail, convenience retail, office, civic and cultural, and lodging commercial uses as well as a variety of multifamily residential types. Manufactured homes would be allowed as a conditional use. Generally, similar types of uses are allowed within this same geographic area under both alternatives with limited exceptions. Under the Proposed Alternative a wider range of housing types would be allowed in the southwest area of this district. The mobile home use located at the Lazy Wheels Mobile Home Park (south of Woodinville Drive at Kaysner Way) would be protected under both alternatives.

General Downtown Corridor District. The General Downtown Corridor District would allow a range of uses under the Proposed Alternative, with more emphasis on less intensive commercial uses than found in the SR 522 Corridor District or the Downtown Core District, and a wider variety of small-scale, multifamily development types. The Proposed Alternative has the potential to pose the greatest change in land use compatibility in small portions of the area zoned R-8,400 near the entrance to Beardslee Place. This area is currently characterized by single-family residential development and does not allow many non-residential uses under existing zoning. Sub-option 1 extends Downtown Neighborhood into the area between Beardslee Boulevard and NE 185th Street, allowing more intense landform and pedestrian-oriented retail.

Sunrise/Valley View Neighborhood District. The Sunrise/Valley View Neighborhood District is composed of two enclaves of single-family residential development

currently zoned either R-8,400 or R-9,600. This district is not expected to substantially change under the Proposed Alternative.

Campus District. The Campus District comprises the UWB/CCC campus property. The future development of the UWB/CCC campus is governed by an existing planned unit development that limits it to education-related institutional uses in the developable western portion of the district.

Parks and Public Open Space District. The proposed Parks and Public Open Space District covers areas along the Sammamish River as well as Pop Keeney Stadium on the NSD property and the cemetery. The existing zoning regulations under the No Action Alternative would allow a wider range of uses than under the Proposed Alternative. However, the properties in this district are generally publicly owned and planned for parks or public uses that are allowed in this district.

Employment and Housing Mix

Under the Proposed Alternative, the City anticipates a larger amount of both employment and housing growth in the study area than under the No Action alternative. The Proposed Alternative is expected to generate up to 1,367-1,644 new jobs (2,645 including UWB/CCC jobs) in the study area by 2035. This represents approximately 11% to 16% of the overall job growth in the Bothell vicinity over that time period (Table 2-3), compared to only 8% under the No Action Alternative.

In addition, the Proposed Alternative is expected to result in an increase in up to 2,736 new housing units in the study area by 2035 (Table 2-3). This represents approximately 19% of the increase in housing units in the Bothell vicinity during this time period, compared to the 10% anticipated under the No Action Alternative.

Results of the buildable lands analysis for the Proposed Alternative were similar to those for the No Action Alternative, with the following exceptions.

- Identifies “opportunity sites” in addition to buildable lands.
- Applies the proposed district classifications in the study area.
- Assumes greater density and floor area ratio in the most intense district (Downtown Core).
- Assumes greater floor area ratio in the Downtown Neighborhood and Downtown Transition districts for the limited commercial areas that are allowed in those districts.

Appendix E provides additional information about the proposed assumptions. The Proposed Alternative results show sufficient capacity for residential and employment forecast.

- forecast dwellings: 2,736
- buildable lands net additional dwellings: 2,737 to 2,779

- forecast employment (excluding campus jobs): 1,367 to 1,644
- buildable lands net additional employment (excluding campus jobs): 2,219 to 2,506

As shown in Appendix E, altering some mixed-use assumptions produces different results; however, in general, the residential forecast could still be accommodated and there would be ample capacity for employment.

Two sub-options would extend the Downtown Core District eastward and westward on Main Street by a few lots in place of Downtown Neighborhood, and apply Downtown Neighborhood instead of Downtown Transition and General Downtown along Beardslee Boulevard. In terms of buildable lands, these changes have a small effect on the results of the capacity analysis above. The changes together would reduce dwellings by 13 and increase jobs by 75.

See “Planning Commission Recommendations,” below, for how the impacts differ from the Proposed Alternative by land use district.

Relationship to Plans and Policies

The Proposed Alternative is generally consistent with the City’s Comprehensive Plan goals and policies related to Downtown Bothell. The newly created districts are generally consistent with the existing Comprehensive Plan land use designations applied to land use within downtown. In areas currently characterized by more than one land use designation, the districts generally apply a similar range of uses under a single district designation and purpose statement, simplifying the land use hierarchy in the study area. Sub-options 1 and 2 provide similar consistency with City plans and policies as the Proposed Alternative as a whole.

A detailed consistency review of the Proposed Alternative is provided below by Comprehensive Plan Element. A review of zoning code consistency is also provided.

See “Planning Commission Recommendations,” below, for how the impacts differ from the Proposed Alternative by land use district.

Land Use Goals and Policies

The Proposed Alternative would help focus redevelopment within Downtown Bothell, particularly central downtown which is described as part of an “activity center” in the Land Use Element. Focusing growth in this area, already characterized by urban growth and supported by existing public facility and service capacity, is consistent with Goal LU-G4.

The Proposed Alternative accommodates a larger percentage of the population and employment growth within downtown and its vicinity, as discussed under Employment and Housing Mix above. This further assists the City with Goal

LU-G6, which deals with accommodating population and employment. See “Employment and Housing Mix” discussion above.

The Proposed Alternative preserves open space corridors in the study area. By placing large areas of the Sammamish River corridor within the Parks and Public Open Space District, it complies with Goal LU-G7 and Policy LU-P10.

The Proposed Alternative is expected to promote the integration of housing and commercial development in the “downtown activity center”—an area where mixed uses are considered mutually beneficial—consistent with Policy LU-P5.

The Proposed Alternative preserves the character of small, single-family neighborhoods in the study area through the Sunrise/Valley View Neighborhood District. This district’s R-8,400 and R-9,600 overlay would protect the intensity and character of development in these neighborhoods. In addition, provisions for special height limits for new development in some districts abutting or across the street from existing single-family homes would help preserve the character of existing development, consistent with Policy LU-P6.

The Proposed Alternative preserves open space corridors adjacent to the Sammamish River and North Creek in the study area, consistent with Policy LU-P10. The Proposed Alternative includes areas identified as “feathered edges” in lower intensity districts that help preserve these natural features, consistent with Policy LU-P11. (See Section 3.4, “Aesthetics,” for more details on potential effects on views of the “feathered edge” from properties to the north of the study area and associated mitigation.)

The City is consistent with GMA in terms of planning for 20 years, but in some cases has planned for beyond 20 years. Under either alternative, the City should consider amending its Comprehensive Plan horizon years in a future update to make them consistent throughout. Currently, the City’s Land Use Element and most other elements have a horizon year of 2025, while the transportation element has a 2030 horizon year. The *Downtown Subarea Plan and Regulations* has a horizon year of 2035. The consistent horizon year should at minimum be for 20 years, consistent with GMA.

Economic Development Goals and Policies

The Proposed Alternative is consistent with identified Economic Development Element goals and policies. It would create approximately 1,170 more jobs than the No Action Alternative within a vibrant mixed-use environment that protects and connects natural open spaces like the Sammamish River and North Creek corridors, consistent with Goals ED-G1 and ED-G2. The higher job growth under the Proposed Alternative indicates that it better meets Goal ED-G8, which calls for cultivating businesses that foster increased shopping in Bothell.

The Proposed Alternative identifies key public and private development opportunities and the form-based code is expected to help spur development on the opportunity sites, consistent with Policy ED-P3.

The Proposed Alternative includes proposals for streetscape improvements, including a boulevard treatment for SR 527. This would help the City achieve creation of attractive commercial transportation routes within Bothell, consistent with Policy ED-P4.

The Proposed Alternative continues to emphasize seeking ways of connecting downtown with the Sammamish River and Bothell Landing through enhanced pedestrian connections and implementation of view corridors to the river in the Riverfront Overlay, consistent with Policy ED-P18.

The Proposed Alternative also includes methods of connecting downtown and the UWB/CCC campus, including improvements to transportation corridors between the two areas, consistent with Policy ED-P19.

The Proposed Alternative would implement economic development actions identified in the Comprehensive Plan including Actions ED-A4 and ED-A24:

ED-A4. Prepare a master plan for Downtown to provide a template for redevelopment that would meet the City’s economic development, land use, historic preservation, transportation, and urban design goals.

ED-A24. Work with the local Chambers of Commerce, merchants, property owners, and local citizens to develop a “Downtown Revitalization Implementation Plan,” based on the anticipated updating of the Downtown Subarea Plan scheduled for 2005.

These actions should be amended to state that the master plan for Downtown Bothell should be maintained and updated as appropriate after adoption of the *Downtown Subarea Plan and Regulations*.

Housing Element

The Proposed Alternative is consistent with relevant Housing Element policies. It promotes residential development in downtown where greater residential density will help provide a market for new businesses in the area, consistent with Policy HO-P9.

The Proposed Alternative would retain the existing Lazy Wheels Mobile Home Park as a source of affordable detached single-family housing, consistent with Policy HO-P11. It would retain this mobile home park through a special regulation overlay applied to the SR 522 Corridor District.

While the City’s affordable housing Goal HO-G2 and Policy HO-P6 “encourage the preservation of existing housing stock,” it is understood that redevelopment will displace some existing housing. In the analysis done for the City’s LIFT application, the improvements anticipated under the Proposed Alternative are estimated to displace about 280 low-income housing units in Downtown Bothell.

The Proposed Alternative promotes a mix of densities and housing types to meet the needs of people who work and desire to live in the “downtown activity center,” consistent with Policies HO-P9 and HO-P15.

Natural Environment Element

The Proposed Alternative encourages concentration of urban land uses in the already built environment of the “downtown activity center,” an area with minimal environmental constraints, consistent with Policy NE-P1.

The Proposed Alternative also includes environmental features such as preserving natural lands near the Sammamish River and North Creek, as well as sustainable development features—contained within proposed regulations under surface water/open space, architectural elements, and parking guidelines—that would improve surface water runoff by making use of features such as natural drainage. These features would contribute to protecting, restoring, and enhancing the natural environment associated with the Sammamish River and North Creek, consistent with Policies NE-P8 and NE-P14.

Parks and Recreation Element

The Proposed Alternative identifies areas appropriate for preservation as part of the Sammamish River parkland corridor by placing them in the Park and Public Open Space District and includes regulations that preserve and/or enhance view corridors across private property to the Sammamish River corridor, consistent with Policies PR-P10 and PR-A6.

Although the connection of the Park at Bothell Landing with the west end of the King County pedestrian bridge across Sammamish River north of Wayne Curve, as called for in Action PR-A9, is not specifically identified under the Proposed Alternative, this connection would still be accomplished under its policy direction and regulations. The City Actions portion of this element should make this a priority within the SR 522 Corridor District and other applicable districts.

The realignment of SR 522, which is included under both alternatives, would help implement Action PR-A10. This action also calls for acquiring land north of the King County trail bridge near Brackett’s Landing for parking and greenbelt planting along the north side of the Sammamish River.

The Proposed Alternative provides an overall plan for interconnecting the various park sites within and adjacent to the study area with pedestrian and bicycle corridors, consistent with Action PR-A21.

Shoreline Master Program Element

The Proposed Alternative is most consistent with the relevant Shoreline Master Program Element policies identified for review. The Proposed Alternative’s policy

direction and simplified form-based code would help the City link downtown with the Sammamish River, consistent with Policy SMP-P13.

The Proposed Alternative identifies areas that are appropriate for preservation along the Sammamish River, consistent with Policy SMP-P20.

The Proposed Alternative identifies safe and accessible pedestrian connections between the downtown/Main Street retail center and the Sammamish River as a priority, consistent with Policy SMP-P22.

Plans for public recreation along the Sammamish River in the study area are consistent with the hierarchy of use preferences outlined in Policy SMP-P28.

The Proposed Alternative's form-based code includes a provision that states that all actions on parcels or portions of parcels within the City's Shoreline jurisdiction must comply with the City's Shoreline Master Program Provisions of Title 13 of the code (BMC 12.64.001(6)). This ensures that development under the Proposed Alternative would be consistent with the City's Shoreline Master Program.

Transportation Element

The Proposed Alternative is consistent with the identified Transportation Element policies.

Section 3.5, "Transportation," describes how the Proposed Alternative meets Policy TR-P2 related to LOS standards for key transportation corridors.

The Proposed Alternative includes boulevard treatment and street standards that are consistent with Policy TR-P7. In particular, SR 527, part of the Bothell Boulevard System, is identified in the Proposed Alternative as a capital improvement project for a boulevard treatment that is expected to transform the area and provide redevelopment opportunities.

The enhanced connected street system downtown that would be created through extension of Main Street and realignment of SR 522, would not encourage cut-through traffic in residential neighborhoods, consistent with Policy TR-P14.

The improvements anticipated under the Proposed Alternative, including the NE 185th Street Extension project, in combination with the implementation of a simplified form-based, design-oriented land use code, would create more transit-oriented development and support land use patterns that reduce the quantity and length of single-occupant vehicle trips, consistent with Policies TR-P21 and TR-P28.

Both alternatives promote pedestrian and bicycle access to the "downtown activity center" consistent with Policies TR-P31 and TR-P39. However, the Proposed Alternative's simplified land use code, which includes street and building design standards, would go further in promoting bicycle and pedestrian access to downtown.

The building and site design features of the Proposed Alternative's land use code would enhance pedestrian access to buildings, consistent with Policy TR-P44.

In terms of consistency with planned projects, some amendment may be needed. The City's transportation project list, contained in the Transportation Element and the CFP, contains all Proposed Alternative capital improvements projects except for the NE 185th Street Extension, SR 527 Multiway Boulevard, and Main Street Enhancement projects, and it describes the Boulevard as only addressing the five lanes of capacity without the other boulevard features. If the Proposed Alternative is adopted, this project list should be updated to account for these projects. The Valley View and 104th Street non-motorized improvement projects are not listed as they are developed incrementally as development occurs and are not city-provided features.

Urban Design Element

The design features inherent in the Proposed Alternative's form-based code are consistent with the identified policies of the Urban Design Element. Their greater emphasis on form fulfills design policies to a greater degree than the No Action Alternative.

The street design standards contained in the Proposed Alternative are consistent with Policy UD-P1, which calls for improving arterials within the study area as landscaped boulevards. Capital improvement plans to convert SR 527 into a boulevard in the study area would help implement this policy. In addition, tree-lined boulevards anticipated in the street design elements under the Proposed Alternative are consistent with Policy UD-P12.

The form-based design-oriented code under the Proposed Alternative is consistent with site design concepts promoted in Policies UD-P2 and UD-P16.

The Proposed Alternative would provide policy direction for creating pedestrian connections and access between central downtown, the Sammamish River corridor, and the UWB/CCC campus, consistent with Policy UD-P3. This policy contains specific examples of approaches to providing pedestrian connections that are relevant to this area and should be reviewed for future consideration.

The Proposed Alternative would help develop community focal places for public interaction, including private frontage standards creating a positive street atmosphere and guidelines for redevelopment of the major properties in the study area, such as possible relocation/redevelopment of City Hall, or redevelopment of the NSD site. This is consistent with Policy UD-P4, which calls for development of a community focal point within activity centers.

The implementation of an extended connected street system through the realignment of SR 522 and extension of Main Street, considered under both alternatives, are consistent with Policy UD-P11. The Proposed Alternative further includes the

NE 185th Street Extension project, which would provide a further connected network of streets. Section 3.5, “Transportation,” contains an analysis of traffic patterns as a result of the new network of streets.

Capital Facilities Element

The Capital Facilities Element refers to the City’s CFP. The CFP contains all of the major capital improvement projects described in the Proposed Alternative. The City’s transportation project list, however, contains all of these except for the NE 185th Street Extension, Main Street Enhancement and SR 527 Multiway Boulevard projects. The Valley View and 104th Street non-motorized improvement projects are not listed as they are developed incrementally as development occurs and are not city-provided features. If the Proposed Alternative is adopted, the City’s transportation project list should be updated to account for this additional project.

Downtown/NE 190th St/Riverfront Subarea Plan

Under the Proposed Alternative, the *Downtown Subarea Plan and Regulations* would largely replace the policies contained in this subarea plan. The new plan does not contain specific policies, but does include a policy framework—district purpose statements, revitalization strategy, and city actions—to guide the future of the study area. Under the Proposed Alternative, policies related to areas that are no longer part of the revised Downtown Subarea boundaries would need to be transferred to other subarea plans, as appropriate. The Proposed Alternative is consistent with policies of this existing subarea plan in the following ways.

Land Use

Policy 1 states that the Downtown Subarea should contain a mix of various types of residential and commercial uses, promote a vibrant mix of development, connect downtown with the riverfront activity center and the other uses in the subarea, and protect the character of established residential areas. The Proposed Alternative promotes a vibrant mix of uses within the study area through similar policies and through a simplified set of land use districts, each with a single purpose statement, and a form-based development code to implement them. The Proposed Alternative identifies relevant pedestrian connections throughout the study area. The established character of residential areas such as Valley View and Sunrise single-family neighborhoods in the study area are protected through a separate land use district that simulates the current R-9,600 and R-8,400 zoning designations.

Policy 2 discusses appropriate land use transitions between downtown and the neighboring Maywood/Beckstrom Hill subarea to the north. The Proposed Alternative places the areas abutting the Maywood/Beckstrom Hill subarea into less intense land use districts to provide for this transition: Downtown Transition District and the General Downtown Corridor District. Both of these districts contain provisions that assist in transitioning between the more intense mixed-use downtown and the predominantly single-family Maywood/Beckstrom Hill area including lower

maximum heights for developments that abut or are across the street from existing single-family residences. Although the exact mix of uses allowed in these areas is not the same as under the No Action Alternative, they are similar. Additionally, form-based site and building standards that govern bulk, height, and aesthetics, among other things, will help to mitigate for land use impacts associated with the possible wider range of allowed.

Policy 3 discusses the special nature of the established single-family residential neighborhoods within the Downtown Subarea present at Sunrise Drive and Valley View Road. These areas, as mentioned under Policy 1 above, are protected through their own land use district, which simulates the present zoning.

Policy 4 discusses protection of existing mobile home parks through the MHP designation. The Proposed Alternative maintains the Lazy Wheels Mobile Home Park through the MHP Overlay.

Policy 5 discusses the land uses appropriate for the GC designation located along SR 522 in the southwestern portion of the study area, and the special conditions for adult entertainment where it is allowed in this area. The Proposed Alternative allows a wider range of uses as well as auto-oriented uses that characterize the area described by Policy 5 in the SR 522 Corridor District. (This is the only district, under the Proposed Alternative, that allows auto-oriented uses.) Policy 5 also includes reference to the small area designated GC in the study area that allows adult entertainment uses. The Proposed Alternative includes a cross reference to the City's adult entertainment regulations in the proposed regulations which address this policy. The City's adult entertainment regulations which describe the geographic area and conditions under which this use is allowed, are found in BMC 12.64.140. These regulations are consistent with Policy 5 language in the existing Downtown Plan. Based on the zoning code changes noted below, special attention should be given to appropriately cross-reference adult entertainment regulations applicable to the area.

Policy 6 is a detailed policy that outlines land use types and heights appropriate in the central portion of the study area. The mix of uses allowed under the Proposed Alternative would be similar to those in Policy 6—mix of retail, service, office, and residential uses— and heights would increase in some areas and decrease in others, as mentioned in the land use patterns discussion above. The Proposed Alternative's geographic placement of districts is intended to allow more intense uses and building heights in the central core of the study area, while lower building heights and less intense uses are allowed on the edges of the subarea; as such, it would be consistent with Policy 6. Motor vehicle sales would be allowed only in the SR 522 Corridor District, because this type of use is seen as incompatible with the development of a vibrant mixed-use core in the rest of the study area.

The Proposed Alternative meets the portions of Policy 6 that discuss the NSD property as a key redevelopment property; the form-based, design-oriented code

implementing its redevelopment would assist with the design guidelines identified as necessary in Policy 6. View corridors to the Sammamish River are implemented with a view corridor overlay in portions of the study area where they are called for in Policy 6 through the SR 522 Corridor District's Special Riverfront Overlay.

Policies 7 through 9 are not applicable to the study area; they are oriented to areas south of the Sammamish River near Riverside Drive. These policies should be transferred to the Waynita/Simonds/Norway Hill Subarea Plan.

The Proposed Alternative recognizes multifamily residential as appropriate along 96th Avenue NE, Hall Road, and the Wayne Curve, consistent with Policy 10.

The Proposed Alternative recognizes the attached residential development potential in portions of the study area described in policies 11 and 12. Changes in development form and intensity under the Proposed Alternative are consistent with the City's downtown vision.

Consistent with Policy 13, the Bothell Cemetery would retain a similar designation to its existing Open Space; under the Proposed Alternative it would be in the Park and Public Open Space District. Under the Proposed Alternative, the Civic Educational designation is eliminated; the various uses listed under Policy 13 would be allowed as civic and cultural uses within the various proposed land use districts.

The Park at Bothell Landing and the Sammamish River Park would both be in the Park and Public Open Space District, an equivalent designation to Policy 14's Open Space designation.

The Proposed Alternative would be consistent with Policy 15's call for a variety of housing types and lot sizes to be supported and continued with new development. As discussed earlier, the Proposed Alternative is expected to attract a larger quantity of housing than the No Action Alternative.

Policy 16 calls for all development along the Sammamish River to provide access to and along the river. Under the Proposed Alternative the Sammamish River parcels would be placed in either the Park and Public Open Space District or a special Riverfront Overlay as part of the SR 522 Corridor District.

Under the Proposed Alternative, the form-based code would include measures to add infill development in the study area compatible with existing development (e.g., the lower height maximums for new development occurring adjacent to existing single-family development). This is consistent with Policy 17.

Natural Environment

The Proposed Alternative includes sustainable development features in the form-based code, making it more consistent with the Natural Environment policies in the existing subarea plan than the No Action Alternative. These sustainable development

features exist under Open Space, Streetscape, and Architectural portions of the proposed form-base code.

Urban Design

The Proposed Alternative identifies key properties and intersections in the study area for particular emphasis as community focal points, consistent with Policy 1.

The Proposed Alternative identifies key corridors for enhancement as linkages between retail and service areas, and residential areas and parks, consistent with Policy 2.

The Proposed Alternative provides design guidelines and illustrations to help developers in the downtown area achieve high quality design, consistent with Policy 3.

The districts applied to the eastern and western edges of the study area and the sustainable development features of the form-based code would help comply with Policy 4, which calls for development in these areas to be sensitive to steep slopes, wetlands, and the Sammamish River.

The design detail contained in the Proposed Alternative's form-based code would ensure consistency with Policies 5 and 6.

The Proposed Alternative includes lighting regulations in BMC 12.64.305(6) that would allow commercial lighting, but prevent light spillage on adjacent properties consistent with Policy 8, relating to lighting guidelines and standards for motor vehicle sales. The SR 522 Corridor District is the only district that allows automobile sales and other auto-oriented retail.

The Proposed Alternative does not appear to address Policy 9, which calls for motor vehicle dealers in the study area to install a sight obscuring landscape screen at the side and rear perimeters of all motor vehicle sales, storage, and display areas.

The City should consider retaining some of this subarea plan's urban design language related to landscaping for motor vehicle sales uses, since these use are still allowed within the SR 522 Corridor District under the Proposed Alternative, as follows:

9. Motor vehicle dealers located on properties with a community business (CB) designation within the Subarea should install a sight obscuring landscape screen at the side and rear perimeters of all motor vehicle sales, storage, and display areas. Such screening should be designed to create both an immediate screen and long term viability of plant materials.

Transportation Policies

The Proposed Alternative is generally consistent with identified transportation policies from this subarea plan. The boulevard design treatment identified for SR 527 and treatments for other arterials in this portion of the study area are consistent with Transportation Policy 3.

The streetscape improvements identified under the Proposed Alternative implement bicycle accommodations for area streets consistent with Transportation Policy 7.

Expanded street networks, resulting from realignment of SR 522 and upgrades to SR 527 under the Proposed Alternative, would occur in the heart of one of the City's designated activity centers. As such the expansion would not encourage cut-through traffic in the neighborhoods, consistent with Policies 11 and 12. See Section 3.5, "Transportation," for additional discussion.

New development under the Proposed Alternative is expected to be transit-oriented in nature, consistent with Transportation Policy 14.

Other Relevant Policies

The Proposed Alternative is expected to encourage a larger amount of development and redevelopment in the study area with a residential component, consistent with housing policies contained in this subarea plan.

Similarly, additional commercial development and redevelopment anticipated under the Proposed Alternative are expected to be more consistent with this subarea plan's economic development policies than the No Action Alternative.

Sammamish River corridor parkland acquisition policies, similar to those in the City's Parks and Recreation Element, are present in this subarea plan. The Proposed Alternative is consistent with these policies, placing these lands within an appropriate land use district or overlay.

The Proposed Alternative's regulations contain Architectural Element regulations (BMC 12.64.504) for the entire subarea and Historic Resource Guidelines (BMC 12.64.505) that developments in the historic areas of downtown would need to comply with. Features contained in the form-based code would help maintain the existing historic aesthetic of Main Street by requiring upper-story setbacks on buildings three stories high or taller in the Downtown Core and Downtown Neighborhood districts. Much of the form-based code for the more intense downtown districts is a return to the historic aesthetic. Reflecting the historic era in new developments would help ensure design compatibility in these districts.

North Creek Subarea Plan

The areas of the study area applicable to the North Creek Subarea Plan policies are those located east of 108th Avenue NE, except for the Sunrise/Valley View single-family areas. This area is dominated by the UWB/CCC campus.

North Creek Land Use

The Proposed Alternative would apply a single land use district to the UWB/CCC campus, the Campus District, which basically allows the land uses and development provided for under the existing campus-approved planned unit development. This is

consistent with land uses allowed in the area pursuant to Policies 2 and 6 of the existing subarea plan.

The area located north and west of Beardslee Boulevard is placed in the General Downtown Corridor District under the Proposed Alternative. The land uses allowed in this district are consistent with the mix of land uses listed in Policy 5. The design elements of the proposed form-based code would do a better job of ensuring that new development in this area achieves the stated goals of Policy 5: to provide a gateway to Downtown Bothell, link the UWB/CCC campus with the “downtown activity center,” and achieve a diverse collection of pedestrian-oriented uses while discouraging auto-oriented uses. The Proposed Alternative would also achieve the stated transportation improvements along Beardslee Boulevard in this area.

The land use districts applied to the portions of this subarea within the study area do not include businesses that are dependent on attracting freeway motorists from NE 195th Street, consistent with Policy 8.

Natural Environment

The Proposed Alternative includes sustainable development standards for architectural, streetscape, and open space/surface water. These would help maintain consistency with the Natural Environment policies for this area related to protecting water quality and fish habitat of North Creek and associated wetlands.

Urban Design

The Proposed Alternative includes proposed streetscape improvements to major arterials in the area, including Beardslee Boulevard. These would help meet Urban Design Policy 1, which outlines Beardslee Boulevard design treatments to make it a gateway to Bothell.

The form-based code includes sustainable development features and site/building design features to assist new development in meeting the requirement to retain the “feathered edge,” outlined in Policy 10.

Transportation

The improvements identified in Transportation Policy 2 for Beardslee Boulevard are consistent with boulevard treatment plans contained in the Proposed Alternative. Similarly, the Proposed Alternative encourages bicycle and pedestrian connectivity in this subarea and between this subarea and surrounding areas consistent with connections and improvements identified in Policy 4.

Connectivity plans under the Proposed Alternative are not expected to result in residential cut-through traffic consistent with Transportation Policies 7 and 8. See Section 3.5, “Transportation,” for more detail.

The Proposed Alternative is silent on treatment of Ross Road and the intersection of Beardslee Boulevard/Ross Road/112th Avenue NE/NE 195th Street outlined in

Policies 12 and 13. However, the roadway improvement project at Ross Road/Beardslee Boulevard appears to be contained within the City's most recent 6-year Transportation Improvement Plan. Therefore, the improvements anticipated at this intersection would occur under either alternative.

Other Policies

This subarea plan contains housing and parks and recreation policies similar to those found in the Downtown/NE 190th St/Riverfront Subarea Plan. The Proposed Alternative's consistency with these policies is similar those discussed under the Downtown/NE 190th St/Riverfront Subarea Plan above.

Zoning Code

The adoption of the *Downtown Subarea Plan and Regulations* will likely require corresponding consistency edits in other portions of the code.

As part of adopting this new form-based code, the City should examine other zoning code sections to ensure that, at a minimum, proper cross references are made to the new zoning. At minimum, the following sections of the Bothell Municipal Code should be reviewed for insertion of cross references to the appropriate area of *Downtown Subarea Plan and Regulations*:

- 12.04, Zoning Classifications, Subareas, Maps, and Boundaries
- 12.06, Permitted Uses
- 12.14, Area, Dimension, and Design
- 12.16, Parking, Loading, and Transit Access
- 12.18, Tree Retention and Landscaping
- 12.22, Signs
- 12.26, Nonconforming Uses, Structures, and Other Improvements

The City should also review the existing BMC 12.64, to see which of the Downtown Subarea regulations are still relevant. The new Downtown Subarea regulations appear to replace certain regulations contained in this section. However, others appear to need to be retained in some form, or moved to another subarea regulation section:

- BMC 12.64.110 through 12.64.130 appear to now relate to a portion of the existing Downtown Subarea that was transferred to the Waynita/Simonds/Norway Hill Subarea. These regulations should be transferred to Chapter 12.66 of BMC.
- BMC 12.64.160 applies to protection of groundwater resources from Norway Hill and applies to the south side of the Sammamish River. Although a few publicly owned parcels are retained in the existing Downtown Subarea south of the Sammamish River, others are transferred to Waynita/Simonds/Norway Hill Subarea. The City should ensure that appropriate groundwater regulations are

contained in the Waynita /Simonds/Norway Hill Subarea Plan, and retain these regulations in the Downtown Subarea Plan for those remaining parcels of land located south of the Sammamish River.

- BMC 12.64.140 relating to adult entertainment in the GC zone, appears to be relevant since a portion of the SR 522 Corridor District still allows adult entertainment uses as part of the auto-oriented use category (page 43, “Site Development Regulations,” of the draft *Downtown Subarea Plan and Regulations*). The City should consider consolidating its adult entertainment regulations, either in BMC 12.64.140 or BMC 12.06.130. In addition, the City retains its existing regulatory structure for adult entertainment, it should update zoning references from GC zone to SR 522 Corridor district, and the existing cross reference to BMC 12.06.130 found in BMC 12.06.130 should be corrected to directly reference BMC 12.64.140.
- BMC 12.64.150 relating to motor vehicle sales overlay also appears to be relevant to the SR 522 Corridor District since that district still allows auto-oriented uses. Some policies in the existing Comprehensive Plan deal with lighting at motor vehicle sales facilities and try to keep light trespass from occurring. Retaining these regulations in some form for the SR 522 Corridor District may be appropriate.

Planning Commission Recommendations

The Planning Commission Recommendations are a hybrid of the Proposed and No Action alternatives, including features of both; however, they are mostly consistent with the Proposed Alternative. The qualitative differences between the Planning Commission Recommendations and the Proposed Alternative are described below.

Land Use Patterns

The Planning Commission Recommendations are expected to have the following land use impacts. Similar to the Proposed Alternative, the discussion is divided by the land use districts identified in the *Downtown Subarea Plan and Regulations*.

Downtown Core District. The Planning Commission recommends maintaining the building height limits in the Downtown Core District described for the No Action Alternative; these are lower than the Proposed Alternative in terms of feet, but the same in terms of the number of stories.

The Planning Commission recommends reducing the extent of the Downtown Core District along the SR 527 boulevard north of the alley between NE 185th and 186th streets, and replacing it with Downtown Neighborhood District.

Downtown Neighborhood District. The Planning Commission recommends reducing the building height limits in this district by 10 feet, compared to the Proposed Alternative, but allowing the same number of stories. It also recommends expanding the Downtown Neighborhood District east to include all of the area currently zoned

R-AC/OP/CB and west to 97th Ave NE; these areas are part of the Downtown Transition District under the Proposed Alternative.

Downtown Transition District. The Planning Commission recommends eliminating this district, expanding the Downtown Neighborhood District in some areas, and retaining the existing R-2,800/OP zoning in other areas. In the first instance, land use patterns would more closely resemble those described for the Downtown Neighborhood District under the Proposed Alternative; in the second instance, they would resemble existing zoning described under the No Action Alternative.

SR 522 Corridor District. The Planning Commission recommends retaining this district along the west side of SR 522 south of Ormbrek Street, but reducing building height limits by 9 feet, compared to the Proposed Alternative. Number of stories would be the same. It also recommends retaining the current zoning between SR 522 and the Sammamish River and north of SR 522 east of Kaysner Way. Land use patterns would resemble the No Action Alternative in areas that would retain existing zoning, and the Proposed Alternative in areas designated SR 522 Corridor District.

General Downtown Corridor District. The Planning Commission recommends reducing building height limits by 9 feet, compared to the Proposed Alternative, and retaining the existing zoning flanking NE 180th Street on the west edge of the study area, east of SR 527 north of Reder Way, along Beardslee Boulevard (except where it recommends expanding the Downtown Neighborhood District, as described above) and west of 108th Avenue NE/Circle Drive on either side of Valley View Road. The overall intended effect on land use patterns is to reduce the geographic area of anticipated land use intensification.

Sunrise Valley/Valley View Neighborhood District. The Planning Commission recommends including the current single-family zoning along the south side of Beardslee Boulevard in the Sunrise/Valley View District, instead of including it in the General Downtown Corridor District. The result would be to expand the area covered by this district compared to the Proposed Alternative, and reduce the associated land use intensification.

Campus District. Land use patterns are expected to remain the same as under the Proposed Alternative and No Action Alternative.

Park and Public Open Space District. The Planning Commission recommends adding a special Pop Keeney Recreation District to address the special needs of that area.

Land Use Compatibility

The Planning Commission Recommendations provide land use compatibility within the range discussed for the Proposed and No Action alternatives.

Downtown Core District. The Planning Commission recommends a smaller Downtown Core District. Land use compatibility within this district would likely be similar to under the Proposed Alternative, except that one of the areas that would become part of the Downtown Neighborhood District—the area east of SR 527 north of the alley between NE 185th and NE 186th streets—would be more residential in nature.

Downtown Neighborhood District. The Planning Commission recommends that this district be expanded to areas designated as other districts under the Proposed Alternative. Land use compatibility within this district would be similar to under the Proposed Alternative.

Downtown Transition District. The Planning Commission recommends eliminating this district and retaining existing zoning. The intention is to avoid any commercial uses directly adjacent to single-family zones on the periphery of the study area. Land use compatibility would be similar to under the No Action Alternative.

SR 522 Corridor District. The Planning Commission recommends retaining some of the mix of land uses found under the No Action Alternative (e.g., R-2800/OP/CB). Land use compatibility in this district is similar under all alternatives.

General Downtown Corridor District. The Planning Commission recommends retaining existing zoning in many areas where this district abuts single-family and other residential-only zones. The Planning Commission's recommendation to retain areas characterized by single-family residential development near the entrance to Beardslee Place in existing zoning would eliminate the anticipated impact on land use compatibility for this area under the Proposed Alternative.

Sunrise/Valley View Neighborhood District. Land use compatibility in this district is not expected to change under any alternative.

Campus District. Land use compatibility in this district is not expected to change under any alternative.

Parks and Public Open Space District. The Planning Commission Recommends adding a new district within this district for the Pop Keeney Stadium area. Land use compatibility in this district is expected to be similar under all alternatives, given the predominance of publicly owned properties planned for parks or other public uses.

Employment and Housing Mix

The Planning Commission Recommendations are expected to include growth levels within the range of employment and housing studied in this Draft EIS.

Relationship to Plans and Policies

The Planning Commission Recommendations are generally similar to the Proposed Alternative in their consistency with the City's Comprehensive Plan goals and policies related to the study area. They would implement a new downtown plan, but

would generally provide a lower intensity, transition between the study area and surrounding neighborhoods.

Key differences in plans and policies are noted by subheading below.

Land Use Goals and Policies

The Planning Commission Recommendations are expected to accommodate a slightly smaller percentage of population and employment growth in the study area and its vicinity than the Proposed Alternative. Retention of existing zoning along the periphery of the study area, and the replacement of some Downtown Core with Downtown Neighborhood designation is expected to help preserve character of existing development consistent with Policy LU-P6.

Economic Development Goals and Policies

The Planning Commission Recommendations would not stimulate the creation of as many jobs as the Proposed Alternative. Additionally, they would not realize the benefits of the form-based code as widely as the Proposed Alternative.

Housing Element

The Planning Commission Recommendations would have a somewhat stronger emphasis on the preservation of and/or transition to existing residential neighborhoods, identified in the City's housing goals and policies.

Natural Environment Element

The Planning Commission Recommendations would be similar to the Proposed Alternative in its consistency with Natural Environment Element goals and policies discussed under the Proposed Alternative.

Parks and Recreation Element

Similar to the Proposed Alternative.

Shoreline Master Program Element

Similar to the Proposed Alternative.

Transportation Element

Similar to the Proposed Alternative.

Urban Design Element

The Planning Commission Recommendations would be similarly consistent with this element as the Proposed Alternative, except that they would not realize the benefits of the form-based code as widely.

Capital Facilities Element

Same as the Proposed Alternative.

Downtown/NE 190th St/Riverfront Subarea Plan

The Planning Commission Recommendations retain current zoning along some of the study area periphery and in some non-publicly owned areas between SR 522 and the Sammamish River. The City should consider adding the following existing policies describing land use designations to the proposed *Downtown Subarea Plan and Regulations* under the Planning Commission Recommendations.

- Policy 2 discussing the transition between the Downtown and the Maywood/Beckstrom Hill subarea to the north;
- Policy 3 relating to the single-family designations in the Sunrise Drive and Valley View Road areas;
- Policy 4 relating to protection of existing mobile home parks through the MHP designation;
- A revised description of Policy 6 that describes the limits of areas still governed by R-AC, OP, CB may be appropriate; and
- A revised description of Policies 11 and 12 describing areas still governed by 2,800, OP zoning may be appropriate.

Otherwise, the Planning Commission Recommendations retain a similar consistency to this subarea plan as the Proposed Alternative.

North Creek Subarea Plan

The Planning Commission Recommendations retain the current zoning for the “Campus Corridor” along the north side of Beardslee Boulevard. The existing zoning applied to this area will still be consistent with the mix of land uses listed under Policy 5 of the Land Use section. However, this area would not realize the anticipated benefits of the form-based code as under the Proposed Alternative.

The City should consider adding a revised version of existing Policy 5, describing the area that is still regulated by existing zoning in this subarea, to the proposed *Downtown Subarea Plan and Regulations*.

Zoning Code

The Planning Commission Recommendations retain existing zoning in some areas along the Sammamish River. The City should consider adding to the proposed *Downtown Subarea Plan and Regulations* the existing Riverfront Special District regulations (contained in BMC 12.64.070 through 12.64.090) and Lazy Wheels Mobile Home Park Overlay regulations (contained in BMC 12.64.100).

3.3.3. Mitigation Measures

Incorporated Plan Features

Mitigation measures incorporated under the Proposed Alternative include the following.

- Sustainability features of the form-based code that govern surface water, open space, architectural, and other aspects of development in the study area will help ensure that development is consistent with environmental values of Bothell.
- Historic resource regulations and upper-story setbacks (above the second story) will help ensure that development in the historic part of Downtown Bothell is complementary to the existing historic aesthetic.
- Regulations that require only residential uses at the edges of the study area when adjacent to single-family zones outside the study area and requiring height restrictions when adjoining or across the street from single-family uses will help transition from the more intense downtown to lower intensity areas.
- The Riverfront Special Overlay will help protect public views and access to the Sammamish River corridor.
- The Mobile Home Special Overlay will help protect the Lazy Wheels Mobile Home Park as an affordable single-family housing type.
- The R-9,600 and R-8,400 overlays within the Sunrise Valley/Valley View District will help protect the established single-family residential character of these neighborhoods within the study area.

Applicable Regulations and Commitments

Applicable regulations and commitments that help mitigate the Proposed Alternative include:

- BMC Chapter 14.04 governing City critical area regulations;
- BMC Title 13 governing Shoreline regulations applicable to the Sammamish River, North Creek, and associated shorelands; and
- BMC Chapter 12.18 governing tree retention regulations that are still applicable to the study area.
- The City is exploring measures to mitigate for the anticipated loss of approximately 280 low-income housing units in Downtown Bothell identified in its award from the state LIFT fund.

Other Potential Mitigation Measures

No Action Alternative

As part of a future update to the Comprehensive Plan, the City should revise horizon years for consistency, while maintaining necessary links to GMA growth projection efforts in King and Snohomish counties.

Proposed Alternative

The Proposed Alternative would require the City to amend its Comprehensive Plan to replace the existing Downtown/NE 190th Street/Riverfront Subarea Plan with the *Downtown Subarea Plan and Regulations*. Since the study area boundaries are

different from those of the existing subarea plan, the City would need to address private properties surrounding West and East Riverside Drive in the Waynita/Simonds/Norway Hill Subarea Plan. In addition, because the UWB/CCC campus and the area of the North Creek/195th Subarea Plan located south and west of I-405/NE 195th Street are address in the study area, the City would need to remove these areas and associated policies from the North Creek/195th Subarea Plan.

Subarea Plan Amendments

Downtown Subarea Plan and Regulations. Adoption of the *Downtown Subarea Plan and Regulations* would replace the existing Downtown/NE 190th Street/Riverfront Subarea Plan.

North Creek/195th. Amend subarea plan to remove the area southwest of I-405/NE 195th Street/Ross Road, which is now addressed in the *Downtown Subarea Plan and Regulations*. In addition, remove all language, goals, and policies related to Beardslee Boulevard, the Beardslee Boulevard Corridor, and the UWB/CCC campus, which also are addressed in the *Downtown Subarea Plan and Regulations*. Among the specific policies that can be removed are Land Use Policies 5 and 6, and Urban Design Policy 1.

Waynita/Simonds/Norway Hill. Amend the subarea plan to include the private parcels surrounding West and East Riverside Drive that are not addressed in the *Downtown Subarea Plan and Regulations*, as well as associated updates to the background information and specific policies applying to this area. Among the text to transfer to this subarea plan are: page DT-3 discussion on East Riverside Drive, page DT-4 discussion of Blyth Park, page DT-8 discussion on improvements to East Riverside Drive; land use policies 7, 8, and 9. Portions of existing policies may be appropriate to transfer to the Waynita/Simonds/Norway Hill Subarea plan, including Land Use Policies 10 and 14; Transportation Policies 2 and 4 should be amended to remove discussion of transferred areas.

Comprehensive Plan Amendments

The City should review its Comprehensive Plan to ensure that cross references to appropriate subarea plans still exist after the realignment of subareas discussed above.

The City should update its transportation project list, contained in the Transportation Element, by adding the NE 185th Street Extension and Main Street Enhancement projects and defining SR 527 improvements consistent with the SR 527 Multiway Boulevard project features. This will make the Transportation Element and CFP consistent.

As part of a future comprehensive plan update, the City should update horizons years to make them consistent across all elements.

The City should amend Comprehensive Plan policies and actions that, with the Proposed Alternative, are no longer current. Policies that should be reviewed and possibly updated include: ED-A4 and ED-A24 regarding the preparation of a downtown plan.

Zoning Code Amendments

Zoning code amendments associated with the Proposed Alternative include:

- Replace BMC 12.64 Downtown Subarea Regulations with the Proposed Alternative’s form-based code.
- As part of adopting this new form-based code, examine other zoning code sections to ensure that, at a minimum, proper cross references are made.
- Review the regulations in BMC 12.64 to determine which should be retained in some form, moved to another subarea plan, or replaced with the new regulations, as described above.

Planning Commission Recommendations

The Planning Commission Recommendations would principally change district boundaries and maximum heights in the study area compared to the Proposed Alternative. Therefore, the same subarea plan amendments, Comprehensive Plan amendments, and Zoning Code amendments identified for the Proposed Alternative would need to be made.

3.3.4. Significant Unavoidable Adverse Impacts

Both the Proposed Alternative and the Planning Commission Recommendation Alternative would result in greater intensity of land use and greater employment and housing in the study area than the No Action Alternative. However, the changes to land use patterns under all alternatives would generally conform to the City’s Comprehensive Plan direction for the “downtown activity center.” Changes to the study area, under the Proposed Alternative and Planning Commission Recommendations, could have impacts on land use compatibility, but these impacts could be mitigated with implementation of the form-based code and other existing city codes that would be retained.

Any identified conflicts with plans and policies would require amendments in a future comprehensive plan docket cycle. With application of mitigation measures and amendments, there are no significant unavoidable adverse impacts on plans and policies.

3.4. Aesthetics

This section addresses the impacts of the alternatives on the overall visual character of the study area, as well as the visual impacts of the alternatives' changes in height and bulk limits in the study area. The visual effects of light and glare are also discussed, as well as the presence of any important views.

3.4.1. Affected Environment

The physical setting of the study area is a relatively flat region nestled in a shallow valley on the north side of the Sammamish River. Bounded by the river to the south and hills to the northwest and northeast, the intersection of State Route (SR) 522 and SR 527 forms the focal point of the area. The visual character, height and bulk, and lighting and glare conditions of the area, as well as important views, are described below.

Visual Character

Due to the size of the study area, the prevailing style of development and visual character vary. Areas with unique visual character are discussed here.

Main Street

The most visually distinctive portion of the study area, Bothell's Main Street is characterized by a high degree of pedestrian appeal and a strong connection between the public and private realms. Sidewalks are wide and contain numerous amenities (e.g., street trees, planters, benches, and decorative lampposts), and most buildings possess an awning or overhang to provide weather protection for pedestrians. Street parking separates the sidewalk from traffic, protecting the space between the street and the buildings, and creating a safe realm for pedestrians. This pedestrian area is distinctly human scaled with a high level of visual detail.

Development in this area consists of mostly older buildings, one to two stories in height. The predominant architectural style is early twentieth century commercial, with a variety of more recent infill construction intermixed. Buildings are closely spaced or use shared-wall construction. Predominant uses include cafés, clothing stores, and specialty shops (e.g., furniture, musical instruments, and jewelry).

Figure 3.4-1 illustrates the existing visual character of Main Street.



University of Washington Bothell/Cascadia Community College

Located at the far eastern end of the study area, this location is the least intensely developed in the study area. While some residential uses are located on the north side of Beardslee Boulevard, and a new professional building has recently been constructed at the intersection of Beardslee and 110th Avenue NE, this area is centered around the University of Washington Bothell/Cascadia Community College (UWB/CCC) campus.

The campus is designed to emulate a rural aesthetic, providing a sense of seclusion and separation from the rest of Bothell. The existing city streets that connect the campus area to an adjacent residential neighborhood to the west have been blocked off to vehicular traffic, with access restricted to pedestrians and emergency vehicles. The land slopes toward North Creek in the east; this area is surrounded by a large amount of open space, which acts as a buffer between development and the creek. Figure 3.4-2 illustrates the visual character of the campus and surrounding wetland area.

North of Main Street

The area immediately north of Main Street, extending to approximately NE 185th Street, contains a mix of older single-family homes and neighborhood professional services (e.g., dentists, vision clinics, churches, and tax services). Many of these services are located in converted single-family homes. In visual character, this area is a residential extension of the Main Street area immediately to the south. The well-provided sidewalks, older homes, and widespread mature trees give the impression of a settled, well-established neighborhood.

While the older construction in this area provides visual interest and a feeling of stability, some of the buildings are beginning to show their age and could benefit from restoration or strategic redevelopment. Additionally, some isolated buildings in very poor condition are present, creating sharp contrasts when located next to new development, such as the City's police station. Figure 3.4-3 illustrates the character of this area.



View of wetland buffer area



View of campus



Figure 3.4-3. Visual Character of North of Main Street
Downtown Bothell Planned Action EIS
December 2008

SR 527 Corridor

Extending from SR 522 to the northern limits of the study area, the SR 527 corridor is characterized by a wide variety of low-density commercial uses (e.g., gas stations, convenience stores, and restaurants) and isolated small office and residential uses (primarily multifamily). A notable exception is the Northshore School District (NSD) property, surrounding the W.A. Anderson Building, which is located along SR 527, between NE 188th Street and NE 185th Street. This site contains broad, landscaped areas of lawn and mature trees, providing visual open space adjacent to SR 527 and NE 183rd Street, and the W.A. Anderson building itself is constructed in a distinctive masonry style. The building and adjacent areas stand in contrast with the surrounding commercial properties, which are typically surrounded by paved areas, a variety of signage, and minimal landscaping. Buildings in the corridor are typically set well back from the street, especially on the west side, and larger uses tend to have large surface parking lots. Sidewalks are provided along SR 527, but they are often interrupted by large curb cuts for wide parking entrances. Development is more intense at the southern end of the corridor, approaching the intersection with SR 522, and vegetation becomes sparser. Figure 3.4-4 illustrates the visual character of the SR 527 corridor.

SR 522 Corridor

SR 522 enters the study area from the southwest and travels north to its intersection with SR 527, then east along the southern border of the study area to its intersection with I-405. This section of the corridor consists of five lanes with shoulders of varying widths, and development along the corridor consists primarily of large parcels and auto-oriented uses. Pedestrian amenities are lacking, and the area is characterized by a general lack of visual coherence.

No formal architectural style dominates the corridor, but development is mostly commercial in nature; a mobile home park is located on the south side of SR 522, near the intersection with Kaysner Way. While some screening vegetation is located along the street frontage, very little planting exists on the site, in sharp contrast to the park located on the opposite bank of the Sammamish River.

Commercial development along SR 522 is interspersed with open space where the road alignment nears the Sammamish River, and uses generally become less intense in the eastern portion of the study area, as the highway nears I-405. In this area, the highway lies at the base of a hill, and the north side of the highway consists of an undevelopable, forested slope. The Sunrise/Valley View neighborhood is located on top of this hill.



Height and Bulk

Height and bulk in the study area are generally low. Current zoning regulations throughout much of the study area limit building heights to 35 feet. In much of the area, exceptions to this limit allow heights up to 65 feet, provided compliance with additional site development standards such as the provision of a specified amount of structured parking and externally oriented, ground-level commercial space. Most existing buildings remain at or below the 35-foot base height.

Given the generally low heights in the study area, most structures likewise exhibit little visual bulk. Single-family residences, in particular, avoid appearing monolithic through spacing and screening vegetation. Likewise, the area surrounding Main Street is characterized by a high degree of pedestrian-oriented development. This type of development contains human-scale elements such as façade modulation and window details that visually subdivide buildings and lower the overall visual impression of bulk.

The portion of the study area most prone to high visual bulk is the SR 522 corridor from where it enters the study area to its intersection with SR 527. Development in this area consists of mostly auto-oriented, commercial development. Building façades are designed to be highly visible from moving vehicles and, therefore, place less emphasis on human-scale elements.

Views

As discussed above, the study area is located in a shallow valley, with hills to the west and northeast and beyond the Sammamish River immediately to the south. While the edges of the study area experience sharp increases in elevation, the interior is relatively flat, with only a gentle slope from north to south. Given this level interior topography and the presence of vegetation, views from inside the study area are primarily directed upward and outward, focusing on the surrounding hills and the visual transition from treed hilltops to sky. The City's Comprehensive Plan refers to this effect as the "feathered edge." While the City does not identify formally protected view corridors to these hilltops, the Land Use Element of the Comprehensive Plan identifies this "feathered edge" as an important component of Bothell's aesthetic character.

Views of the Sammamish River from the rest of the study area, while desirable, are typically obstructed by dense vegetation or intervening development. Views of the river corridor, characterized by mature trees lining the water, are more widely available. Views of the river itself are available from the southern edge of the study area, looking north, and from property between SR 522 and the river. Views of the riverfront area can also occasionally be found in the Valley View neighborhood, along Valley View Road.

Light and Glare

Ambient light and glare are produced from a number of different sources, including exterior building illumination, automobile headlights, and street lamps. The SR 527 and SR 522 corridors likely generate the most light and glare in the study area. This is due to higher levels of automobile traffic and the presence of commercial properties, including businesses such as grocery stores, car dealerships, and gas stations, which utilize large amounts of external illumination. Pop Keeney stadium also generates light and glare. It is in use about 200 nights a year, though early evening events in the summer may not require the use of lights.

Lighting and glare conditions in the remainder of the study area are moderate by comparison. Many office buildings do not have staff present after business hours, and residences typically produce less ambient light than commercial areas.

Regulatory Context

The City does not currently have a design review board or other formal body dedicated to reviewing aesthetic and urban design issues; however, development in the historic downtown area and projects that may significantly affect properties with structures over 50 years old is reviewed by the Landmark Preservation Board, which serves an advisory function. Currently, design review for development projects is conducted by City staff as part of the permit application process. The Bothell Municipal Code (BMC), 12.14.170–12.14.230, contains provisions related to site design and general exterior building design. These regulations deal primarily with building setbacks, provision of landscaping, and roofline and façade modulation; provisions for screening of walls and the placement of parking away from the street are also notable features.

General goals and policies related to aesthetics are contained in the Urban Design Element of the City’s Comprehensive Plan (City of Bothell 2004a). The following policies are of primary relevance to this analysis.

Policy UD-P1. Improve selected arterials within the Planning Area as landscaped boulevards to visually integrate the community and provide a pleasant driving, transit-riding, bicycling and walking experience along arterials. This system of boulevards should consist of features including the following:

- Landscaped medians and a street tree planting scheme;
- Transit pullouts and architecturally designed shelters;
- Bikeways;
- Meandering walkways and special pavement treatment at crosswalks;
- Noise attenuation walls where appropriate;
- Special landscaping treatments at gateways to the City, including “Welcome to Bothell” signs, possibly incorporating electronic message displays to announce City activities;

- Special sidewalk, street furniture, street trees, light fixtures, and other design features should be created for boulevards within community activity centers.

Policy UD-P3. Pedestrian linkages between major activity areas should be provided across built features that act as barriers to safe and easy access. For example, safe and accessible pedestrian linkage should be provided between the downtown/Main Street retail activity area, the riverfront activity area, and the Cascadia Community College/University of Washington, Bothell campus.

Policy UD-P5. Provide for pedestrian-oriented mixed use neighborhood villages where appropriate within the Planning Area to promote a sense of community to residential areas and reduce the number and length of limited item convenience shopping trips by automobile.

In addition to urban design policies, the Land Use Element sets forth a number of goals and policies regarding preservation of the “feathered edge” and its associated views.

Goal LU-G8. To preserve the “feathered edge” visual transition from treed hillsides to sky which is an important part of Bothell’s aesthetic character.

Policy LU-P11. Protect and preserve tree-covered hillsides and hilltops—particularly the feathered edge ridgeline image so valued by the community—for their visual and aesthetic benefits to Bothell, as well as for their functions as habitat, erosion control, and runoff retardation.

The North Creek Subarea Plan, which currently includes the UWB/CCC campus complex, contains the following urban design policy regarding views:

10. Predominant views, both from and to the hillside areas, shall be preserved in order to retain the natural character and the sense of identity that the hillside areas now impart as well as the “feathered edge” effect. Visual impact studies shall be provided by the developer detailing the effects of grading, tree removal, building and parking placement and streets proposed in the development plans.

The Bothell Municipal Code also contains provisions for the preservation of views of the Sammamish River from the Riverfront Special District, located between the river and SR 522. Properties in this district are required to maintain one-fourth of their width free of structures to provide view corridors to the river (12.64.080(B) BMC).

3.4.2. Impacts

Impacts Common to All Alternatives

For the purposes of this analysis, an aesthetic impact occurs if the proposal would result in:

- an increase in building heights or visual bulk significant enough to create obvious conflicts of scale between new and existing development;
- the alteration or obstruction of recognized views; or
- an increase in light and glare that affects views or interferes with public safety.

Visual Character

Two types of activities are expected to affect visual character: general land use redevelopment according to plans and regulations and capital facility projects such as roads and new public facilities.

All alternatives promote mixed uses in the study area at different scales compared to existing conditions. In some instances, locations and design quality would likely differ between the alternatives.

Anticipated effects of the projects common to all alternatives on visual character are discussed below.

Bothell Crossroads

The realignment of SR 522 would create several new blocks of real estate in the heart of downtown, while eliminating the traffic bottleneck that currently exists at the end of Main Street. The realignment would allow for the creation of an intersection between Main Street and SR 527 that can act as a gateway into historic Downtown Bothell.

SR 527 Projects

Improvements to SR 527 under both alternatives would increase traffic capacity; however, the No Action Alternative provides fewer pedestrian amenities and less landscaping than the SR 527 Multiway Boulevard Project under the Proposed Alternative.

Main Street

Both alternatives include the Main Street extension west of SR 527. This extension would result in a more pedestrian-friendly environment in a currently auto-oriented area; no adverse aesthetic impacts are anticipated. In conjunction with Bothell Crossroads, this project would improve the connectivity of the current shopping district to the new commerce areas.

Though the No Action Alternative includes the Main Street extension, it would not provide the enhanced urban design amenities, such as street lighting, landscaping, benches, and bicycle racks along the existing street section east of SR 527 included under the Proposed Alternative.

City Hall

A new City Hall would consolidate department staff now inadequately housed among several buildings. Three options are being considered: rebuild City Hall at its present location, utilize W.A. Anderson Building located on the NSD property, or build a new City Hall at the Beta Bothell Commercial Site.

Rebuilding City Hall at its current location would create a civic campus with the existing police and municipal court buildings and provide an anchor in close vicinity

to Main Street. This option would likely result in a larger, taller building to accommodate the co-location of several City departments. The change in scale and bulk would be mediated by design guidelines, and the topography of the site would provide an opportunity to incorporate structure parking in an aesthetically pleasing way. Adjacent properties are allowed the same ability to redevelop according to development regulations, though there may be temporary inconsistencies in scale if City Hall redevelopment is accomplished first.

Redevelopment of a portion of the NSD site with a new City Hall would involve augmenting the current multistory W.A. Anderson Building with a new annex in conformance with the applicable design standards of the alternatives. The adjacent cafeteria and gymnasium may be razed, but the iconic building would remain and be kept under public use. The building is three stories under existing regulations, the future annex would likely achieve heights up to 65 feet under; under the Proposed Alternative, the regulations would allow heights of six stories or 76 feet, but would require additions to either be separated from the W.A. Anderson Building by 20 to 30 feet or to preserve its massing architectural integrity. In conjunction with other development at this site, the City Hall project could turn this into a more intensive area, including features designed to accommodate pedestrians as well as autos. The change in scale could be mitigated by design standards that address upper-story setbacks and other design features intended to reduce bulk and appearance of height. All alternatives include some form of design standards, but the Proposed Alternative would impose more prescriptive standards as part of its form-based code. No adverse aesthetic impacts are anticipated.

Locating City Hall in the riverfront area on the Beta Bothell Commercial Site would strengthen the link between downtown and the riverfront, currently impeded by existing commercial properties, providing greater public access to a popular public open space resource. Given the site's current commercial development, its extensive paving, and general lack of landscaping, this redevelopment project would likely improve the site's visual quality. Construction of the new City Hall at this site would require adherence to either existing or proposed design standards, with special focus on sensitivity to existing park uses and reducing conflicts of scale.

Other Public Facilities

The Pop Keeney Stadium improvements and other public space features would enhance community focal places for public interaction, providing visual relief and recreation as the study area redevelops into a more intensive mixed use environment. Development on the stadium site could include a new aquatics center and a parking garage. No adverse aesthetic impacts are anticipated.

Height and Bulk

Under all alternatives, development within the study area is expected to continue, as many properties are currently underdeveloped. (See Figures 2-7 and 2-8 for

buildable lands and opportunity sites.) Outside of residential areas, building heights are often below the maximum allowed by code. As development pressures continue to rise, it is anticipated that a greater proportion of properties will be redeveloped at maximum allowed densities and heights to maximize the use of limited space. Therefore, overall building heights would increase under all alternatives, though concentration of this increase and the related potential increase in visual bulk would vary. Each alternative's height and bulk impacts and potential mitigation measures are further addressed below.

Views

Most views from the study area are already obstructed by vegetation, topography, and existing development. The potential for additional blocked views under the alternatives would be contingent on redevelopment of the study area to maximum heights allowed by code. This would represent an increase in height over existing conditions in many locations; however, these height increases are most likely to occur in the vicinity of SR 522 and SR 527. City planning policies encourage preservation of views to the “feathered edge” but do not define specific view corridors in regulations except in the Riverfront District. The concentration of additional building height in the SR 522 and SR 527 corridors could block territorial views (such as to the “feathered edge”) from a few properties located to the north of the study area. Mitigation measures for this potential impact could include upper story setbacks, and use of green building features such as green roofs. The view corridor regulations for the Riverfront District would remain in place under either alternative.

The introduction of taller buildings in the several downtown districts could potentially create views that are not currently available. Taller buildings could provide the additional elevation needed to gain new territorial views of the valley in which the study area is located or possibly provide additional views of the Sammamish River. This potential to create views is considered a potential positive impact.

Light and Glare

No common impacts on light and glare are anticipated.

No Action Alternative

Visual Character

While all future development under the No Action Alternative would be required to comply with existing regulations regarding building and site design, the structure of the current regulations makes the future visual character of the study area difficult to predict. Changes in visual character can result from changes in use as well as design. The City's system of applying multiple zoning designations to the same area, while

allowing for flexibility of use, may produce more uncertain aesthetic results than the more prescriptive regulations included under the Proposed Alternative. Potential impacts on specific portions of the study area are discussed below.

Main Street

Bothell's Main Street lies within an area zoned Residential-Activity Center (R-AC), Office Professional (OP), and Community Business (CB). The current pedestrian-oriented land uses along Main Street are permitted under current zoning and are likely to continue under the No Action Alternative. Future development would be required to provide many of the same features currently found in the area, such as rear parking and landscaping, but increased height over current development could cause conflicts of scale with the existing historic properties in the area. However, development adjacent to any property listed on the national, state, or local historic register or the City of Bothell Historic Inventory is subject to development regulations under City Code. BMC 12.14.230 states that any such development must reflect the historic character of adjacent building through measures specified in the code, including the use of similar building proportions, exterior materials, window proportions and patterns, and architectural details. In addition, 12.64.015(D) BMC requires buildings with frontage on Main Street to set back from the street lot line a minimum of 20 feet above the second story.

Even with the application of these special code provisions, a few parcels exist in the area that are not adjacent to inventoried properties. As such they would not be subject to these regulations. Therefore, taller redevelopment in the area could be out of character with the existing historic development. Thus, there could be residual impacts on visual character in this area under the No Action Alternative.

University of Washington Bothell/Cascadia Community College

The area surrounding the UWB/CCC campus complex is currently split among a variety of zones. East of Campus Way, the area is zoned R-AC, OP, CB, and Light Industrial, but is governed by a planned unit development. North of Beardslee Boulevard and west of Campus Way, current zoning calls for residential uses, neighborhood businesses, and professional offices. These uses are currently present in the area. Some of the office space appears to be of fairly recent construction and is in compliance with current design regulations. No significant impacts on visual character are anticipated in this area.

North of Main Street

The neighborhood immediately north of Main Street lies within an area zoned R-AC/OP/CB. The area is characterized by single-family homes and neighborhood services, but the CB zone allows a variety of more intense uses, such as auto repair, car washes, and gas stations, which are not currently prevalent uses. Expansion of these uses could conflict with the existing neighborhood aesthetics and disrupt the

quiet, residential character of this area, which would represent a significant impact on the visual character of this neighborhood.

SR 527 Corridor

SR 527 serves as a zoning boundary, so this corridor contains a variety of zoning districts. Property east of the highway and north of NE 185th Street is zoned R-2800 and OP, while land to the west is zoned R-AC, OP, and CB. The east side consists primarily of residences and small offices, while the west side contains a strip mall, gas stations, residences, and restaurants. Given the wide variety of uses that are permitted by current zoning, the future visual character of this area is difficult to predict. As such, the No Action Alternative provides little aesthetic certainty, compared to the Proposed Alternative. More information about the visual quality along SR 527 is pending the project-level National Environmental Policy Act (NEPA) analysis.

SR 522 Corridor

The SR 522 corridor contains portions of the General Commercial zone, as well as land zoned R-2800, OP, CB, and Motor Vehicle Sales Overlay (MVSO). The intersection of SR 522 and SR 527 is zoned R-AC, OP, CB, and MVSO. The southern portion of this corridor is expected to change over time as landscaping standards and parking requirements push redevelopment closer to the street, but the area is likely to retain a strong commercial character.

The future visual character of the intersection of SR 527 and SR 522 is more difficult to predict. Zoning in this area permits uses ranging from single-family homes to indoor shooting ranges to car dealerships. As such, future development under this alternative could lack visual unity. More information about the visual quality along SR 522 is pending the project-level NEPA analysis.

Height and Bulk

Under the No Action Alternative, the building heights could increase in R-AC zones surrounding the intersection of SR 522 and SR 527. These zones currently contain a number of properties developed at heights below the maximum allowed by code. By complying with additional development requirements, such as the provision of a specified amount of structured parking and externally oriented ground-level retail, properties can increase the maximum allowed height from 35 feet to 65 feet. Over time, it is anticipated that development pressures would lead redevelopment projects to take advantage of this opportunity and increase heights in these areas.

To illustrate various height scenarios, digital mass models of a portion of the study area were created. The maximum building envelope was calculated using measurement techniques set forth in the Bothell Municipal Code, assuming the provision of structured parking and the ground-floor retail required to achieve a maximum height of 65 feet. Figure 3.4-5 illustrates a cross section of this model along NE 183rd Street, in the western portion of the study area, including a potential extension from 98th Avenue NE to 96th Avenue NE looking north.

While this increase in height would be in compliance with existing regulations, it would represent an increase over existing conditions. Since most properties in the R-AC zones have not taken advantage of the 65-foot maximum height, redevelopment under the No Action Alternative has the potential to create temporary scale conflicts as some properties grow taller while others remain at their lower heights. Of particular concern is the R-AC zone that includes Main Street. The Main Street pedestrian area could find itself surrounded by taller buildings or being pressured to redevelop at greater heights, possibly losing some of its current human-scaled character. However, current development regulations specify height and setback regulations for development adjacent to historic inventory properties, and due to the prevalence of historic inventory properties in this area, most Main Street redevelopment sites would find themselves subject to these standards. Those properties in the Main Street area that are not adjacent to historic inventory properties would not be required to comply with these regulations. Redevelopment at the full allowed height could cause isolated conflicts of scale with the existing historic development. Thus, there could be residual impacts under the No Action Alternative.

In addition to internal conflicts, increased heights along the SR 527 corridor and adjacent to the R-2800/OP zone north of Main Street could affect properties adjacent to the study area, which are primarily residential in character. As properties in this area redevelop and take advantage of the 65-foot height bonus, conflicts of scale may result. However, 12.18.110 BMC requires landscape buffers between differing zones, and 12.64.015(C)(1) BMC requires buildings in the R-AC/OP/CB zones that abut a residential-only zone to increase their standard setbacks by 3 horizontal feet for every foot of building height over 35 feet. With the application of these standards, anticipated impacts would be less than significant.

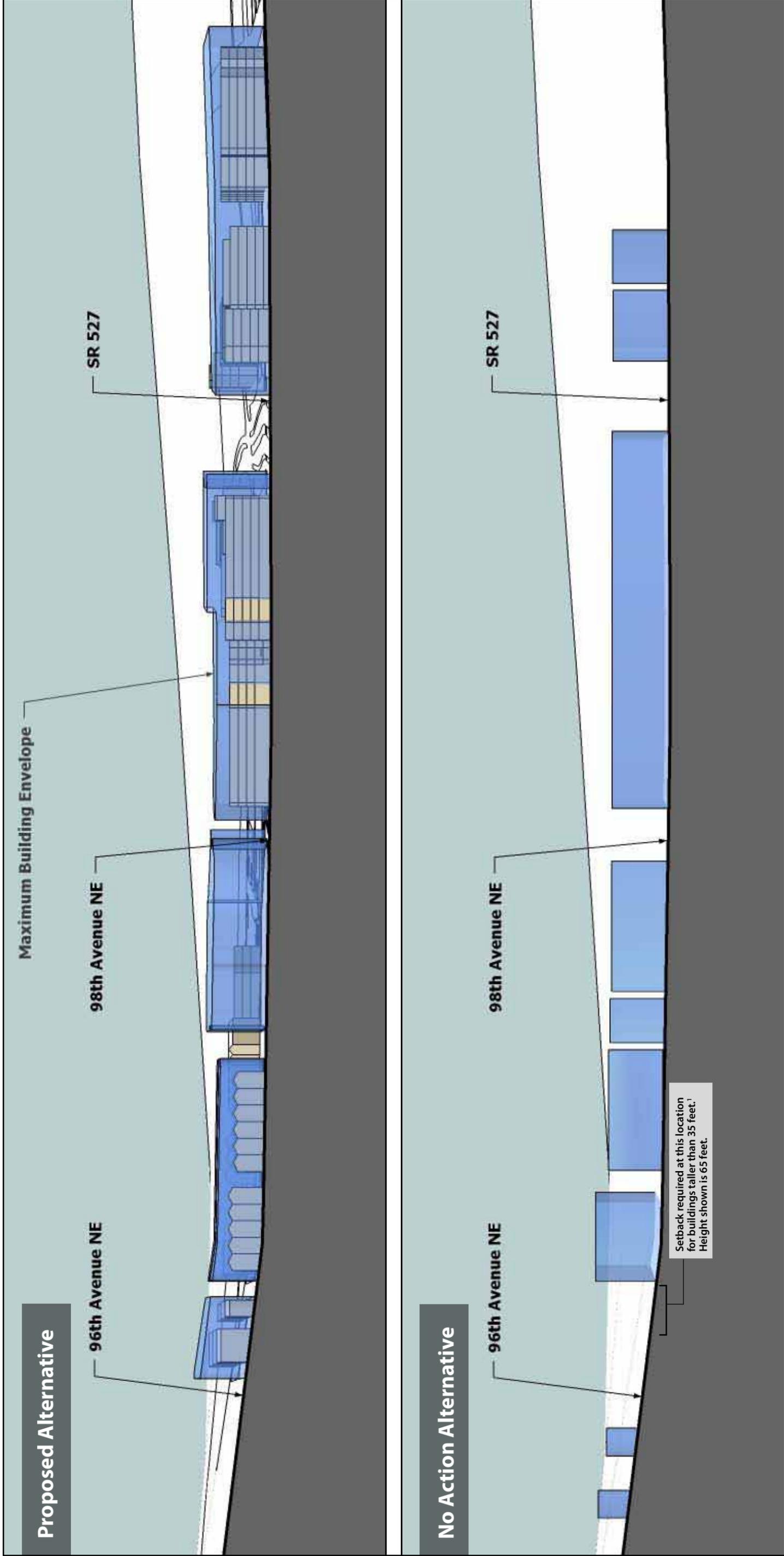
Views

Impacts under the No Action Alternative are limited to those discussed above under “Impacts Common to All Alternatives.”

Light and Glare

As properties redevelop under the No Action Alternative, it is anticipated that the net level of ambient light and glare will not significantly change from existing conditions. While taller development will require an increase in structured parking, thus decreasing the amount of surface parking and associated exposed lighting, the increased density of development is likely to introduce more commercial, office, and retail uses, along with their associated external illumination and signage.

In addition, the SR 522 and SR 527 capital projects, discussed under “Impacts Common to All Alternatives,” have the potential to affect light and glare. As a major highway, light and glare along SR 522 is anticipated to remain at roughly current levels.



Legend

- Maximum building envelope
- FTB Architects conceptual design (Proposed Alternative)

¹ BMC 12.64.015(C) requires increased setbacks for buildings taller than 35 feet that abut residential zones. Standard setbacks apply to buildings 35 feet and under.

Any new development under the No Action Alternative would be required to comply with BMC site development regulations that govern lighting. With the application of these regulations, no significant impacts on light and glare are anticipated.

Proposed Alternative

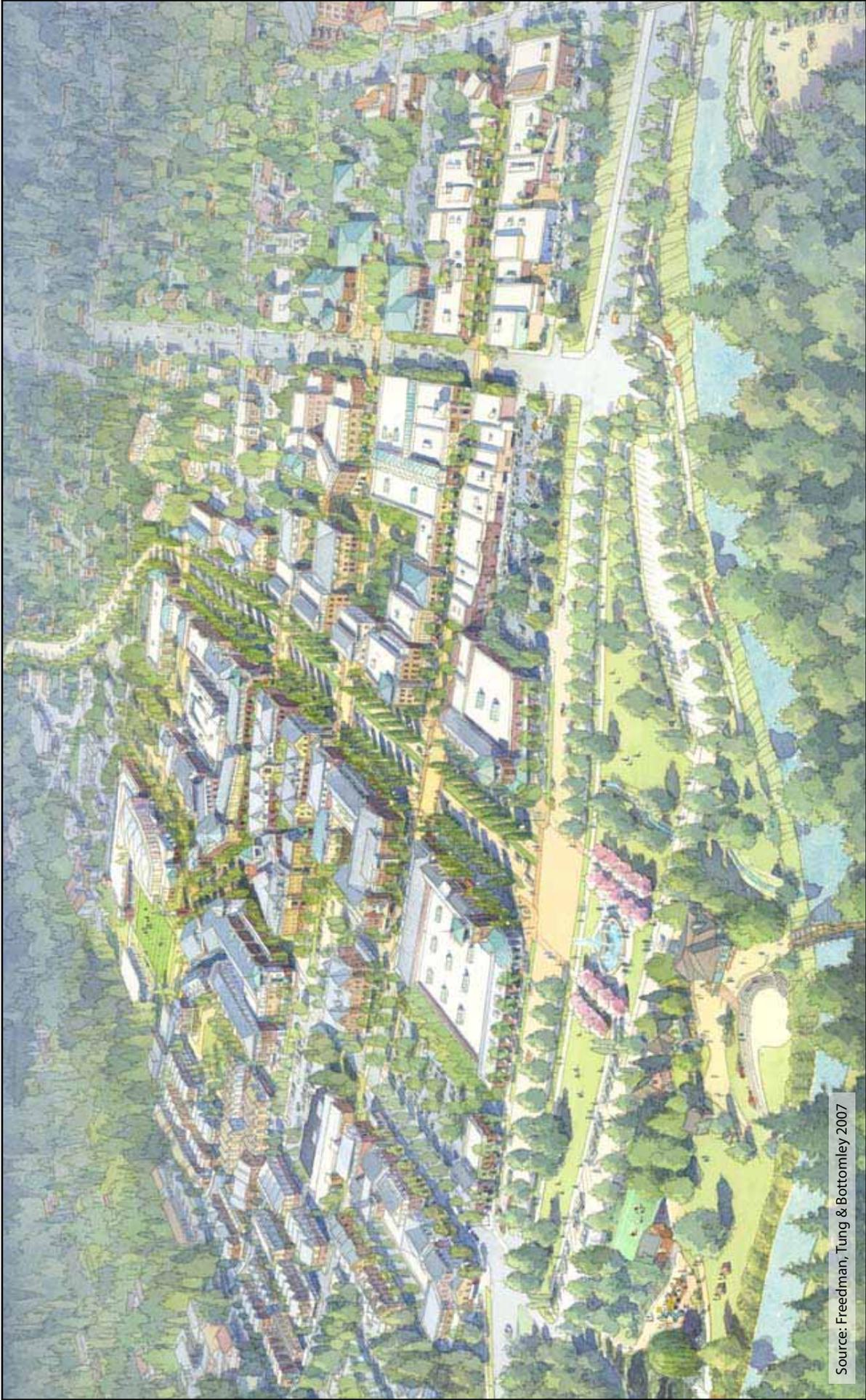
Visual Character

The *Downtown Subarea Plan and Regulations* proposes to transform Downtown Bothell to look and feel like the heart of the city (Freedman Tung and Bottomley 2008). The use of more defined districts with unique intents together with the form-based elements of the code are likely to create more predictability with the future development in the study area than the No Action Alternative. Figure 3.4-6 show conceptual renderings of the form development might take under the Proposed Alternative. Likely impacts on visual character resulting from implementation of the *Downtown Subarea Plan and Regulations* are described below.

Downtown Core

Under the Proposed Alternative, this district, which would include the SR 527 corridor and Main Street and would be designed as the most intensely developed portion of the study area, is envisioned as a pedestrian haven containing retail, entertainment, and personal services within an area furnished with wide sidewalks and other pedestrian amenities. Development of this type is generally located close to the street for ease of pedestrian access; gaps in sidewalks and pedestrian services undermine the whole.

The character along the SR 527 corridor would change substantially under the Proposed Alternative with the addition of the SR 527 Multiway Boulevard Treatments. This project would convert the SR 527 corridor south of Reder Way into a multiway boulevard, including low-speed access lanes and parallel parking separated from the main flow of traffic by planted medians. This represents a substantial change in character from existing conditions. Implementation of the project would create a pedestrian realm that is separated from arterial traffic and access lanes with on-street parking; currently, there is no opportunity for curbside parking or pedestrian amenities due to traffic speeds. This infrastructure improvement is also likely to foster a higher density of development along the corridor, given the increase in pedestrian access. The overall visual character of the area is anticipated to transition away from an auto-centric environment to a more pedestrian-friendly one with wide sidewalks, street trees, street furnishings, and more human-scaled visual details. Currently, medians are provided only near the intersection with NE 185th Street, and no curbside parking is available. Under the Proposed Alternative, the SR 527 corridor would constitute less of a visual barrier in the downtown area.



Source: Freedman, Tung & Bottomley 2007

Figure 3.4-6. Conceptual Rendering
Downtown Bothell Planned Action EIS
December 2008



While the Main Street area possesses many of the pedestrian-oriented characteristics desired in the Downtown Core District, its height restrictions could render it a low-rise island surrounded by much larger buildings. The application of design standards and development regulations would ensure that surrounding development is sensitive to the established Main Street visual character. With implementation of appropriate design standards, no significant impacts on visual character are anticipated in this district.

The Main Street Extension project would improve parking and sidewalks, expanding the pedestrian-friendly atmosphere. While the core of Main Street (near 101st Avenue) already possesses numerous urban design amenities, such as street lighting, landscaping, benches, and bicycle racks, other portions do not. In the areas between 101st Avenue and SR 527 and east of 102nd Avenue, pedestrian amenities are not as plentiful. Under the Proposed Alternative, these amenities are expected to expand to include the existing length of Main Street, as well as a planned extension across SR 527 to 98th Avenue. This extension would result in a more pedestrian-friendly environment in a currently auto-oriented area.

Proposed Alternative sub-option 2 would extend the Downtown Core District east several properties along either side of Main Street and west along the future extension of Main Street in place of Downtown Neighborhood District. Though the Downtown Core District allows for greater building heights than the Downtown Neighborhood District, special height limits and upper-story setbacks (at least 20 feet above the second story) would be applied to these properties. Historic resource protection regulations would also apply and are described under Section 3.7, “Cultural Resources.” The above discussion regarding Main Street visual character is also applicable to the expanded Downtown Core District. No significant impacts on visual character are anticipated in this district.

Downtown Neighborhood

Under the Proposed Alternative, the new Downtown Neighborhood District would flank the Downtown Core District to the east and west, including the area described under “Affected Environment” as North of Main Street. The intent of this district is to provide a location for a mix of commercial and multifamily residential uses immediately adjacent to the Downtown Core District.

While multifamily residential uses already exist in the affected areas, their current visual character would change under the Proposed Alternative. West and east of the Downtown Core District, the character is primarily medium density, single-family with some multifamily residences and neighborhood services mixed in. To the south, the existing character is primarily commercial. The Proposed Alternative would transform the area into one characterized primarily by multifamily residences, located closer to the street; new single-family homes would not be permitted. While the area is intended to act as a buffer between the Downtown Core Districts and the less urban

districts outside it, easy access to the Downtown Core District is a paramount design goal. As a result, the Downtown Neighborhood District would result in higher densities than are currently found within its geographic limits. While a new emphasis on quality design and pedestrian access could improve many properties that are currently in poor condition, single-family homes may find themselves crowded as the area redevelops. The area immediately north of Main Street could be especially vulnerable to this, as it is an established neighborhood of older homes.

Visual character in this district would also be affected by the proposed NE 185th Street/98th Avenue NE Connector from SR 527 to 98th Avenue NE. The CFP indicates that this project is intended to provide an east-west connection between new development on the west side of SR 527 and the campus district to the east, including a possible transit route. The establishment of this connection would alter the present visual character of the area, catalyzing redevelopment and adding street activity; however, this project would also result in a more pedestrian-friendly environment by breaking up the large-block scale. No significant impacts on visual character are anticipated.

Proposed Alternative sub-option 1 would extend the Downtown Neighborhood District east between Beardslee Boulevard and NE 185th Street in place of some areas of Downtown Transition and General Downtown Corridor. Overall, this would allow for a more mixed-use and urban character given the greater allowance for commercial uses and the additional story in height. No significant impacts on visual character are anticipated.

Downtown Transition District

Under the Proposed Alternative, this district would provide a transition between the densities of the Downtown Core and Downtown Neighborhood districts and lower density existing residential neighborhoods adjacent to the study area on the north and west. This district is essentially a slightly less intense version of the Downtown Neighborhood District. While the areas within this district currently contain large numbers of single-family homes, new single-family homes will not be permitted. While this change is not likely to adversely affect the visual quality of the area, it does represent a change to visual character. Future development would consist of clusters of townhomes, apartments, and condominiums, rather than houses on individual lots. Development regulations for this district provide modest setbacks and ensure spacing of buildings. While setback requirements would limit visual bulk and preserve open space, they would not mask the increased density, which represents a significant impact on the visual character of the area.

Proposed Alternative sub-option 1 would replace a section of the Downtown Transition District in the vicinity of 104th Avenue NE south of NE 185th Street with the more intense Downtown Neighborhood District. This would increase building height limits in this area by one story and create a more urban, mixed-use character.

With the application of appropriate design standards, no significant impacts on visual character are expected.

SR 522 Corridor

Under the Proposed Alternative, landscaping standards and modified parking requirements in this district would bring buildings closer to the street in some cases, yet still provide substantial setbacks to distinguish it from the more urban districts. This district would maintain its important commercial function, but restrictions on location of parking and regulations governing building design would be imposed to avoid the appearance of “strip” style development. No significant impacts on visual character are anticipated.

General Downtown Corridor

Under the Proposed Alternative, this district would undergo more extensive street plantings and buildings would be located closer to the street frontage to create a more clearly defined “street edge.” Similar to the SR 522 corridor, this district is intended to remain a travel corridor, though the narrower streets and less intense uses permitted here would serve to create a suburban character, rather than the primarily commercial function of SR 522. No significant impacts on visual character are anticipated in this district.

Proposed Alternative sub-option 1 would replace a portion of the General Downtown Corridor north of Beardslee Boulevard with the more intense Downtown Neighborhood District. This would increase the building height limits and create a more urban, mixed-use character. With the application of appropriate design standards, no significant impacts on visual character are expected.

Sunrise/Valley View Neighborhood

Under the Proposed Alternative, the Sunrise/Valley View Neighborhood would preserve the existing neighborhood’s single-family character. This district is intended to provide a greater degree of housing choice to those wishing to live close to central downtown. Visual quality would likely increase in this area over time as a result of the restriction on large multifamily projects and commercial infill and the requirement that new homes reflect the historic style of the area.

Campus District

Impacts under the Proposed Alternative would be limited to those discussed above under “Impacts Common to All Alternatives.”

Park District

Under the Proposed Alternative, this district would be composed of Bothell’s network of open space and trails, which connect the North Creek wetlands to the Park at Bothell Landing via the Sammamish River Trail. The Sammamish River Trail continues along the river to the southwest, connecting to the Burke Gilman Trail, which gives pedestrians and bicyclists access to recreation opportunities outside of

Bothell. The Park District is designed to preserve this amenity for the community; as such, no significant impacts on visual character are anticipated.

Riverfront Overlay

The Riverfront Overlay zone is established in current Bothell code to protect views of the river by limiting building heights to 38 feet and requiring that one-fourth of each parcel be dedicated as a river view corridor. Under the Proposed Alternative, the Riverfront Overlay would remain in place. No impacts on views are anticipated.

Height and Bulk

Under the Proposed Alternative, the maximum allowable building height in the study area would change. Maximum heights would increase in some areas, such as the Downtown Core District, and decrease in others, such as the Downtown Neighborhood District and portions of the Downtown Transition District.

Figure 3.4-7 shows the proposed maximum heights for the study area, including the net change of proposed compared to current maximums.

The proposed maximum height for the Downtown Core District (76 feet) is higher than for any current zoning in the study area. While 76 feet is greater than the present allowance in this location, it is not unprecedented in Bothell. The City allows buildings in other portions of the City to reach heights of 100 feet, such as in the Canyon Park regional activity center and North Creek regional activity center, with the provision of underground/structured parking and ground-level retail/entertainment uses. However, the proposed maximum would represent a large increase over existing conditions, because buildings have not typically achieved maximum heights under current regulations.

While maximum heights would decrease in some areas, with the exceptions of the Sunrise/Valley View neighborhood and the Campus District where heights limits are retained, the proposed maximum heights are generally higher than existing buildings. As a result, redevelopment under the Proposed Alternative could affect pedestrian comfort in these environments and create temporary conflicts of scale with existing development. The Main Street area, which is included in the Downtown Core District, would be especially vulnerable to this. The application of design standards, with special attention to upper story setbacks, would be necessary to minimize conflicts of scale and ensure that new buildings are sensitive to existing development.

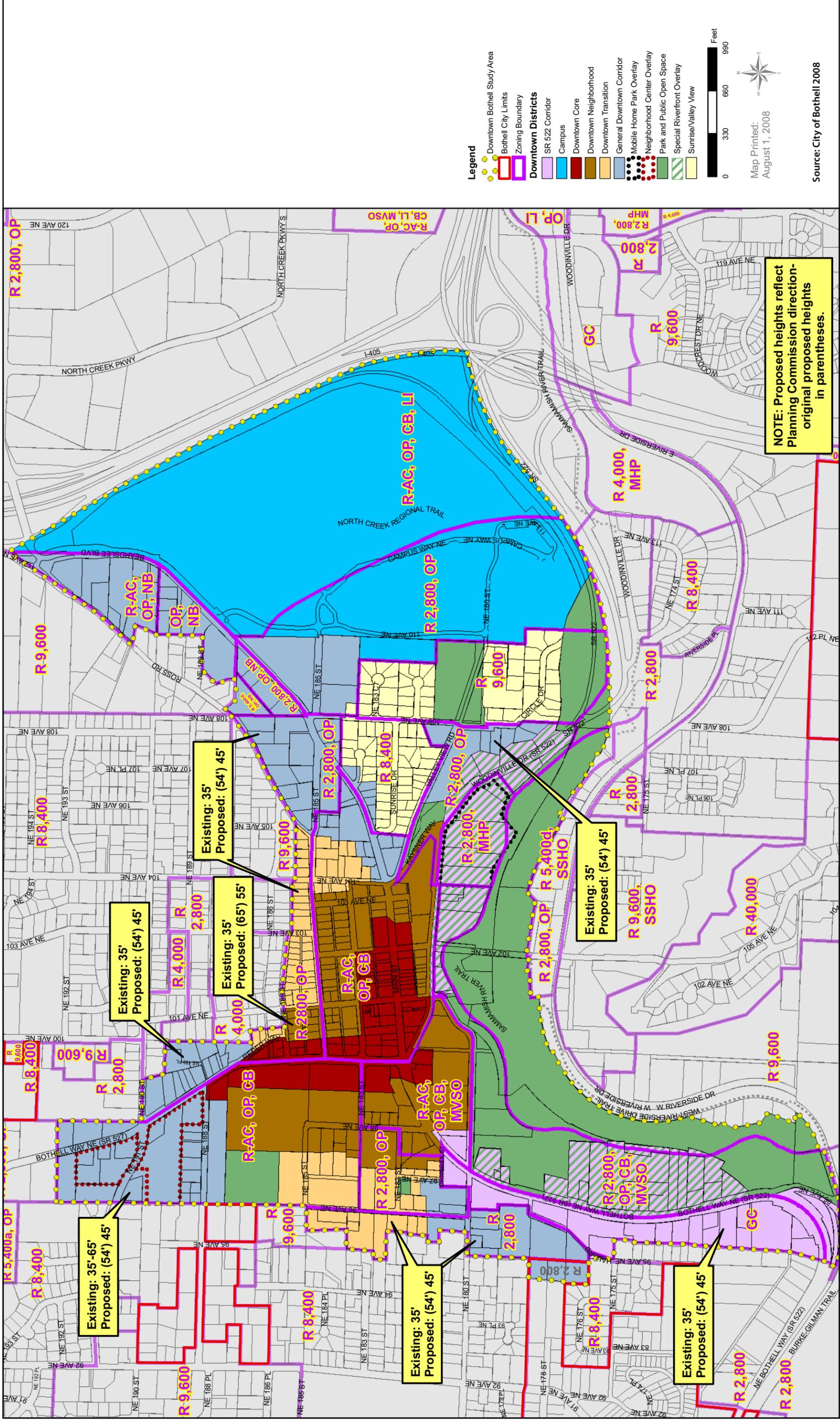


Figure 3.4-7. Maximum Heights—Proposed Alternative Downtown Bothell Planned Action EIS
December 2008

While conflicts of scale are often an issue where districts with differing height limits meet, such conflicts would be minimized under the Proposed Alternative.

Figure 3.4-5 shows a cross section of a likely buildout scenario along a potential extension of NE 183rd Street to 96th Avenue NE (City of Bothell 2008), as well as maximum allowed heights under the Proposed Alternative. The likely buildout scenario represents a conceptual design based on land available, parking requirements, and building footprint restrictions in the proposed code.

As illustrated in Figure 3.4-5, the spatial arrangement of the districts buffers areas of greatly differing heights with areas of intermediate height. For example:

- The Downtown Transition District forms a buffer between the Downtown Core and Downtown Neighborhood districts and the lower-density, single-family neighborhoods to the north and west of the study area.
- General Downtown Corridor forms a buffer between the Sunrise/Valley View District's low height limits and the nearby urban area, and between the Downtown Core District along the north end of the multiway boulevard and the residential zoning to the northeast.

The Proposed Alternative does, however, contain the potential for conflicts of scale with development surrounding the study area. Most of the districts on the edge of the study area are proposed to have maximum heights between 54 and 65 feet. The surrounding areas are primarily residential in character, and are generally limited in height to 35 feet by current zoning. The application of proposed special height requirements and setback requirements along the edges of the study area will help ensure that new development is sensitive to neighboring existing low-density uses.

Views

In addition to view impacts discussed under “Impacts Common to All Alternatives,” heights in the SR 522 Corridor District would increase to 54 feet under the Proposed Alternative, compared to the current maximum of 35 feet. The Riverfront Special District, as currently defined by the Bothell Municipal Code, would be within this district. The Proposed Alternative, however, preserves the regulations contained in 12.64.080–090 BMC for use in the Special Riverfront Overlay. With the application of these development regulations, the no significant impacts on views are anticipated.

Light and Glare

Under the Proposed Alternative, increases in ambient light and glare are anticipated primarily in the Downtown Core, Downtown Neighborhood, and Downtown Transition districts. These light and glare increases would result from increased vehicle traffic related to increased density, operation of retail and entertainment uses during evening hours, and the SR 527 Multiway Boulevard Treatments. The application of design standards governing lighting will reduce impacts associated with increased light and glare to a less-than-significant level.

Planning Commission Recommendations

As described in Section 2.3.4, the Planning Commission Recommendations are in the range of the No Action and Proposed alternatives, with special attention paid to transitions between the study area and surrounding neighborhoods. The recommendations are intended to increase compatibility between new and existing development in these areas.

Visual Character

Potential changes to visual character are anticipated to be generally similar to under the Proposed Alternative, except in those areas where district boundaries differ or where existing zoning is retained. Visual impacts on specific locations are described below.

Downtown Core/Downtown Neighborhood

Under the Planning Commission Recommendations, the reduction of the Downtown Core District and expansion of the Downtown Neighborhood District along SR 527 north of NE 185th Street would result in lower building density, increased multifamily residential, and reduced commercial, compared to the Proposed Alternative. The Downtown Neighborhood District would be more extensive along Beardslee Boulevard, in an effort to compensate for reduced density in other locations. Compared to the No Action Alternative, the recommendations would result in increased building density and greater provision of pedestrian amenities.

Effects on visual quality would be similar to the Proposed Alternative, except with regard to location.

Downtown Transition District

Under the Planning Commission Recommendations, the Downtown Transition District would be eliminated, and parcels in this area would continue to be governed by existing land use designations and zoning (R-2800 and R-2800/OP). Impacts on visual character in this district would be similar to under the No Action Alternative.

SR 522 Corridor

Under the Planning Commission Recommendations, the SR 522 Corridor would be reduced from the boundaries set forth under the Proposed Alternative. The R-2800/OP/CB/MVSO zone near the south end of the subarea would remain under current zoning, allowing the current auto-oriented uses to continue. These properties would not be subject to revised parking standards or setback requirements under the Proposed Alternative. While visual impacts in most of the SR 522 Corridor would be similar to under the Proposed Alternative, those areas where current zoning is retained would experience impacts similar to under the No Action Alternative.

General Downtown Corridor

Under the Planning Commission Recommendations, the boundaries of the General Downtown Corridor would be reduced through the retention of some existing zoning districts (R-2800/OP, R-2800/OP/NB, R-5400d/OP/NB, and R-AC/OP/NB). While visual impacts in most of the General Downtown Corridor would be similar to under the Proposed Alternative, visual impacts in peripheral areas where existing zoning is retained would be similar to under the No Action Alternative.

Sunrise/Valley View Neighborhood

Visual impacts in the Sunrise/Valley View Neighborhood under the Planning Commission Recommendations are anticipated to be similar to under the Proposed Alternative, with the exception of those areas where the district's boundaries are amended, as described in Section 2.3.4.

Mobile Home Park Overlay

Under the Planning Commission Recommendations, the proposed Mobile Home Park Overlay is eliminated, and the affected parcels would continue to be governed by existing zoning (R-2800/MHP). Visual impacts in this area are anticipated to be similar to under the No Action Alternative.

Other Districts

In the remaining districts (Campus, Park and Public Open Space, Special Riverfront Overlay, Neighborhood Center Overlay), the Planning Commission recommends no significant changes to the Proposed Alternative. Therefore, visual impacts are anticipated to be similar to under the Proposed Alternative.

Height and Bulk

In general, the Planning Commission Recommendations call for lower height limits than the Proposed Alternative, but higher limits than the No Action Alternative. In most cases, the Planning Commission Recommendations allow the same maximum number of floors as the Proposed Alternative, but absolute height in feet is capped at a lower value (Table 2-6).

Height and bulk impacts under the Planning Commission Recommendations, while greater than under the No Action Alternative, would be less than under the Proposed Alternative, due to the lower maximum height limits and the elimination of the Downtown Transition District. No additional significant height and bulk impacts are anticipated.

Views

View impacts under the Planning Commission Recommendations are anticipated to be in the range of the No Action and Proposed alternatives. The reduction of building height limits in the downtown districts is anticipated to result in less significant impacts on views than the Proposed Alternative.

Light and Glare

Similar to the Proposed Alternative.

3.4.3. Mitigation Measures

Incorporated Plan Features

The No Action Alternative would continue the Urban Design Element goals and policies set forth in the Comprehensive Plan, as well as sections 12.14.170–12.14.230 BMC, which contain provisions for exterior building and site design.

Under the Proposed Alternative, the following standards and provisions of the *Downtown Subarea Plan and Regulations* would act as mitigation measures for any impacts (Freedman Tung and Bottomley 2008).

- **Section 12.64.203.** New development adjacent to single-family residential uses will be subject to a relational height limit that establishes a 1:1 ratio of height to setback above 15 feet. Landscaping will also be provided along the adjoining property line to screen existing single-family residences from new development.
- **Section 12.64.503.** Building length massing regulations specify the use of façade modulation, including pilasters or notches, to avoid long stretches of uninterrupted wall and maintain human scale in the downtown area.
- **Section 12.64.203(3).** New development along Main Street and other selected streets in the surrounding area are subject to a special height limit that requires a street façade offset above the second story to protect the pedestrian environment below and maintain consistency with existing development.
- **Section 12.64.305(6).** Standards for the design and placement of exterior lighting include requirements that lighting fixtures be directed downward to avoid excess light pollution and provisions encouraging the use of shielded bollards to avoid glare for passing motorists.
- **Section 12.64.504(6d).** Green roofs and roof gardens are encouraged to provide improved stormwater management and increase the visual interest of the building.
- **Section 12.64.301(4e).** The proposed NE 185th Street/98th Avenue NE Connector project will include on-street parallel parking, a planted center median, and transit amenities to preserve the pedestrian environment while accommodating increased traffic.
- **Historic Resources Regulations.** These regulations establish a Downtown Special Review Area (which includes Main Street) and specify that the Landmark Preservation Board will review any application to conduct exterior alterations to a building within this area. Additionally, new development and redevelopment within the area would utilize the character-defining features currently found in the district and maintain heights that are compatible with adjacent buildings.

Applicable Regulations and Commitments

Development under the No Action Alternative would continue to be bound by the provisions of the Bothell Municipal Code governing building and site design (12.14.170 – 230 BMC) and the City’s Comprehensive Plan. The UWB/CCC campus complex would continue to be governed by the adopted planned unit development under all alternatives. The Riverfront Overlay regulations protecting views in this area would be retained under all alternatives.

Other Potential Mitigation Measures

The City could consider revising maximum allowable heights in zones/districts that border the edge of the study area to reduce impacts on surrounding development and aid transitions from residential areas to the more urban downtown. The Planning Commission Recommendations provide an example of this type of approach.

The following mitigation measure is recommended, in addition to measures identified under “Incorporated Plan Features,” to reduce potential impacts on territorial views.

Green Roofs and Roof Gardens

Green roofs and roof gardens could be encouraged on all development in the study area through the use of incentives such as alternative stormwater requirements or parking standards.

3.4.4. Significant Unavoidable Adverse Impacts

The overall character and significance of visual impacts on the study area depends in large part on the quality of the architectural and urban design features incorporated into the development and the values of those viewing the changes. New development and redevelopment would result in a change to the current aesthetic conditions of the study area. The alternatives would potentially increase the amount of ambient light and glare produced in the study area. The alternatives differ with regard to the scope, intensity, and location of these changes. With application of existing and proposed plans and regulations, and other identified mitigation measures, no significant unavoidable adverse impacts are anticipated.

3.5. Transportation

This section discusses existing conditions relating to transportation, including applicable regulations and policies, and presents an inventory of transportation infrastructure and services, and existing operating conditions. Impacts on transportation from increased vehicle traffic associated with the alternatives are analyzed cumulatively with traffic from other planned regional growth. Parking requirements, non-motorized facility improvements, and transit location and capacity are compared.

3.5.1. Affected Environment

Transportation facilities in the study area include state highways, city streets, sidewalks, bikeways, trails, and public transportation facilities and services. A comprehensive inventory of all transportation facilities provides a sound basis for effective planning. Consistent with the requirements of the Growth Management Act (GMA), the City of Bothell (City) maintains inventories of transportation facilities, which include:

- roadways,
- parking,
- traffic control,
- public transportation,
- bikeways and walkways, and
- transportation demand management.

These elements of the City's transportation system are described in the following sections. Data in this section are based on the *City of Bothell Downtown Transportation Needs Analysis—Existing Conditions Report* produced by the Transpo Group in 2003 and updated by Perteet Inc., in 2006 (Perteet 2006) regarding the bicycle facilities, American with Disabilities Act (ADA) facilities, and additional transit facilities sections. This report is included as Appendix F.

Existing Roadway Network

State Highways

Bothell is bordered on the north by unincorporated Snohomish County, to the south by unincorporated King County, on the east by unincorporated Snohomish County and the City of Woodinville, and to the west by unincorporated Snohomish County and the City of Kenmore. Interstate (I) 405 is a major state/federal north-south freeway route through the Puget Sound region and Bothell. SR 522 provides a

corridor between Highway 2 in East Snohomish County and the City of Seattle along the north end of Lake Washington. SR 527 provides a corridor between Bothell and southeast Everett.

Study Area Street Network

The study area is served by three regional transportation corridors: SR 522 and SR 527 pass through the study area and I-405 forms its eastern boundary. SR 527, SR 522, and Beardslee Boulevard provide connections to I-405. High traffic volumes on these corridors during commuting periods cause congestion and delays in the study area.

The two major roadways in the study area are SR 522 and SR 527. SR 522 provides an east-west link to other communities and study area circulation; SR 527, which begins at the intersection of SR 522 and Main Street, provides north-south access to other communities and study area circulation.

Figure 3.5-1 identifies the street in the study area by the following classifications:

- limited access highway
- principal arterial
- minor arterial
- collector
- neighborhood or local access street

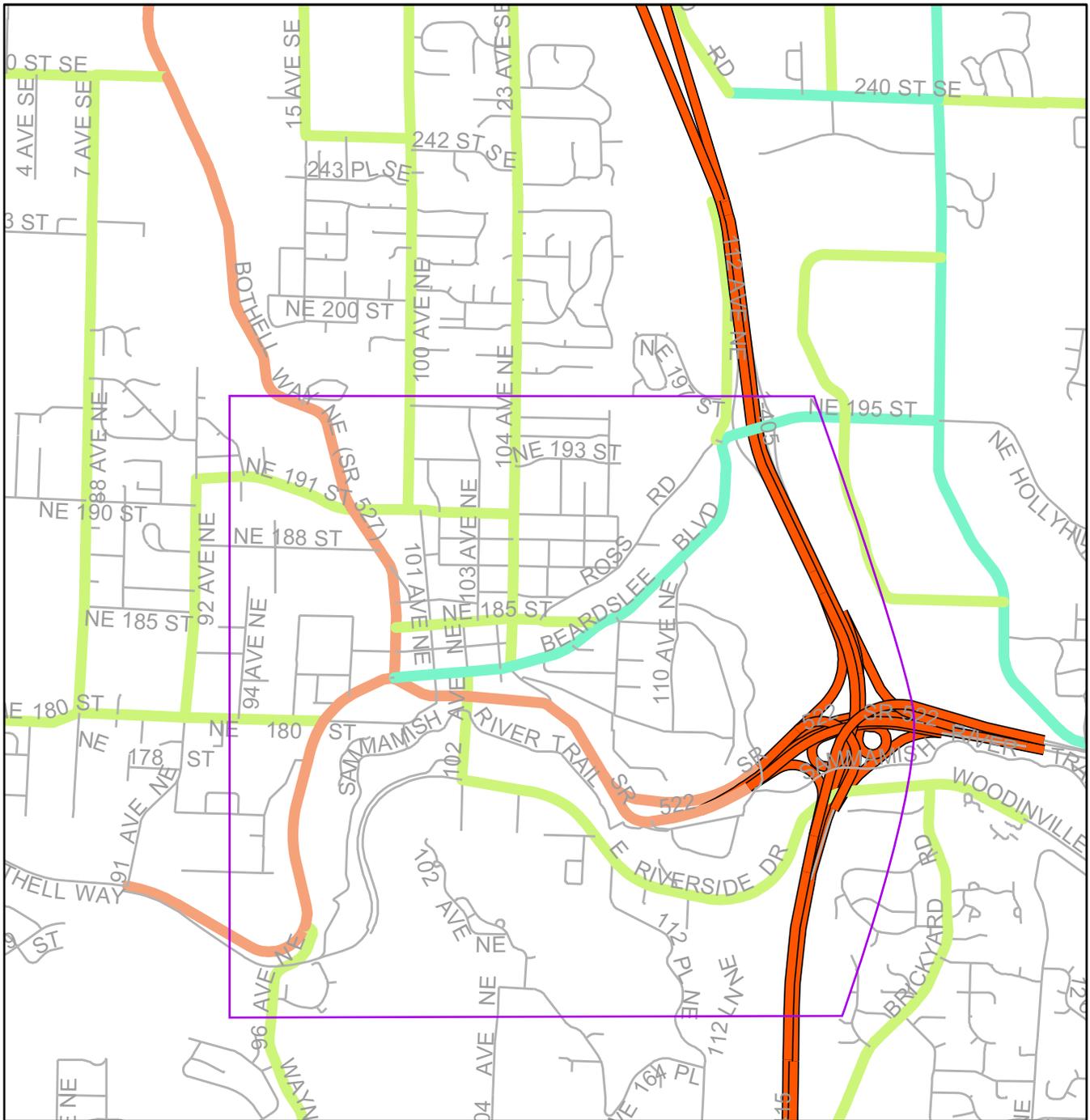
Most study area intersections are controlled with one-way stop signs, all-way stop signs, or traffic signals. Figure 3.5-2 depicts the locations of intersections controlled by all-way stop signs and traffic signals. Within the study area signals are found generally on state highways.

Existing Roadway Operations

Traffic analysis was completed for this Draft EIS to comply with the City's concurrency requirements and to provide additional information for the reader. This section discusses existing traffic volumes, concurrency management, and intersection level of service (LOS).

Traffic volumes

Traffic counts were conducted for the total number of vehicles traveling on key streets in the study area in 2006. The total number of daily vehicles was measured as well as the number of vehicles traveling during morning (AM) and afternoon (PM) peak commuting hours. The AM peak-hour volumes occurred between 7:00 a.m. and 8:00 a.m. The PM peak-hour volumes occurred between 5:00 p.m. and 6:00 p.m.



Legend

- █ Limited Access Highway
- █ Principal Arterial
- █ Minor Arterial
- █ Collector
- Neighborhood or Local Access Street
- ▭ Study Area

Source: City of Bothell 2006



Figure 3.5-1. Roadway Functional Classifications
 Downtown Bothell Planned Action EIS
 December 2008

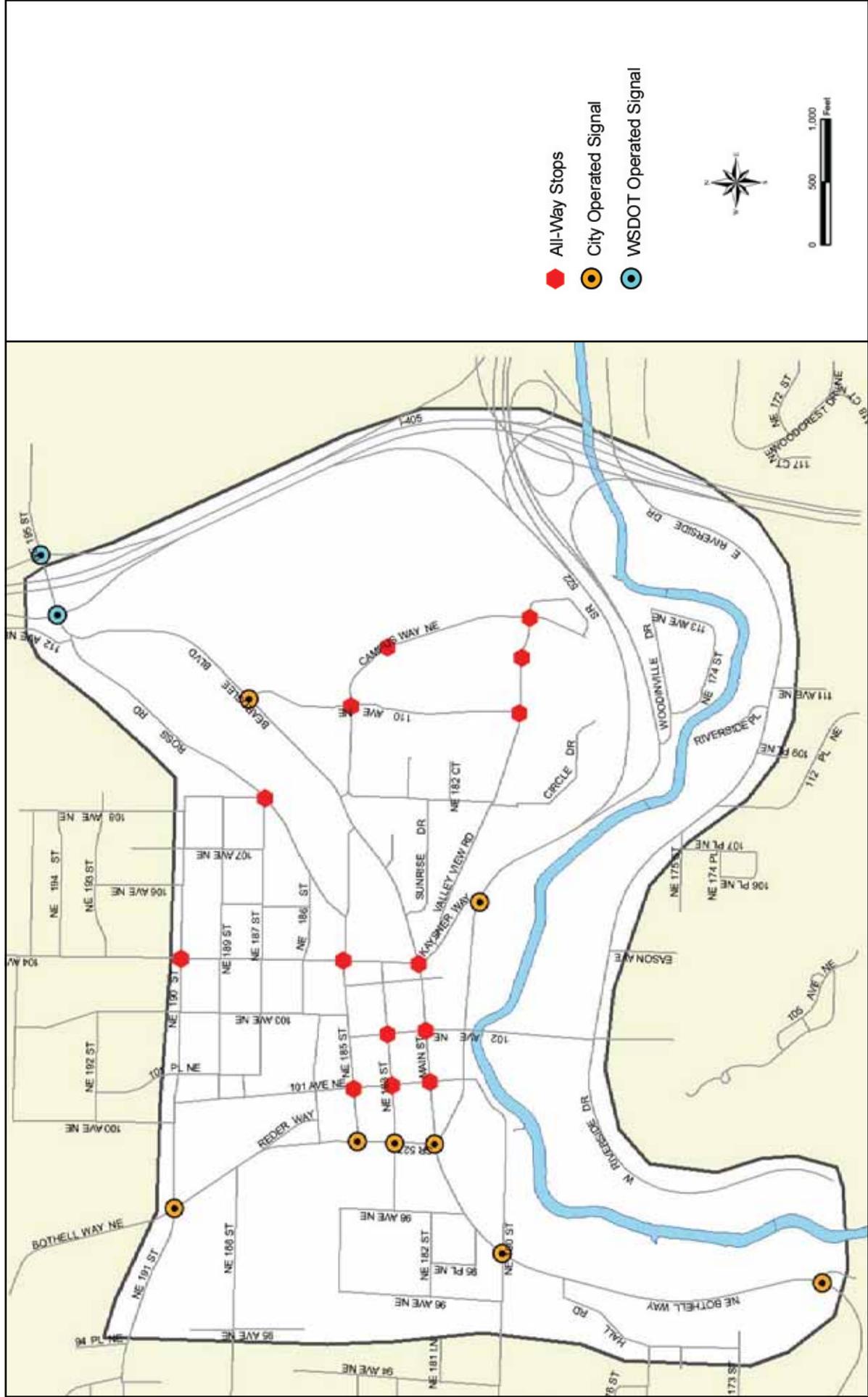


Figure 3.5-2. Intersection Traffic Control—Existing (2005)
 Downtown Bothell Planned Action EIS
 December 2008

The traffic counts revealed that average daily traffic (ADT) volumes in the study area are highest on Bothell Way NE/SR 522, ranging from 34,400 ADT on the west end of the study area to 31,400 ADT at the east end near I-405 (Figure 3.5-3). Bothell Way NE/SR 527 and Beardslee Boulevard have the next highest daily traffic volumes: 14,400 and 13,500 ADT, respectively. Table 3.5-1 shows ADT volumes for major traffic corridors in the study area. A significant amount of the north-south traffic (91%) travels on the arterial streets, while only 9% travels on the collector streets.

Table 3.5-1. Average Daily Traffic Volumes on Major Corridors—Existing (2006)

Average Daily Traffic Volumes	
North-South Corridors	
Arterial Streets	
SR 527 north of NE 190th St	17,800
I-405 north of Beardslee Blvd	120,000
Subtotal	137,800
Collector Streets	
88th Ave NE north of NE 195th St	4,280
100th Ave NE north of NE 190th St	5,740
104th Ave NE north of NE 190th St	3,740
Subtotal	13,760
East-West Corridors	
Arterial Streets	
SR 522 west of SR 527	43,600
NE 185th St via 98th Ave	1,200
Subtotal	44,800

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

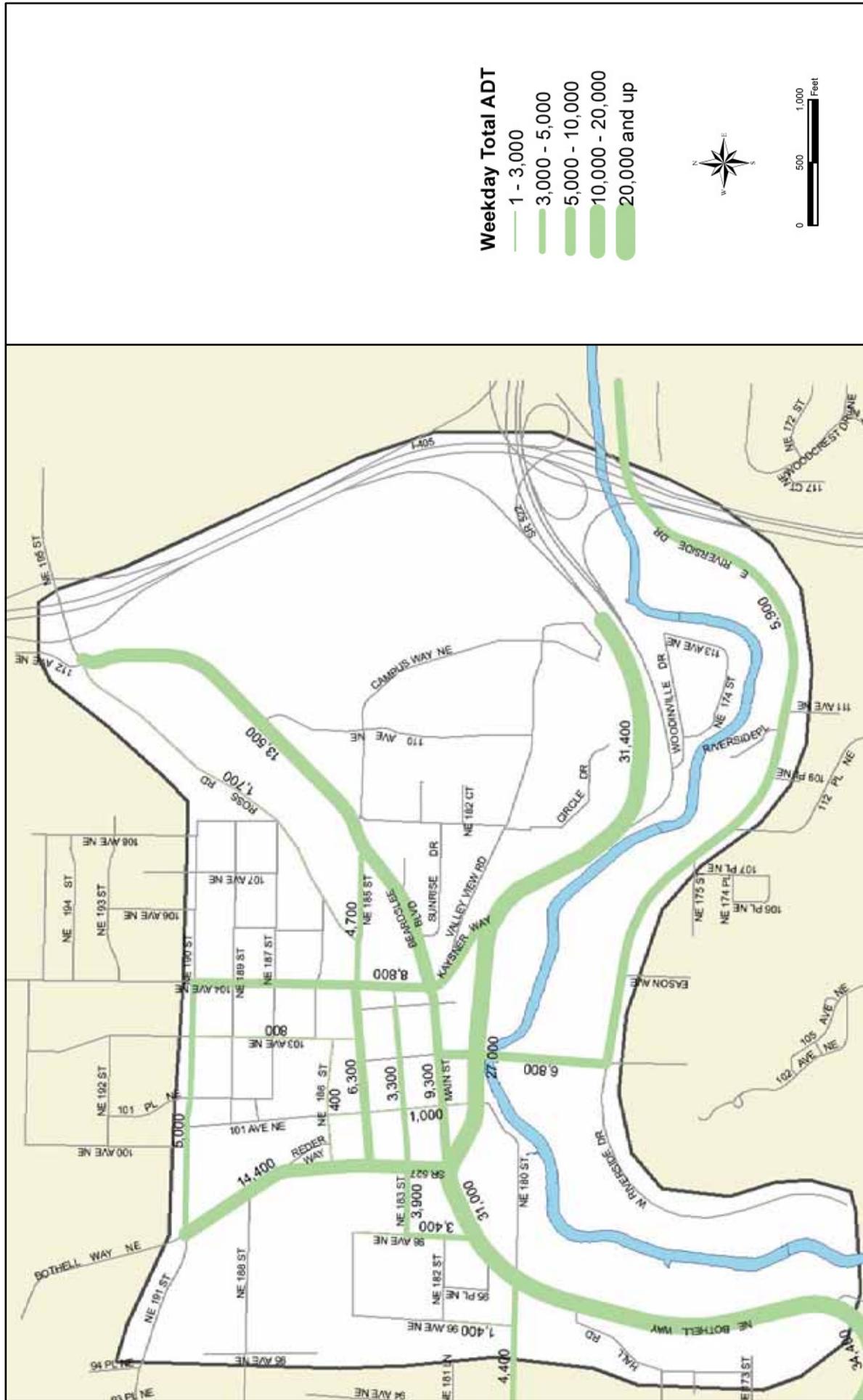


Figure 3.5-3. Daily Traffic Volumes—Existing (2006)
Downtown Bothell Planned Action EIS
December 2008

Immediately to the north and west of the study area are low-density residential neighborhoods. Table 3.5-2 provides ADT volumes for roadways in these neighborhoods.

Table 3.5-2. Neighborhood Street Traffic Volumes—Existing (2006)

Roadway	Average Daily Traffic Volumes
NE 180th St east of 92nd Ave NE	5,150
NE 188th St east of 92nd Ave NE	5,560
NE 191st St east of 92nd Ave NE	4,080
90th Ave NE west of 92nd Ave NE	1,950
NE 190th St west of 92nd Ave NE	1,350
NE 185th St west of 92nd Ave NE	990
91st/92nd Ave west of SR 522	1,550
83rd Ave to 180th St west of SR 522	3,330

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan.

Concurrency Management System

Transportation planning is mandated by GMA [RCW 36.70A]. GMA mandates that agencies such as the City adopt concurrency management systems to ensure that development cannot occur unless existing infrastructure either exists or is built concurrent with development. In addition to construction of new capital facilities, concurrency may be met through transit service or transportation demand management (TDM) strategies.

The City has established through its Comprehensive Plan a policy for concurrency management. Under the City's concurrency management system, seven specific corridors have been identified for evaluation. The average delay is calculated at each of the selected intersections within the corridor; these delays values are then averaged for the entire corridor. The corridor LOS is determined based on this average.

LOS is the primary measurement used to determine the operating quality of a roadway segment or intersection. The quality of traffic conditions is graded into one of six LOS designations: A, B, C, D, E, or F. LOS A and B indicate smooth traffic flow with minimal delay; LOS C and D indicate traffic flow with some delay; LOS E indicates conditions at or approaching congestion; and LOS F indicates unstable traffic flow with a high level of congestion.

The City has adopted a PM peak-hour threshold of LOS E for all corridors. The LOS was calculated according to procedures set forth in the Highway Capacity Manual (Transportation Research Board 2000).

Table 3.5-3 summarizes the delay criteria used to determine LOS for signalized and stop-controlled intersections. LOS for signalized intersections is based on the average amount of delay experienced by all vehicles that travel through the intersection. LOS for stop-controlled intersections is based on the average delay experienced by drivers on the stop-controlled approaches. Because stop-controlled intersections are generally expected to carry lower volumes of traffic than signalized intersections their acceptable delay times are lower at each LOS.

Table 3.5-3. Level of Service Criteria for Intersections

Level of Service	Average Delay per Vehicle (seconds/vehicle)	
	Signalized Intersections	Stop-Controlled Intersections
A	≤10	≤10
B	10–20	10–15
C	20–35	15–25
D	35–55	25–35
E	55–80	35–50
F	>80	>50

Source: Transportation Research Board 2000

Only one of the corridors that the City evaluates for concurrency—SR 522 from 91st Avenue NE through the Kaysner Way intersection—is completely contained in the study area. For this reason, it was selected for concurrency analysis in this Draft EIS; it is referred to herein as the study corridor. This corridor operates at LOS D, with a delay of 42 seconds per vehicle.

Intersection Evaluation

The City does not have an LOS threshold or standard for individual intersections. However, LOS E is a common threshold with other jurisdictions throughout the region. LOS values for study intersections are provided in Tables 3.5-4 and 3.5-5 and on Figure 3.5-4.

¹ SR 522 is an HSS route and the City is not required to comply with state LOS requirements. SR 527 is a regional route and has a requirement of LOS E mitigated. The state does not limit LOS analysis to intersections but allows cities to determine the measurement methodology. The City's methodology and LOS threshold are consistent with the regional requirement.

Table 3.5-4. Signalized Intersections Level of Service Summary—Existing (2006)

Street Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay ¹	Volume/ Capacity	LOS	Delay ¹	Volume/ Capacity
SR 522/Kaysner Way	C	20.2	0.60	D	39.9	0.68
SR 522/Main St/SR 527	D	42.2	0.83	D	48.0	0.89
SR 522/180th St	B	16.2	0.65	B	18.6	0.78
SR 522/96th Ave	C	33.6	0.91	C	25.0	0.86
SR 527/183rd St	A	9.1	0.37	B	17.0	0.41
SR 527/190th St	D	38.2	0.87	C	34.4	0.78
Beardslee Blvd /110th Ave	B	12.2	0.54	A	9.1	0.49

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

LOS = level of service

¹Average intersection delay in seconds per vehicle

Table 3.5-5. Unsignalized Intersections Level of Service Summary—Existing (2006)

Street Intersection	AM Peak Hour			PM Peak Hour		
	LOS	Delay ¹	Approach	LOS	Delay ¹	Approach
SR 522/98th Ave	E	45.1	NB	F	58.1	NB
SR 527/185th St	B	12.0	WB	C	18.0	WB
Main St/101st Ave	B	11.6	EB	B	12.9	WB
Main St/102nd Ave	D	29.4	EB	D	29.1	NB
Main St/104th Ave	F	50.1	SB	F	93.2	NB
183rd St/101st Ave	A	9.0	SB	A	9.5	WB
183rd St/102nd Ave	B	10.7	SB	B	11.0	WB
183rd St/104th Ave	B	12.6	EB	B	11.7	EB
185th St/101st Ave	B	11.7	SB	B	13.0	WB
185th St/104th Ave	C	23.3	SB	D	25.8	NB

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

LOS = level of service; NB = northbound; WB = westbound; EB = eastbound; SB = southbound

¹ Average intersection delay in seconds per vehicle

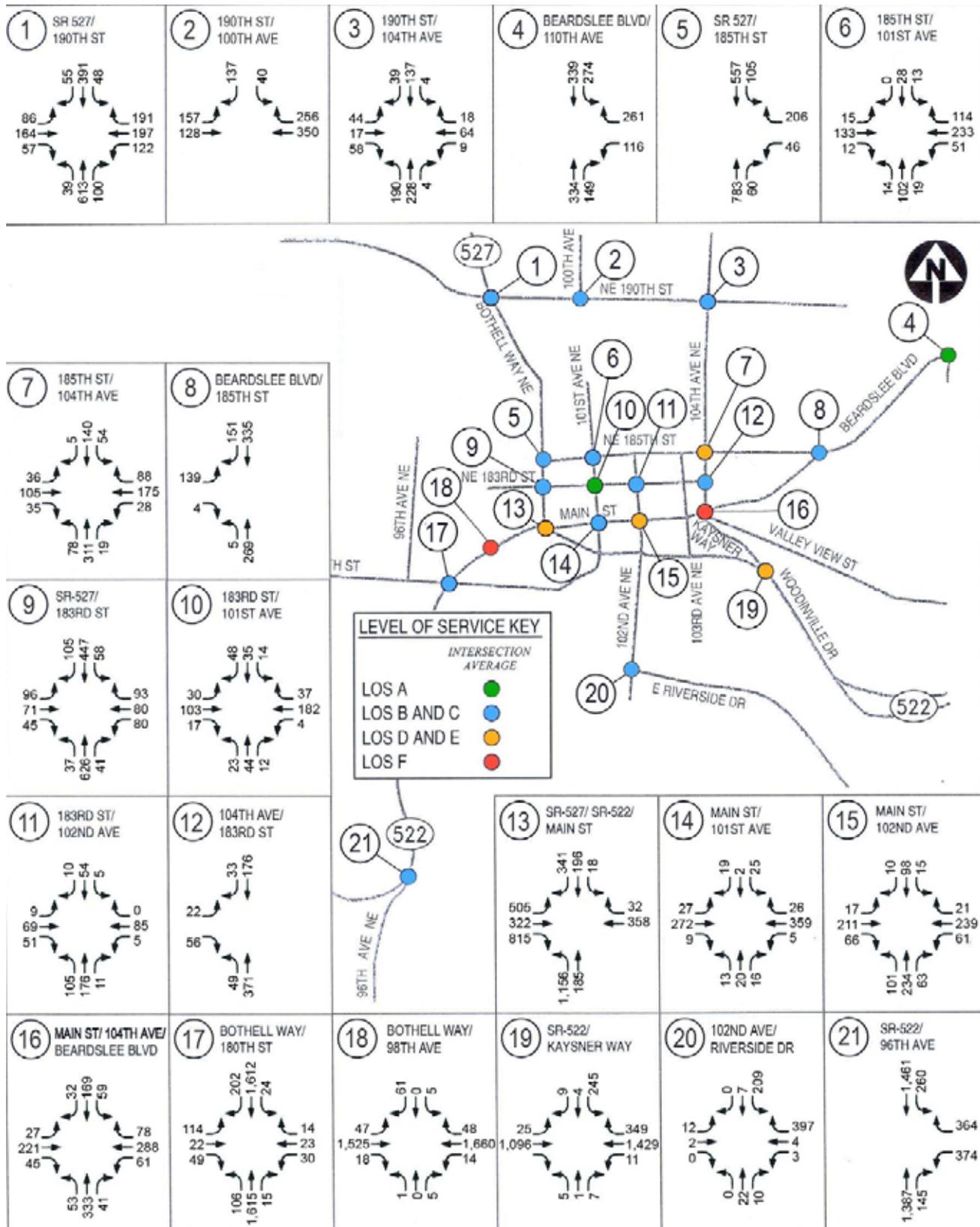


Figure 3.5-4. PM Peak-Hour Traffic Volumes and LOS—Existing (2006)
 Downtown Bothell Planned Action EIS
 December 2008

Table 3.5-4 shows that all signalized intersections in the study area are operating at LOS D or better during the AM and PM peak hours. Looking more closely at signalized intersections, there is a high demand in the Wayne Curve area of SR 522 for the southbound-to-eastbound, left-turning vehicles at the intersection of 96th Avenue during the AM peak hour—more than 400 left-turning vehicles. Significant queuing has been observed in the left-turn lane, backing vehicles up into the two-way left-turn lane. It is estimated that the queue length can exceed 550 feet.

In addition, during the PM peak hour, westbound vehicles on SR 522 face significant delays from the SR 527 intersection back to Kaysner Way. There is similar queuing northbound on SR 527 at 190th Street during the PM peak hour.

Table 3.5-5 shows that most unsignalized intersections in the study area are operating at LOS D or better during the AM and PM peak hours. Four intersections are operating at LOS E or F during the AM or PM peak hour, or both. The worst case is the Main Street/104th Avenue NE intersection where northbound vehicles are delayed by an average of more than 90 seconds during the PM peak hour.

A closer look at unsignalized intersections shows that the northbound traffic on 104th Avenue NE at Main Street may queue down Kaysner Way to SR 522 and impact traffic on SR 522.

Parking

Parking in the study area is accommodated via a mixture of parking lots and on-street parking. Most on-street parking is unrestricted; exceptions include areas in the downtown core where time restrictions have been implemented and along the two state highways where parking is prohibited. The parking lots are a mixture of private and public. The public lots primarily serve municipal facilities such as City Hall, commuters (park-and-ride lots), and the library (Figure 3.5-5).

Parking utilization data was collected for selected lots in the downtown core as well as on the University of Washington Bothell/Cascadia Community College (UWB/CCC) campus, during the periods of 11:00 a.m. to 1:00 p.m. and 3:00 p.m. to 5:00 p.m. The data showed that usage of parking facilities in the study area varies greatly. Many restrictions apply to on-street parking, but there is very little enforcement of the restrictions. The on-street parking along Main Street and the park-and-ride lot are highly utilized. Parking supply in the study area appears adequate; although during certain periods of the day utilization may be higher and some facilities may be more attractive than others (Perteet Inc. 2006; Appendix F).

Some of the residential areas contain on-street parking as well; however, it is not uniform and signage regarding restrictions is unclear.

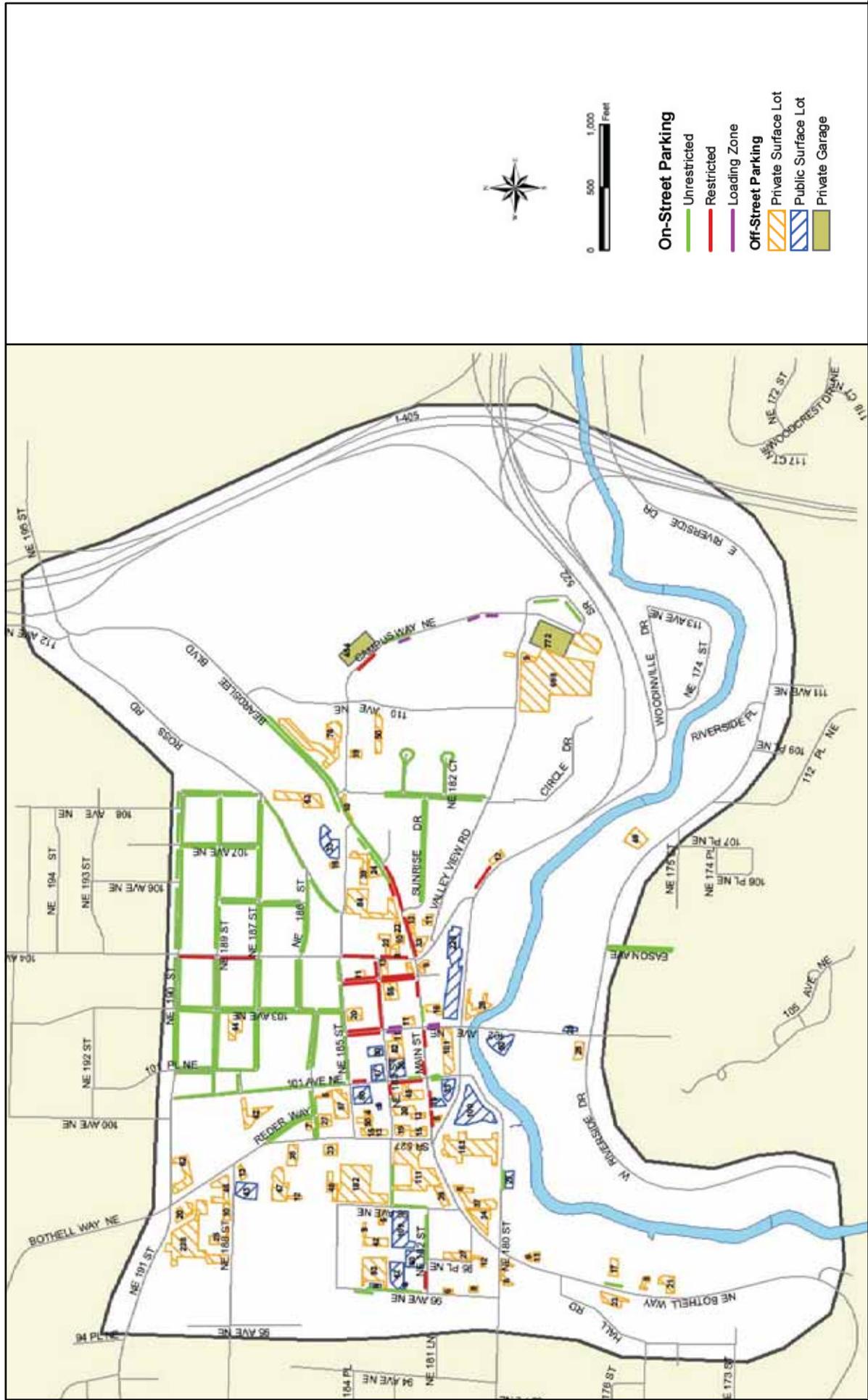


Figure 3.5-5. Parking and Loading Zones—Existing (2006)
 Downtown Bothell Planned Action EIS
 December 2008

Parking data also showed that usage of parking during the noon hour was high along Main Street at 101st Avenue NE and NE 183rd Street, but dropped off within residential areas. Many off-street parking areas were designated for specific business or residential use and would not have been available as public parking. Parking on weekdays varied greatly with the type of business served by the parking facility. Generally, parking utilization was low for both on- and off-street parking during the 3:00 p.m.–5:00 p.m. period.

Parking utilization was measured by zones in the study area. At no time did utilization rates exceed 61% in any of the zones measured. The area south of NE 185th Street, north of SR 522, and bounded by SR 527 and Beardslee Boulevard had the highest utilization rate during the 11:00 a.m.–1:00 p.m. period (61%) and the 3:00 p.m.–5:00 p.m. period (56%). Typically, at 85% utilization motorists perceive that parking is at capacity. Total available parking in the study area is approximately 5,900 spaces; approximately 3,350 of these spaces are available during the afternoon period.

Collision History

Review of WSDOT accident data for 1998 through 2000 revealed that the highest level of recurring accidents in the study area during this period occurred at the Main Street/104th Avenue NE intersection (over 11 accidents). At this time, the intersection is controlled by an all-way stop. The next highest level of accidents (between seven and 10) occurred at the NE 190th Street/100th Avenue NE and NE 190th Street/104th Avenue NE intersections. Fewer than six accidents were reported for other intersections in the study area (Figure 3.5-6).

Transit

Bothell Park-and-Ride

The Bothell Park-and-Ride is located at 10303 Woodinville Drive. It has 220 parking spaces and is served by Community Transit routes 105 and 106, Sound Transit routes 522 and 535, and King County Metro routes 238, 312, 342, and 372.

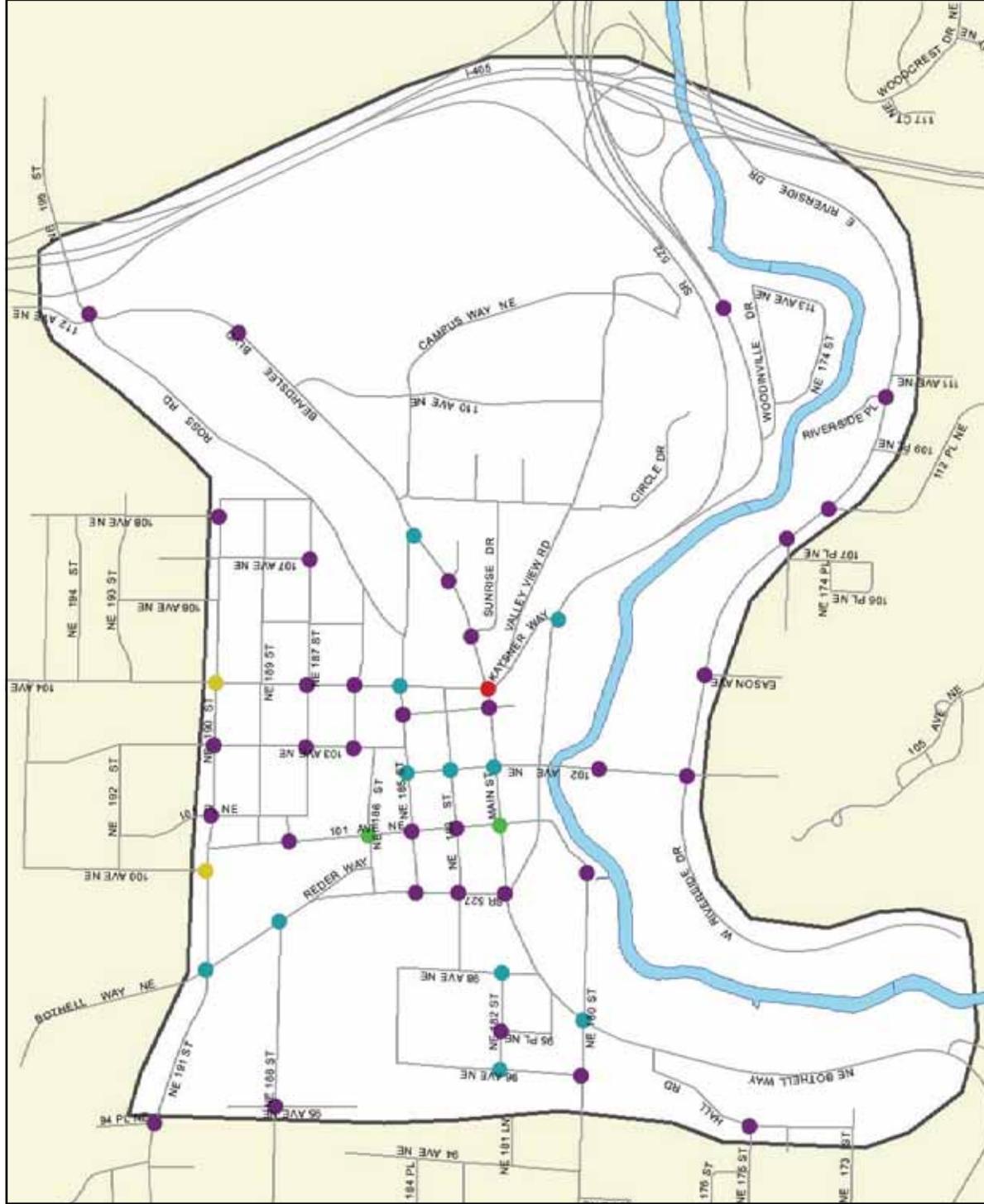


Figure 3.5-6. Study Area Accidents (1998–2000)
 Downtown Bothell Planned Action EIS
 December 2008

Transit Service

Three transit agencies—Sound Transit, King County Metro, and Community Transit—serve the study area (Figure 3.5-7). The major transit route, Main Street/Beardslee Boulevard to the UWB/CCC campus, carries 439 buses per day. Nearly 1,000 passengers get on or off these buses each weekday in the study area, including 330 boardings at the Kaysner Way Park-and-Ride stop and 256 at the UWB/CCC campus stop. Nine basic bus routes serve the study area 7 days a week.

- Two Sound Transit bus routes connect the study area to Everett, Woodinville, Bellevue, and Seattle.
- Two Community Transit bus routes connect the study area to Everett and Lynnwood.
- Five King County Metro bus routes connect the study area to Kirkland, Renton, the University District, and downtown Seattle.

NE Bothell Way, Woodinville Drive, and Campus Way are other key transit corridors. Bus stops in the study area are generally located along the major arterials.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, and trails. Sidewalks are provided throughout the central portion of the study area and form a well-connected network (Figure 3.5-8). This network is enhanced by many marked crosswalks and all-way stops. The residential neighborhood in the southeast corner of the study area has a limited number of sidewalks. NE 188th Street also lacks continuous sidewalks. Study area trails are discussed below.

Bicycle Facilities

Trails, bicycle lanes, and bicycle storage and locker facilities support bicycle commuting in the study area (Figure 3.5-9).

The UWB/CCC campus is connected to downtown via bicycle lanes on Beardslee Boulevard. In addition, lanes on 104th Avenue NE and 190th Street NE provide connections from the downtown core to the northern and western parts of the study area. The Sammamish River Trail, a pedestrian/bicycle trail located in the southern part of the study area, is 10 feet wide with an estimated daily volume of 1,031 bicyclists (Perteet Inc. 2006). The North Creek Trail, also 10 feet wide, connects the UWB/CCC campus and the Sammamish River Trail. Several smaller trails connect the Sammamish River Trail with local streets. These trails provide some commuter access to downtown and the UWB/CCC campus; however, there is no overall

network that connects all of the bicycle facilities. Rideability² is deemed fair or better in all parts of the study area except on SR 522.

There are two bicycle storage racks on Main Street. The UWB/CCC campus has one bicycle rack and three sets of bicycle lockers with a capacity of 24 bicycles. There are no bicycle storage facilities at the Bothell Park-and-Ride, a major bus boarding site in the study area. Figure 3.5-9 shows locations of these facilities.

3.5.2. Impacts

This section describes the impacts of the alternatives on the transportation system. The analysis of traffic, transit, and non-motorized mobility is based on the *City of Bothell Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan* (Perteet Inc. 2008a; Appendix G).

The Planning Commission Recommendations would fall within the range of analysis results for the No Action and Proposed alternatives, and would be closer to the Proposed Alternative due to similar growth patterns in the downtown core and similar transportation improvements.

Forecasts

Forecast Methodology

This analysis used a PM peak-hour transportation demand forecasting model to forecast future traffic volumes based on existing traffic patterns and forecasted land use growth. Chapter 2 presents the land use assumptions for the Proposed and No Action alternatives. In general, the Proposed Alternative would result in an estimated net increase of 2,736 dwellings between 2000 and 2035, compared to 1,387 dwellings under the No Action Alternative. Similarly the Proposed Alternative would result in an estimated increase of over 645,500 square feet of retail and office development (excluding colleges) between 2000 and 2035, compared to 534,400 square feet of development under the No Action Alternative. The Proposed Alternative projects 1,367 to 1,644 additional jobs whereas the No Action Alternative assumes 1,167 jobs.

² Fair Rideability is defined as “No bicycle lane on medium traffic volume, medium speed road or bicycle lane on high traffic volume, high speed route.” Good Rideability is defined as “No bicycle lane on low traffic volume/low speed road designated as bicycle route.” Downtown Transportation Needs Analysis, page 9.

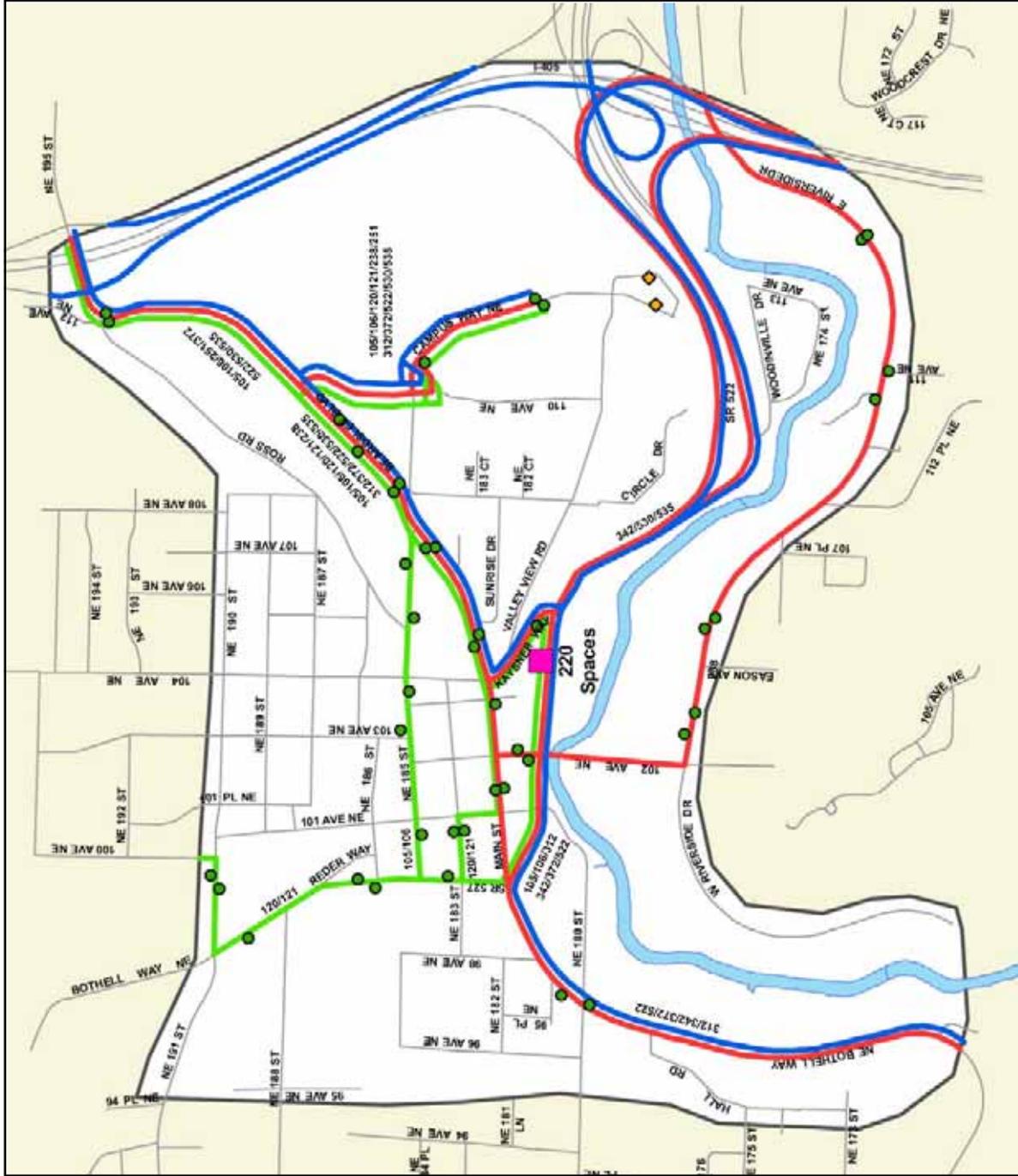


Figure 3.5-7. Transit Facilities—Existing (2005)
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 December 2008

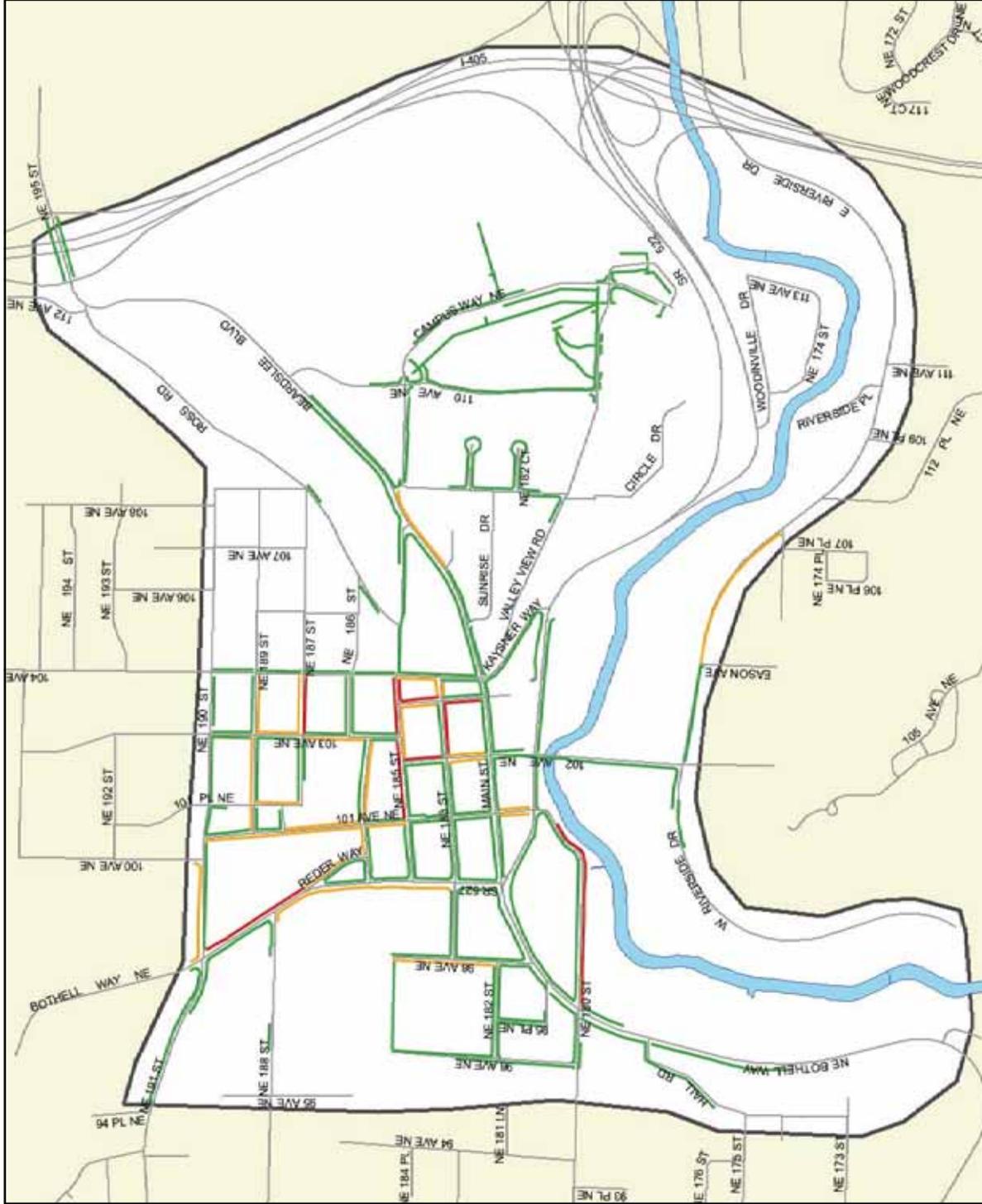


Figure 3.5-8. Sidewalk Condition—Existing (2005)
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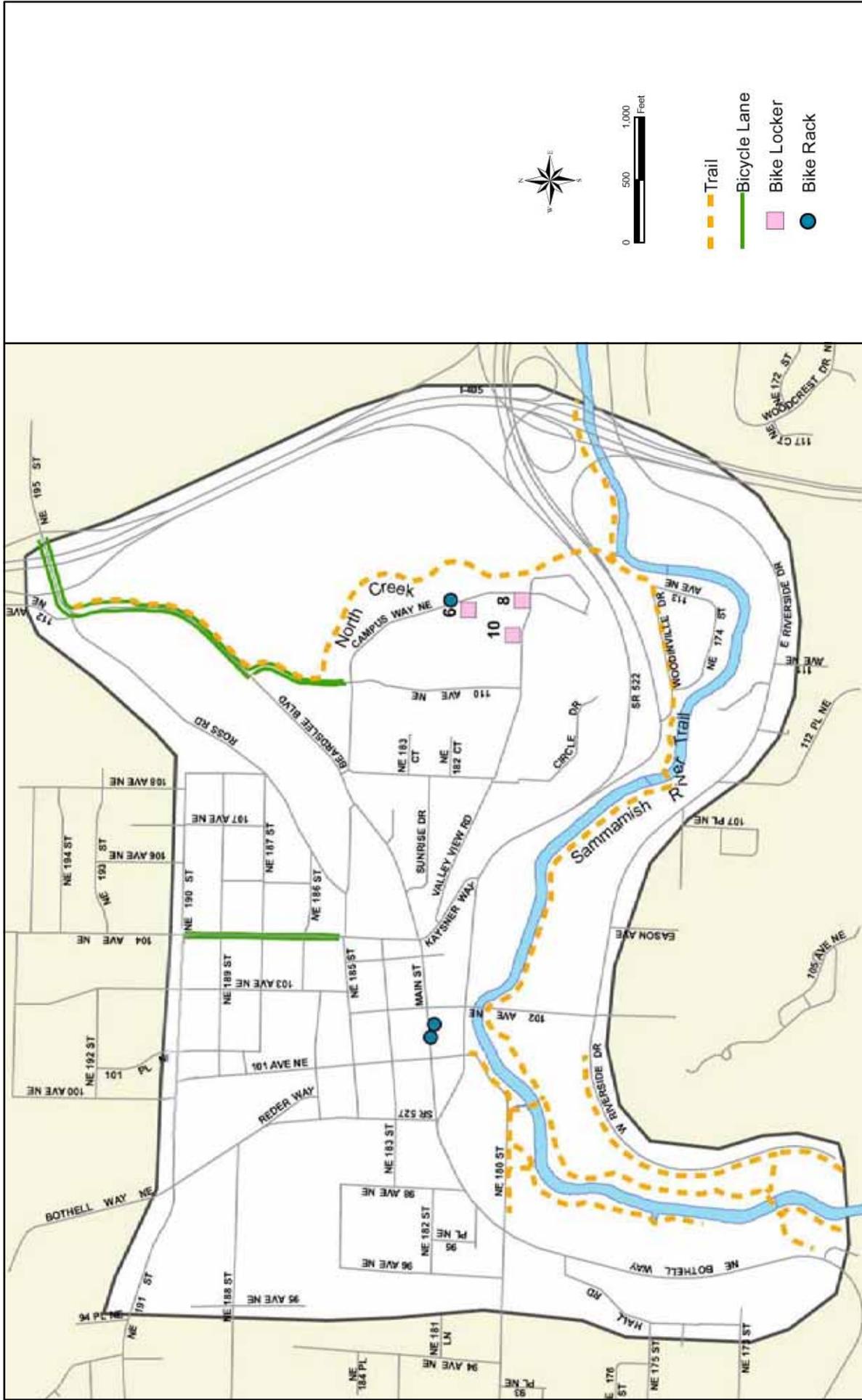


Figure 3.5-9. Bicycle Facilities—Existing (2005)
 Downtown Bothell Planned Action EIS
 December 2008

Based on these land use assumptions, Perteet Inc. developed a VISUM travel demand forecasting model to estimate the future PM peak-hour traffic volumes in the study area. As stated in the transportation plan (Perteet Inc. 2008a): “The VISUM travel demand model is based on the Puget Sound Regional Council (PSRC) estimates of population and employment for the years 2030 and 2040 throughout the entire region and also on a refinement of the City of Bothell T-Model/2 travel demand model which was developed for the Comprehensive Plan for overall development in the City. The results were interpolated to the horizon year 2035.”

Roadway Improvement Assumptions

Each scenario assumed specific transportation improvements would be implemented for the 2035 street network. The transportation improvement projects are described in Chapter 2, “Description of the Alternatives,” under “Capital Improvements.”

The following transportation improvement projects were assumed in the analysis of the No Action Alternative.

- Bothell Crossroads
- SR 527 Improvements (five lanes)
- Main Street Extension
- SR 522 Wayne Curve Improvements
- SR 522 East of Wayne Curve
- Beardslee Boulevard Widening East of NE 185th Street
- 104th Avenue NE Bike Lanes
- Valley View Road Improvements

In addition to the projects list above, the following transportation improvement projects were assumed in the analysis of the Proposed Alternative.

- SR 527 Multiway Boulevard Treatments
- Main Street Enhancement
- NE 185th Street/98th Avenue NE Connector
- NE 185th Street Transit-Oriented Street
- NE 185th Street Downtown Transit Facilities and Park-and-Ride
- Kaysner Park-and-Ride/Transit-Oriented Development
- Public Parking (cash-in-lieu-of-parking program)

No Action Alternative

Traffic Volumes

Projected traffic volumes for study intersections in 2035, under the No Action Alternative, are provided on Figure 3.5-10.

Traffic Impact Analysis

Under the No Action Alternative, the study corridor (SR 522) would experience an average delay of 58 seconds per vehicle. As such, it would be classified as LOS E and would meet the City's concurrency requirements.

Although the City does not have a concurrency requirement for intersections, LOS ratings were determined for key study intersections for informational purposes. Under the No Action Alternative, LOS for all signalized intersections would deteriorate by one or two grades (Table 3.5-6). Only the SR 522/SR 527 intersection would deteriorate to LOS F.

Table 3.5-6. Signalized Intersections PM Peak-Hour Level of Service Summary—No Action Alternative (2035)

Street Intersection	LOS	Delay ¹	Volume/Capacity
SR 522/Kaysner Way	E	58.2	1.14
SR 522/SR 527	F	100.9	1.20
SR 522/180th St	D	35.6	1.02
SR 522/98th Ave	D	51.5	0.94
SR 527/Main St	C	25.7	1.02
SR 527/183rd St	C	20.0	0.82
SR 527/190th St	E	66.5	1.18
SR 527/185th St	D	47.6	1.06

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).
LOS = level of service

¹Average intersection delay in seconds per vehicle

Under the No Action Alternative, LOS at all but three unsignalized intersections would be degraded by 2035 compared to existing conditions (Table 3.5-7); the three improved intersections would go up one grade. The three Main Street intersections would operate at LOS F. Two intersections that are currently unsignalized (SR 522/98th Avenue NE and SR 527/NE 185th Street) would be signalized under the No Action Alternative; as such, they appear in Table 3.5-6.

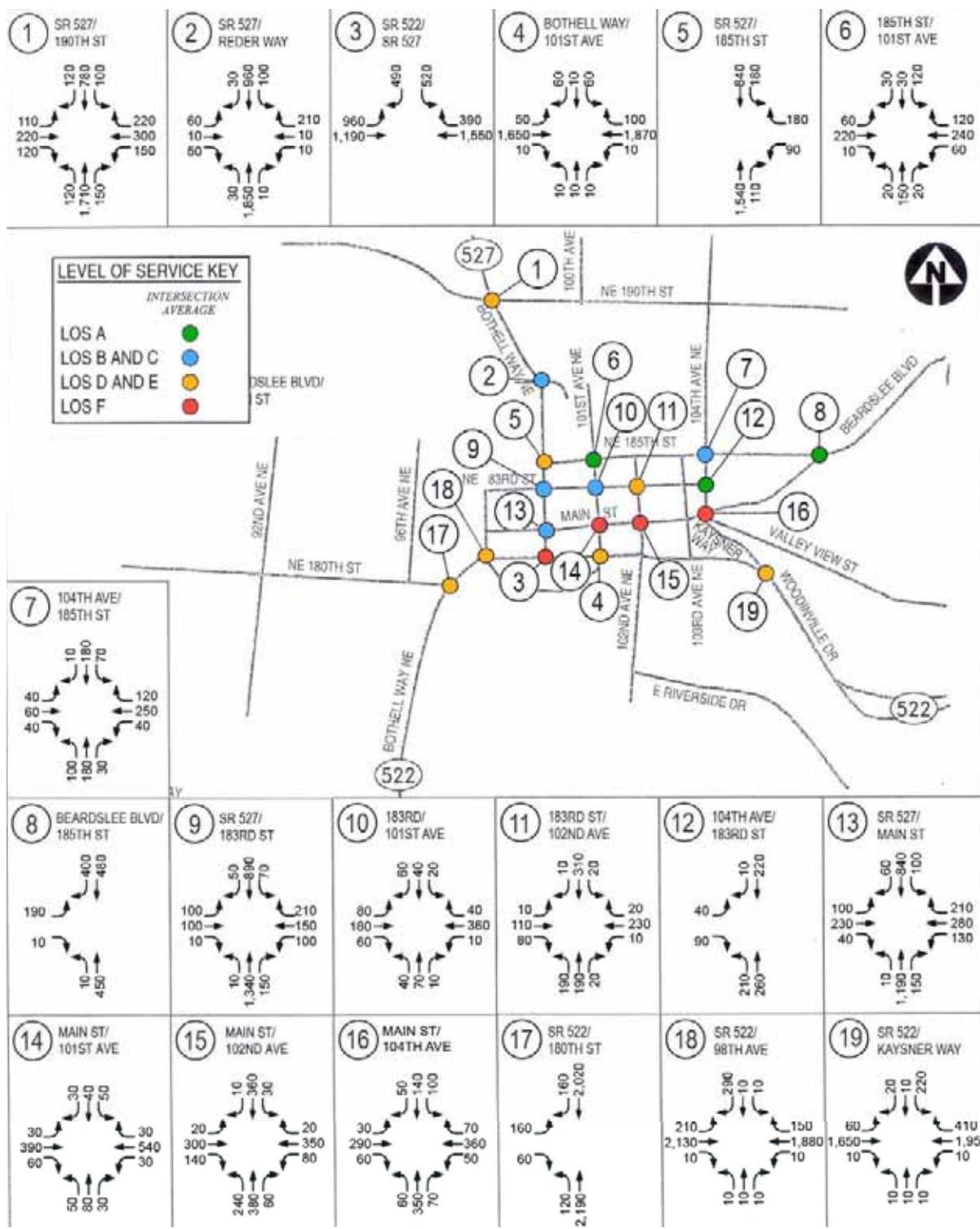


Figure 3.5-10. PM Peak-Hour Traffic Volumes/LOS—No Action (2035)
 Downtown Bothell Planned Action EIS
 December 2008

Table 3.5-7. Unsignalized Intersections PM Peak-Hour Level of Service Summary—No Action Alternative (2035)

Street Intersection	LOS	Delay ¹	Volume/Capacity
Main St/101st Ave	F	60.1	1.12
Main St/102nd Ave	F	270.1	1.97
Main St/104th Ave	F	139.3	0.32
183rd St/101st Ave	B	14.8	0.65
183rd St/102nd Ave	D	26.5	0.84
183rd St/104th Ave	A	7.3	0.50
185th St/101st Ave	A	9.1	0.57
185th St/104th Ave	B	10.8	0.63

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

LOS = level of service

¹Average intersection delay in seconds per vehicle

Under the No Action Alternative, 2035 traffic volumes for major traffic corridors would increase throughout the street system compared to existing conditions (Table 3.5-8). The largest increases would be along the north-south arterials.

Table 3.5-8. Average Daily Traffic Volumes on Major Corridors—No Action Alternative (2035)

	2006	2035
North-South Corridors		
Arterial Streets		
SR 527 north of NE 190th St	17,800	41,000
I-405 north of Beardslee Blvd	120,000	175,000
Subtotal	137,000	216,000
Collector Streets		
88th Ave NE north of NE 195th St	4,280	6,400
100th Ave NE north of NE 190th St	5,740	8,900
104th Ave NE north of NE 190th St	3,740	8,100
Subtotal	13,760	23,400
East-West Corridors		
Arterial Streets		
SR 522 west of SR 527	43,600	49,800
NE 185th St via 98th Ave	1,200	6,200
Subtotal	44,800	56,000

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

Immediately to the north and west of the study area are low density residential neighborhoods. Table 3.5-9 compares the existing traffic volumes to the 2035 No Action Alternative traffic volumes for a number of streets that serve this area. The largest increase in traffic volumes occur along NE 180th Street with the only reduction along NE 188th Street.

Table 3.5-9. Neighborhood Street Average Daily Traffic Volumes—No Action Alternative (2035)

Roadway	2006	2035
NE 180th St east of 92nd Ave NE	5,150	6,800
NE 188th St east of 92nd Ave NE	5,560	4,000
NE 191st St east of 92nd Ave NE	4,080	6,100
90th Ave NE west of 92nd Ave NE	1,950	3,000
NE 190th St west of 92nd Ave NE	1,350	2,100
NE 185th St west of 92nd Ave NE	990	1,500
91st/92nd Ave NE west of SR 522	1,550	1,800
83rd Ave NE to NE 180th St west of SR 522	3,330	3,600
Totals	23,960	28,900

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

Under the No Action Alternative, ADT volumes would increase on all neighborhood street compared to existing conditions, except for on NE 188th Street east of 92nd Avenue NE.

Parking

Under the No Action Alternative, the existing parking regulations would remain in place. The required commercial and residential parking spaces vary by type of uses and type of residential units (Chapter 12.16 Bothell Municipal Code [BMC]). Most commercial uses require one space per 300 square feet including business and personal services, veterinary clinics, education, government services, health and social services, recreation, culture and entertainment, and retail uses. The typical residential use requires 2.2 spaces per dwelling unit. Chapter 12.16.110 BMC allows the Community Development Director to reduce the required employee off-street parking up to 40% when one or more scheduled transit routes provide service within 660 feet of the site during the AM and PM peak hours. A reduction of up to 20% is allowed for other land uses such as retail and residential.

Currently, nine transit routes provide nearly 128 AM and PM peak-hour scheduled runs per day within 660 feet of most study area properties. Of these runs, 22 operate along NE 185th Street. Based on an allowed 4% reduction per run, most of the study area, except for a small portion in the northwest corner between 183rd and 188th

Street NE and a small portion just west of the UWB/CCC campus, would be eligible for a 40% or 20% reduction.

Off-street parking requirements with and without the allowed code reductions are shown in Table 3.5-10. Based on the proposed level of growth assumed under the No Action Alternative, the total parking space requirement without applying the allowed code reductions would be 4,820 parking stalls; with the reductions it would be 4,340. The non-eligible retail and office space are outside of the transit zone (Figure 3.5-11).

Table 3.5-10. Required Off-Street Parking Spaces—No Action Alternative (2035)

Land Use	Per City Code	Per City Code With Allowed Reductions
Multifamily	3,050	2470
Retail	870	700
Non-eligible retail ¹	30	30
Office	860	510
Non-eligible office ¹	30	30
Total	4,840	3,740

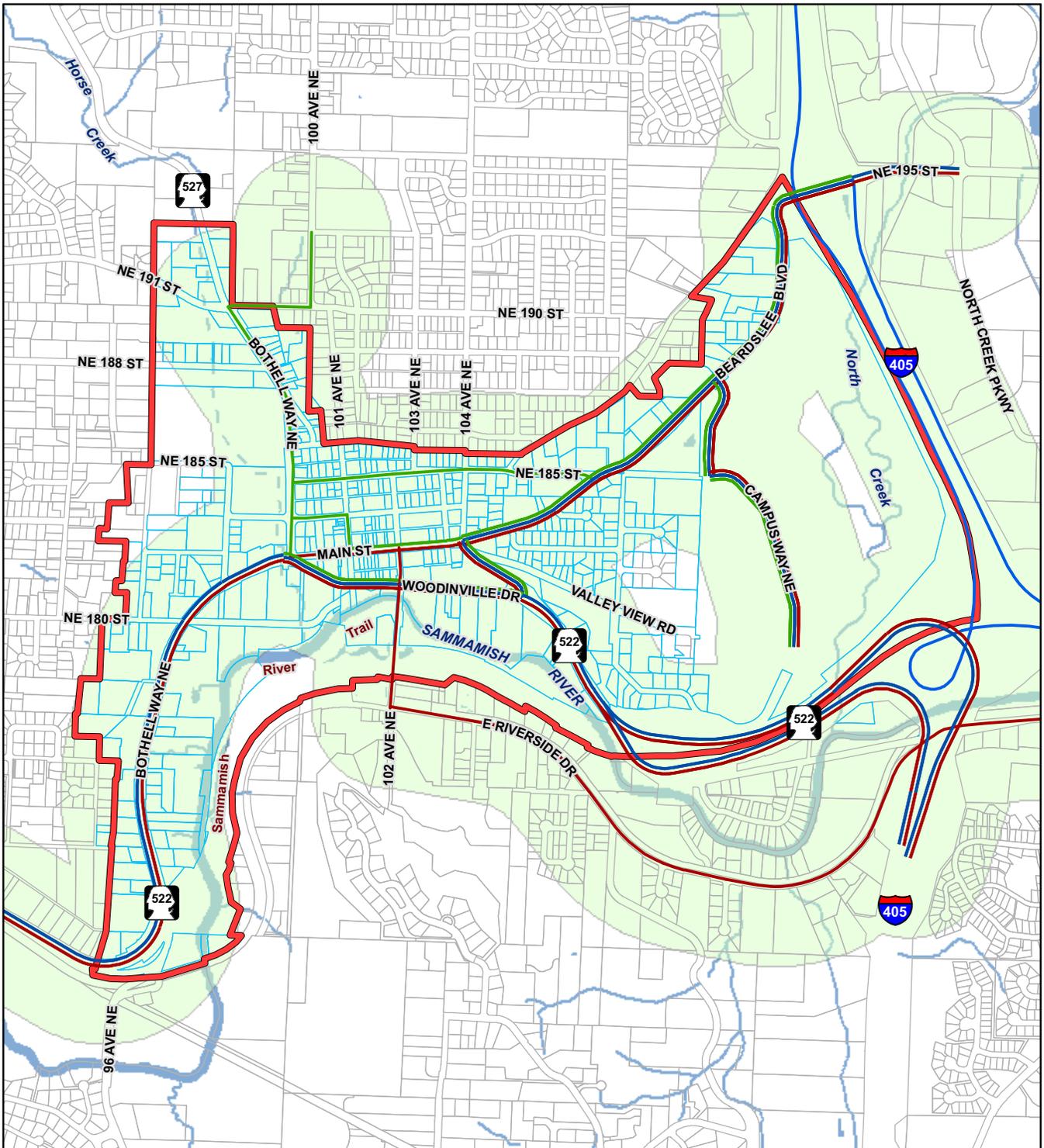
¹ These parking requirements were derived by proportioning the commercially zoned land area outside the transit benefit zone within the study area compared to the total commercial area within the transit benefit zone and study area.

The provision of adequate parking will be determined on a case-by-case basis in accordance with City regulations and at the time of permit reviews. Adequate parking supply is necessary to reduce the likelihood that vehicles visiting the study area would park in residential areas surrounding the study area and/or that retail employees, office workers, or study area residents would use the park-and-ride lot.

Transit Service and Mobility

Lower density land use under the No Action Alternative would be less conducive to transit service and less supportive of the City's transit policies. Main Street would continue to act as the primary transit corridor through the study area. The continued use of stop signs to control traffic along this route would lead to delays to transit vehicles with a loss of scheduling predictability. Even with the installation of traffic signals at the Main Street intersections the anticipated queues would continue to delay transit vehicles.

Under the No Action Alternative, transit ridership is estimated to exceed 4,500 riders per day. Currently, transit ridership during the PM peak hour within the Bothell city limits is approximately 26% of the daily total ridership. Based on this factor, the No Action PM peak-hour ridership would be approximately 1,320 passengers. Of this total 43% would be departing (570 passengers) and 57% arriving (750 passengers). Current transit ridership has the capacity for 1,500 additional departing trips and 1,450 arrivals, indicating adequate capacity for additional transit ridership.



Source: City of Bothell (2008); King County (2008); Pertee (2006)

- Study Area
- Parcel
- ~ Water Feature
- - - Piped Stream
- Community Transit Routes
- Sound Transit Routes
- King County Metro Routes
- Parcels within Transit Buffer

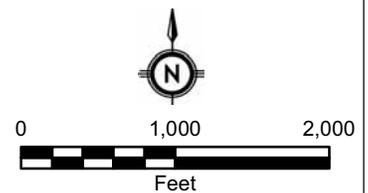


Figure 3.5-11. Areas Eligible for Transit Parking Reduction
Downtown Bothell Planned Action EIS

December 2008

Pedestrian and Bicycle Mobility

The No Action Alternative would include a number of street improvements that would improve pedestrian and bicycle mobility. The Main Street Extension project, would improve bicycle and pedestrian circulation and mobility by providing improved east-west access through the center of the study area. It would also include the addition of bike lanes on 104th Avenue NE and Valley View Road that would improve bicycle mobility through the study area. Additionally, when property is developed under the No Action Alternative, street frontage improvements including sidewalk upgrades and bicycle lanes would be undertaken when appropriate.

Access and Circulation

The circulation system in the study area would improve under the No Action Alternative with the extension of Main Street. The project would improve vehicular circulation in an east-west direction through the study area and generally improve vehicular access to the study area west of SR 527.

Proposed Alternative

Traffic Volumes

Projected traffic volumes for study intersections in 2035, under the Proposed Alternative, are provided on Figure 3.5-12.

Traffic Impact Analysis

Under the Proposed Alternative, the study corridor (SR 522) would experience an average delay of 34 seconds per vehicle and operate at LOS C. LOS C meets the concurrency requirements and is a two-grade improvement over the No Action Alternative.

Under the Proposed Alternative, LOS for all signalized intersections would deteriorate by one or two levels compared to existing conditions (Table 3.5-11). The average vehicle delay would be less than under the No Action Alternative, except for the SR 527/NE 190th Street intersection, which would remain at LOS E with an 8 second increase in the average delay. No intersections would deteriorate to LOS F.

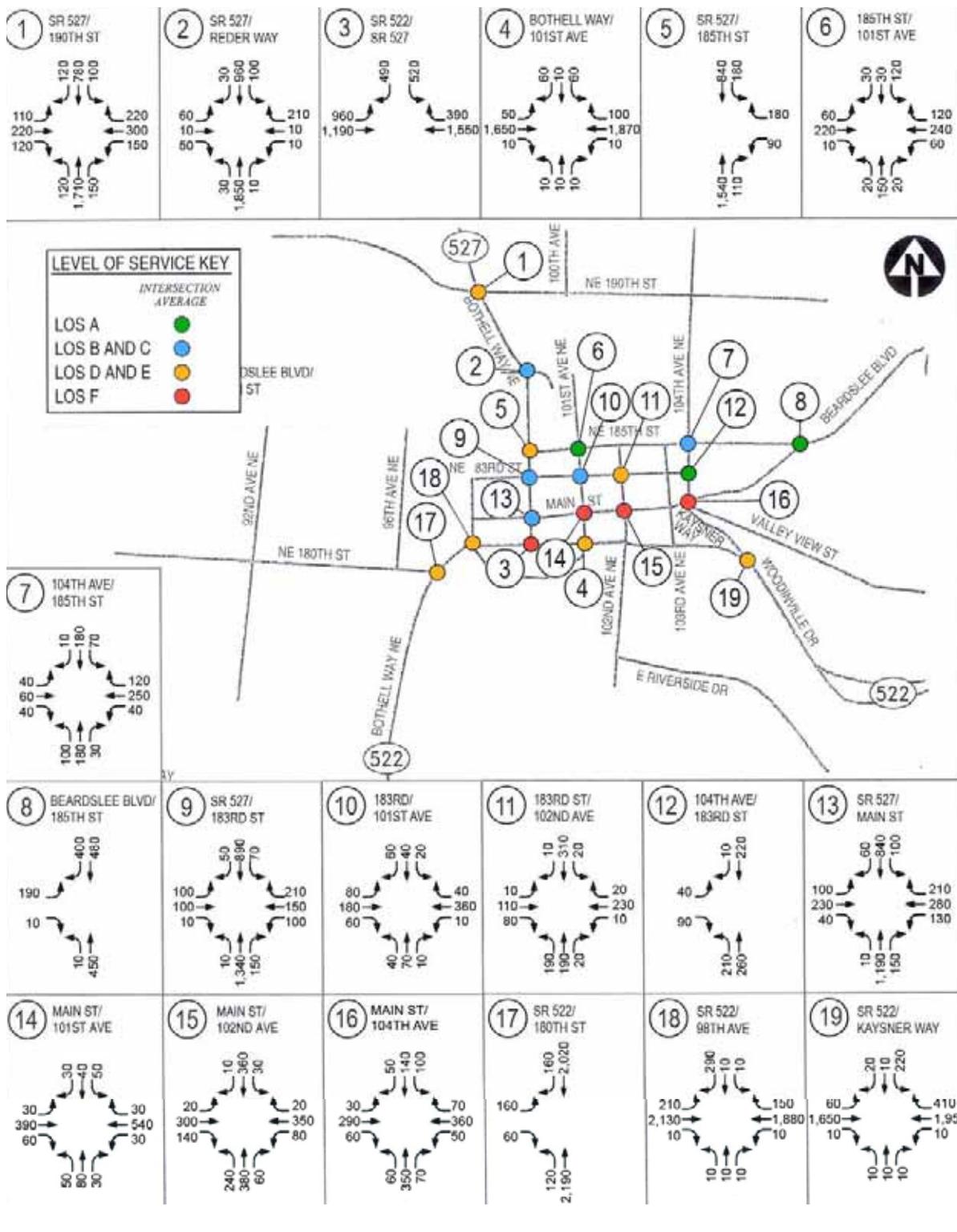


Figure 3.5-12. PM Peak-Hour Traffic Volumes/LOS—Proposed Alternative (2035)
 Downtown Bothell Planned Action EIS
 December 2008

Table 3.5-11. Signalized Intersections PM Peak-Hour Level of Service Summary—Proposed Alternative (2035)

Street Intersection	LOS	Delay ¹	Volume/Capacity
SR 522/Kaysner Way	D	50.2	1.10
SR 522/SR 527	D	49.2	1.03
SR 522/180th St	C	31.8	1.02
SR 522/98th Ave	D	37.2	1.00
SR 527/Main St	B	15.9	0.89
SR 527/183rd St	B	12.2	0.77
SR 527/190th St	E	74.3	1.22
SR 527/185th St	D	39.0	1.00
185th St/101st Ave	B	13.3	0.77
185th St/104th Ave	B	16.6	0.84

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

LOS = level of service

¹Average intersection delay in seconds per vehicle

Under the Proposed Alternative, LOS at all but three unsignalized intersections would be degraded by 2035 compared to existing conditions (Table 3.5-12); the three improved intersections would experience a one-grade improvement. Two of the three Main Street intersections would operate at LOS F. Two intersections that are currently unsignalized (SR 522/98th Avenue NE and SR 527/185th Street) would be signalized under the Proposed Alternative; as such, they appear in Table 3.5-11.

Table 3.5-12. Unsignalized Intersections PM Peak-Hour Level of Service Summary—Proposed Alternative (2035)

Street Intersection	LOS	Delay ¹	Volume/Capacity
Main St/101st Ave	D	29.8	0.90
Main St/102nd Ave	F	271.1	2.06
Main St/104th Ave	F	95.7	1.28
183rd St/101st Ave	B	14.0	0.64
183rd St/102nd Ave	D	31.2	0.89
183rd St/104th Ave	A	5.3	0.33

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

LOS = level of service

¹Average intersection delay in seconds per vehicle

As discussed previously, LOS E is commonly used as an indicator that mitigation measures should be undertaken. LOS could be improved at the two Main Street intersections operating at LOS F by installing traffic signals. A traffic signal would

improve LOS at the 102nd Street intersection to LOS D and 104th Street intersection to LOS B. However more detailed traffic simulation studies indicate that traffic operations along the street may remain slow. The short blocks may result in queues, while vehicles wait to proceed through the green phase of a signal, exceeding the block length causing delays.

Additionally, implementing mitigation measures such as signals may not be consistent with the character of the street. Main Street is a key retail activity center in the study area with a strong pedestrian character. Providing streets that maximize vehicle flow may not be consistent with providing on-street parking, a shopping environment, or safe and efficient pedestrian movements. The decision to install signals will need to be balanced with the potential impacts.

Under the Proposed Alternative, 2035 traffic volumes for major traffic corridors would increase throughout the street system compared to existing conditions (Table 3.5-13). The increases would vary somewhat from under the No Action Alternative, but the largest increases would still be along the north-south arterials.

Table 3.5-13. Average Daily Traffic Volumes on Major Corridors—Proposed Alternative (2035)

	2006	2035
North-South Corridors		
Arterial Streets		
SR 527 north of NE 190th St	17,800	42,000
I-405 north of Beardslee Blvd	120,000	175,000
Subtotal	137,800	217,000
North-South Corridors		
Collector Streets		
88th Ave NE north of NE 195th St	4,280	6,000
100th Ave NE north of NE 190th St	5,740	8,500
104th Ave NE north of NE 190th St	3,740	7,900
Subtotal	13,760	22,400
East-West Corridors		
Arterial Streets		
SR 522 west of SR 527	43,600	47,200
NE 185th St via 98th Ave	1,200	9,800
Subtotal	44,800	57,000

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

Immediately to the north and west of the study area are low density residential neighborhoods. Table 3.5-14 compares the existing traffic volumes to the Proposed

Alternative 2035 average daily traffic volumes for a number of streets that serve this area. The largest increases in traffic volumes occur along NE 180th Street with the only reduction along NE 188th Street.

Table 3.5-14. Neighborhood Street Average Daily Traffic Volumes—Proposed Alternative (2035)

Roadway	2006	2035
NE 180th St east of 92nd Ave NE	5,150	6,100
NE 188th St east of 92nd Ave NE	5,560	3,800
NE 191st St east of 92nd Ave NE	4,080	6,000
90th Ave NE west of 92nd Ave NE	1,950	3,000
NE 190th St west of 92nd Ave NE	1,350	2,100
NE 185th St west of 92nd Ave NE	990	1,500
91st/92nd Ave west of SR 522	1,550	1,400
83rd Ave to 180th St west of SR 522	3,330	3,000
Totals	23,960	26,900

Source: Downtown Transportation Needs Analysis—Downtown Revitalization Transportation Plan (Appendix G).

ADT volumes on neighborhoods streets would be lower under the Proposed Alternative than under the No Action Alternative. Volumes would decrease compared to existing conditions on NE 188th Street east of 92nd Avenue NE, similar to the No Action Alternative, but would also decrease on 91st/92nd Avenue NE west of SR 522, due to the diversion of neighborhood traffic to the improved 98th Avenue/185th Street corridor. Further reduction of neighborhood traffic is dependent on providing additional arterial capacity by widening SR 527 north of the study area to SE 228th Street.

Parking

Under the Proposed Alternative, parking requirements for commercial land uses would be reduced in line with the current allowed reductions in the code. Under the No Action Alternative, the same reductions could be achieved, but they would require the Community Development Director's approval on a case-by-case basis. Additionally, areas not currently eligible for reductions (Table 3.5-10) would receive the reductions under the Proposed Alternative.

The Proposed Alternative also includes a reduction in the amount of required multifamily residential parking. Under the current City code the parking requirements is 2.2 stalls per multifamily unit. A code reduction of 20% for transit service is allowed for residential development within most of the study area. An additional 10% reduction is allowed for shared parking.

Table 3.5-15 compares the number of parking spaces required under existing City code with those required under the Proposed Alternative, using the level of growth assumed under the Proposed Alternative.

Table 3.5-15. Required Off-Street Parking Spaces—Proposed Alternative (2035)

Land Use	Per City Code	Per City Code with Allowed Reductions ²	Per Proposed Alternative
Multifamily	6,320	5,120	3,690 ¹
Retail	1,320	1,070	1,060
Office	830	510	500
Total	8,470	6,700	5,250

¹ Assumes for every 10 multifamily units that four are one-bedroom, four are two-bedroom and two is three-bedroom.

² Does not include 10% reduction for shared parking.

The Proposed Alternative parking requirements are recommended for several reasons: transit access, estimated demand shared parking, and increased retail services and office space within the study area. Under the Proposed Alternative, transit routes would shift north and west, improving access to office, commercial, and residential uses. Improved transit access would result in increased transit ridership with the potential for a reduction in vehicle parking requirements.

Increasing the residential dwelling units in the study area by approximately 1,400 units over the No Action Alternative, the Proposed Alternative would reduce the number of vehicular trips to retail, office, and other similar uses, likewise reducing the need for parking spaces.

Parking Generation cites several parking demand surveys for multifamily residential land uses (Institute of Transportation Engineers 2004). These surveys indicate that a low-rise apartment complex in an urban area would have a peak parking demand of 1 space per dwelling unit and a mid-rise condominium in a suburban area would have a peak demand of 1.46 spaces per dwelling unit. The apartment rate results in a parking demand of 2,736 spaces, approximately 25% below the proposed parking requirement; the condominium rate is approximately 9% above the proposed parking requirement. The need for parking is further reduced when various non competing uses share the same parking space. For example, office parking demand typically peaks in the late morning hours, whereas retail uses peak in the afternoon hours. If parking requirements for individual uses were implemented, there would be an oversupply of parking in the afternoon. Under the Proposed Alternative, the amount of square footage for retail, commercial, and office uses increases. Implementing a

parking management plan that allows public use of all parking spaces would provide a pool of spaces to meet the cumulative peak demand through shared parking.

The provision of adequate parking will be determined on a case-by-case basis in accordance with City regulations and at the time of permit reviews. Adequate parking supply is necessary to reduce the likelihood that vehicles visiting the study area would park in residential areas surrounding the study area and/or that retail employees, office workers, or study area residents would use the park-and-ride lot.

To supplement parking supply, the Proposed Alternative includes three parking initiatives: NE 185th Street Downtown Transit Facilities and Park-and-Ride, a cash-in-lieu-of-parking program, and additional on-street parking. The Downtown Transit Facilities would be constructed somewhere along the NE 185th Street corridor, for example, the existing City Hall site. This new facility would contain 250 to 300 parking spaces to support transit operations. The facility would be available for other uses during the weekday evening hours and weekends.

The cash-in-lieu-of-parking program would allow developers to contribute to a City-maintained parking fund that would construct parking facilities. This arrangement is particularly helpful to small properties where the parking requirements would have a significant impact on development potential or require driveways along pedestrian-oriented streets. The additional benefit of this type of facility is that it allows for shared use of parking.

The SR 527 Multiway Boulevard Treatments project, included only under the Proposed Alternative, would provide supplemental on-street parking via one-way parallel parking lanes on each side of SR 527 separated by medians. This parking would primarily support retail uses during the day and residential uses during the evening.

Transit Service and Mobility

The Proposed Alternative would support public transportation services and the City's transportation policies. Transit services would improve under the Proposed Alternative as improvements are made to streets and parking facilities. If the staff-recommended improvements to NE 185th Street/98th Avenue NE are implemented, this roadway would be designated a transit corridor and most east-west bus routes would be moved to operate along it. Using this roadway as a transit corridor would reduce the vehicle delays along Main Street, described above, and would provide the best balance of walking distances for residents and employees throughout the study area.

The Proposed Alternative also includes the 185th Street Downtown Transit Facilities and Park-and-Ride, described above, and a Kaysner Park-and-Ride/TOD Redevelopment. The transit facilities, combined with continuing linkages at the UWB/CCC campus, would provide strategic transfers linking major east-west bus

routes with north-south routes and all three transit services. The existing Kaysner Park-and-Ride facility would be revitalized providing for mixed uses, while retaining approximately 100 park-and-ride spaces.

Under the Proposed Alternative, transit ridership could reach 6,650 riders per day. Currently, transit ridership in the study area during the PM peak hour is approximately 26% of the daily total ridership. Based on this factor, PM peak-hour ridership under the Proposed Alternative would be approximately 1,750 passengers. Of this total 43% would be departing (750 passengers) and 57% arriving (1,000 passengers). Current transit ridership has the capacity for 1,500 additional departing trips and 1,450 additional arriving trips, indicating adequate capacity for additional transit ridership.

Pedestrian and Bicycle Mobility

The Proposed Alternative would include a number of street improvements, in addition to those discussed under the No Action Alternative, that would further improve pedestrian and bicycle mobility. The extension of NE 185th Street, as part of the NE 185th Street/98th Avenue NE Connector project, would improve access in the western portion of the study area and provide another signalized crossing of SR 527. The installation of a signal at 98th Avenue NE and SR 522 would improve north-south circulation and the Main Street Enhancements would improve the pedestrian environment, safety, and access along Main Street.

Access and Circulation

The circulation system in the study area would improve under the Proposed Alternative with the extension of Main Street and the extension of NE 185th Street to connect with 98th Avenue NE. These projects would improve vehicular circulation in an east-west direction through the study area and generally improve vehicular access to the study area west of SR 527. The installation of a traffic signal at SR 522 and 98th Avenue NE would also improve north-south circulation west of SR 527.

3.5.3. Mitigation Measures

Incorporated Plan Features

Future transportation improvements in the study area under the alternatives are described in Chapter 2. A discussion of these improvements is included in the previous section.

Applicable Regulations and Commitments

The City has adopted a Commute Trips Reduction Program that requires participating employers to encourage employees to reduce vehicle miles of travel and single-occupant-vehicle commute trips 14.06 BMC. The City's continued implementation

of this program will reduce the number of vehicle trips generated under the alternatives.

Chapter 12.16 BMC includes a number of requirements for developers to provide pedestrian and transit facilities. The City's continued implementation of these requirements will encourage walking and transit as a means of commuting and reduce the number of required parking spaces and vehicle trips generated under the alternatives.

Other Potential Mitigation Measures

Transit

A number of additional transit measures could be incorporated to increase transit ridership and reduce single-occupant vehicles. These primarily include coordination with the three transit agencies that serve the study area.

- Coordinate with transit agencies to promote transit usage through coordination of bus routes and scheduling.
- Coordinate with transit agencies to develop LOS standards that include the percentage of residents living within a prescribed distance of a transit route and establishing the appropriate bus frequencies.
- Coordinate with transit agencies to implement employer outreach programs that promote the use of alternative transportation modes.
- Encourage employers to provide incentives for employees to commute by transit, or ridesharing, or other alternative means.

Parking

The City should implement a parking management plan for the study area. The plan should include monitoring of on-street parking, especially in residential areas adjacent to the study area; promoting shared parking; and managing the cash-in-lieu-of-parking program. If available parking supply is not adequate to meet the typical demand, additional mitigation measures could include:

- implementing hourly time restrictions,
- shortening the hourly time restrictions,
- installing parking meters,
- restricting parking in residential neighborhoods through a permit system,
- modifying the BMC parking requirements, and
- constructing additional parking.

3.5.4. Significant Unavoidable Adverse Impacts

Implementation of either the Proposed Alternative or No Action Alternative would result in increased traffic in the study area. The increased traffic with planned improvements can meet City concurrency standards for the study corridor (SR 522). Although the effects of additional vehicles on traffic congestion can be mitigated to varying degrees through the proposed transportation improvements, the actual increase in traffic under either alternative is considered a significant unavoidable adverse impact.

3.6. Noise

The purpose of this section is to address potential changes in the noise environment of the study area. This section describes noise from roadway sources and stationary sources (e.g., commercial businesses).

3.6.1. Affected Environment

Much of the focus of the affected environment is on traffic noise analysis, as this source category is most directly linked to changes in land use, population, and employment under the alternatives being considered.

Noise Terminology

Below are brief definitions of noise terminology used in this section.

- **Sound.** A vibratory disturbance transmitted by pressure waves through a medium (e.g., air, water, and solids) and capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable. In general, sound waves travel away from a ground-level noise source in a hemispherical pattern. As a result, the energy contained in a sound wave is spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the noise source.
- **Decibel (dB).** A measure of sound intensity based on a logarithmic scale that indicates the squared ratio of actual sound pressure level to a reference sound pressure level (20 micropascals).
- **A-Weighted Decibel (dBA).** A measure of sound intensity that is weighted to take into account the varying sensitivity of the human ear to different frequencies of sound. Typical A-weighted noise levels for various types of sound sources are summarized in Table 3.6-1.
- **Equivalent Sound Level (Leq).** Leq represents an average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level that would contain the same acoustical energy as the time-varying sound that actually occurs during the monitoring period. The 1-hour A-weighted equivalent sound level (Leq 1h) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- **Day-Night Level (Ldn).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with a 10-dB penalty added to sound levels between 10:00 p.m. and 7:00 a.m.

Table 3.6-1. Typical A-Weighted Sound Levels

Sound Source	Decibels (A-weighted)	Typical Response
Carrier deck jet operation	140	Limit amplified speech
Limit of amplified speech	130	Painfully loud
Jet takeoff (200 feet) Auto horn (3 feet)	120	Threshold of feeling and pain
Riveting machine Jet takeoff (2,000 feet)	110	—
Shout (0.5 foot) New York subway station	100	Very annoying
Heavy truck (50 feet) Pneumatic drill (50 feet)	90	Hearing damage (8-hour exposure)
Passenger train (100 feet) Helicopter (in flight, 500 feet) Freight train (50 feet)	80	Annoying
Freeway traffic (50 feet)	70	Intrusive
Air conditioning unit (20 feet) Light auto traffic (50 feet)	60	—
Normal speech (15 feet)	50	Quiet
Living room Bedroom Library	40	—
Soft whisper (15 feet)	30	Very quiet
Broadcasting studio	20	—
	10	Just audible
	0	Threshold of hearing

Source: Federal Transit Administration 2006.

A doubling of acoustical energy from a noise source results in a 3-dB increase in sound. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different than what is measured. Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 hertz [Hz]) range. In typical noisy environments, most people are able to detect sound-level increases of 3 dB, and a 10-dB increase is generally perceived as a doubling of loudness. Therefore, doubling sound energy (e.g., doubling the volume of traffic on a highway) is generally perceived as a detectable but not substantial increase in sound level.

Attenuation rate is used to describe the rate at which the intensity of a sound signal declines as it travels outward from its source. When distance is the only factor considered, sound levels from isolated point sources of noise typically decrease by about 6 dBA for every doubling of distance from the noise source. When the noise

source is a continuous line (e.g., vehicle traffic on a highway), sound levels decrease by about 3 dBA for every doubling of distance. Noise levels can also be affected by several factors other than the distance from the noise source. Topographic features and structural barriers that absorb, reflect, or scatter sound waves can affect the reduction of noise levels. Atmospheric conditions (e.g., wind speed and direction, humidity levels, and temperatures) also can affect the degree to which sound is attenuated over distance.

Noise Regulations and Impact Criteria

City of Bothell Noise Regulations

Chapter 8.26 of the Bothell Municipal Code establishes limits on the noise levels and durations of noise crossing property boundaries. Permissible noise levels at a receiving land use depend on its environmental designation for noise abatement (EDNA). The City of Bothell (City) EDNAs are classified as follows:

- **Class A.** Lands where human beings reside and sleep, including all properties in the City which are zoned in single-family residential or multiple-family residential classifications.
- **Class B.** Lands involving uses requiring protection against noise interference with speech, including all properties in the City which are zoned in neighborhood business, community business, general commercial, and freeway service classifications.
- **Class C.** Lands involving economic activities of such a nature that higher noise levels than experienced in other areas is normally to be anticipated. Persons working in these areas are normally covered by noise control regulations of the Department of Labor and Industries. Such areas shall include all properties in the City which are zoned in light industrial and general industrial classifications.

Permissible noise limits are shown in Table 3.6-2. Between the hours of 10:00 p.m. and 7:00 a.m. (nighttime hours), the noise limits are reduced by 10 dBA for receiving property within Class A EDNAs.

Table 3.6-2. Maximum Permissible Noise Levels at Receiving Property Line

EDNA of Noise Source	Permissible Noise Level in dBA EDNA of Receiving Property			
	A		B	C
	Daytime	Nighttime	All Hours	All Hours
A	55	45	57	60
B	57	47	60	65
C	60	50	65	70

For noise levels that exceed the above levels for short durations, maximum permissible sound levels are regulated as shown in Table 3.6-3.

Table 3.6-3. Adjustment to Maximum Permissible Noise Levels at Receiving Property Line

Duration of Sound Level within a 1-Hour Interval	Add Amount to Maximum Permissible Sound Level
15 minutes	+ 5 dB
5 minutes	+ 10 dB
1.5 minutes	+ 15 dB

Sounds that are exempt, at all time, from the maximum permissible noise levels adopted by the City include, but are not limited to, the following sounds:

- sounds originating from temporary construction. The exceptions do not apply to the receiving properties within Class A EDNAs between the hours of 10:00 p.m. and 7:00 a.m.;
- sounds created by motor vehicles when regulated by the Chapter 173-62 of Washington Administrative Code (WAC);
- sounds created by warning devices not operating continuously for more than 5 minutes or bells, chimes, and carillons; and
- sounds created by motor vehicles, licensed or unlicensed, when operated off public highways except when such sounds are received in Class A EDNAs.

Federal and State Traffic Noise Impact Criteria

Federal Highway Administration (FHWA) has adopted criteria for evaluating noise impacts associated with federally funded highway projects, and for determining whether such impacts are sufficient to justify funding of noise abatement. These criteria are specified in the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise. The FHWA Noise Abatement Criteria (NAC) and Washington State Department of Transportation (WSDOT) impact criteria are summarized in Table 3.6-4.

WSDOT has adopted the FHWA NAC for evaluating noise impacts and determining whether such impacts are sufficient to justify funding of noise abatement for roadway improvement projects with state funding. The WSDOT impact criteria are listed in Table 3.6-4. In cases where no state or federal funding is involved, the WSDOT protocols are not applicable, but for this EIS the WSDOT standard is considered a relative indicator of impact (i.e., criterion) for State Environmental Policy Act (SEPA) evaluations. For WSDOT roadway projects, a noise impact occurs when a predicted traffic noise level under the design year conditions exceeds the WSDOT impact criteria listed in Table 3.6-4, or when the predicted traffic noise level

substantially exceeds the existing noise level. A 10-dBA increase over existing noise levels is considered to be a substantial increase and therefore a traffic noise impact.

Table 3.6-4. FHWA Noise Abatement Criteria and WSDOT Impact Criteria

Activity Category	FHWA NAC (dBA Leq)	WSDOT Impact Criteria (dBA Leq)	Description of Activity Category
A	57 (exterior)	56 (exterior)	Lands where serenity and quiet are of extraordinary significance and that serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67 (exterior)	66 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals
C	72 (exterior)	71 (exterior)	Developed lands, properties, or activities not included in Categories A or B above
D	—	—	Undeveloped lands
E	52 (interior)	51 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums

Land Uses and Noise-Sensitive Receivers

Noise-sensitive receivers addressed by community noise studies generally include residences, schools, parks, and places of worship. Generally, outdoor areas of frequent human use are considered noise sensitive. Noise-sensitive land uses in the study area are primarily associated with single-family houses, residential condominiums, apartment buildings, office buildings, and commercial buildings. The University of Washington Bothell/Cascadia Community College campus (UWB/CCC) is located in the eastern portion of the study area.

Existing Background Noise Levels

The study area is likely affected by the following existing noise sources:

- vehicles on public streets within the study area;
- traffic on State Route (SR) 522 and SR 527; and
- rooftop equipment (e.g., ventilation systems) on buildings in the study area.

Although no sound-level measurements were taken as part of this evaluation, noise levels within the study area are expected to be relatively high, where normal vehicle traffic is the most significant contributor to noise levels. Typical background outdoor, daytime noise levels are estimated to be between 55 and 65 dBA in the City, depending on distance from the roadway (Federal Transit Administration 2006).

3.6.2. Impacts

Common to All Alternatives

Development under both alternatives would temporarily increase noise levels from construction activities. Also, as described in Section 3.5, “Transportation,” future traffic volumes would increase on local streets within the study area. These traffic increases would result in higher ambient noise levels from moving and idling traffic at residential dwelling units constructed adjacent to the streets.

No Action Alternative

Although the No Action Alternative would result in smaller increases in population than the Proposed Alternative, noise impacts would be similar. These impacts are described and compared in detail under “Proposed Alternative.”

Proposed Alternative

This section addresses noise impacts associated with construction, traffic on local streets, transit buses, and commercial operations.

Construction Noise

Redevelopment of the study area would require demolition and construction activity close to residential housing units, which would temporarily increase noise levels. Temporary daytime construction activity is exempt from the City noise ordinance limits. Temporary daytime construction activity could cause annoyance and speech interference at outdoor locations adjacent to the construction sites and could cause discernible noise (for several blocks away from the site). Nighttime construction activity, if required at all, is not exempt from the City’s noise ordinance, and would be required to comply with the nighttime limits specified by the City noise ordinance (Tables 3.6-2 and 3.6-3). Compliance with City nighttime noise ordinance limits would reduce any impacts from nighttime construction activity to a less-than-significant level.

Noise Impacts on Existing Homes Caused by New Buses and Increased Traffic on Study Area Streets

Daily traffic volumes were similar under both alternatives, except for the increases due to the potential NE 185th Street/98th Avenue NE Connector, which is only included under the Proposed Alternative. Future PM peak-hour traffic volume increases along the major streets in the study area under the Proposed Alternative are listed in Table 3.6-5.

The potential improvement of NE 185th Street and its extension to 98th Avenue NE, included only under the Proposed Alternative, would add a center turn lane and move

travel lanes outward (closer to existing homes along the street), increase traffic volumes, and add new buses. These changes would increase associated traffic noise at existing dwellings on these streets. At this time, it is uncertain whether such improvements would use local funding or state or federal funding. Before WSDOT can issue any funds, it will require a traffic noise analysis to identify noise impacts, if any, and to assess whether state or federal funds can be used to abate identified impacts.

Table 3.6-5. PM Peak-Hour Traffic Volumes of Major Study Area Streets

Road Segment	2007 Existing Volumes (Vehicles/hour) ¹	2005 Existing Bus Volumes (Buses/hour) ^{2,3}	2035 Proposed Alternative Volumes (Vehicles/hour) ¹	2035 Proposed Alternative Bus Volumes (Buses/hour) ^{1,3}
SR 527 north of SR 522	1,450	14	2,150	6
SR 522 east of SR 527	2,560	25	3,570	7
Main St east of SR 527	720	10	950	11
NE 185th St east of SR 527	360	8	950	42
NE 185th St/98th Ave NE Connector north of SR 522	160	0	1,150	36

¹Source: Perteet Inc. 2008a

²Source: Perteet Inc. 2006

³PM peak-hour bus volumes are assumed to be 10% of daily bus volumes.

The FHWA Traffic Noise Model (TNM) Lookup Table and Version 2.5 were used to predict existing and future noise levels during the PM peak hour. The model was configured as follows:

- The traffic noise model requires traffic information by vehicle volume (two-axle, four-tire vehicles), medium volume (two-axle, six-tire vehicles), heavy truck volume (three or more axles), and bus volumes. The assumption of 3% of medium trucks and 2% of heavy trucks were modeled for these roadways, which are consistent with the noise analysis for the SR 527 Multiway Boulevard Treatments (Perteet Inc. 2008d). Because the Proposed Alternative would shift the transit service to NE 185th Street and the NE 185th Street/98th Avenue NE Connector, bus volumes were input based on the existing bus volumes and future bus volumes projected on these streets. Because the specific locations of new bus stops have not yet been determined, the noise from buses accelerating away from bus stops was not modeled.
- Traffic was assumed to operate at 30 miles per hour (mph) on SR 527 and SR 522 and 25 mph on Main Street, NE 185th Street, and 98th Avenue NE in the study area.

- The terrain surface between the roadway and nearby residential receivers consists mainly of asphalt and packed soil. Therefore, the ground surface type was defined as “hard surface” for the model.
- The analysis distance from the center of the road to the existing homes is assumed to be 75 feet for SR 527 and 50 feet for SR 522, NE 185th Street, and 98th Avenue NE. No existing homes are identified on Main Street under existing conditions. Under the Proposed Alternative, one direction of travel lanes may move closer to the existing homes because of the roadway widening improvements, but the distances between the center of the road and the existing homes are assumed to be the same.
- Under the Proposed Alternative, future distance between the center of the road and average allowable setbacks (for new developments) is assumed to be 70 feet for SR 527, 50 feet for SR 522, 30 feet for Main Street, and 40 feet for NE 185th Street and 98th Avenue NE.

The PM peak-hour traffic noise increase for existing homes (2035 noise levels compared to existing noise) along the major streets in the study area are summarized in Table 3.6-6.

Table 3.6-6. Modeled PM Peak-Hour Noise Levels of Major Study Area Streets

Road Segment	Existing Homes			Proposed Developments
	2007 Existing Noise Leq (dBA)	2035 Proposed Alternative Noise Leq (dBA)	2035 Proposed Alternative Minus 2007 Existing (dBA)	2035 Proposed Alternative Noise Leq (dBA)
SR 527 north of SR 522	64	66	2	66
SR 522 east of SR 527	69	70	1	70
Main St east of SR 527	—	—	—	65
NE 185th St east of SR 527	59	64	5	65
NE 185th St/98th Ave NE Connector north of SR 522	55	64	9	66

As shown in Table 3.6-6, modeled peak-hour exterior Leq noise levels are between 66 and 70 dBA for new dwellings constructed as close to busy streets as allowed by the proposed setback requirement. Those peak-hour noise levels would be high enough to interfere with normal speech at outdoor use areas (e.g., exterior balconies) adjacent to the roads. However, those future exterior noise levels would not be loud enough to cause excessive indoor noise levels, because the City’s proposed building code for new dwellings in the study area will require installation of double-pane glass windows. Therefore, new dwellings constructed near even the busiest roads would not be impacted by traffic noise. Note, this conclusion might change if the City elected to use WSDOT funding for roadway improvements, because WSDOT’s

66-dBA impact criterion applies to exterior noise levels, regardless of the City's acoustical building code requirements.

The combination of roadway widening, increased traffic volumes, and rerouting of buses would increase peak-hour Leq noise levels at existing homes adjacent to the NE 185th St/98th Ave NE Connector north of SR 522 by as much as 9 dBA. That forecast peak-hour increase is less than WSDOT's "substantial increase" impact threshold of 10 dBA. Therefore, the Proposed Alternative would not impact typical existing dwellings along that segment. However, the modeled noise levels did not account for buses accelerating at individual bus stops, because the locations of individual bus stops have not yet been established. Noise impacts caused by buses accelerating at individual bus stops are described in the next section.

Instantaneous Noise at Dwellings Adjacent to Bus Stops

The potential NE 185th Street/98th Avenue NE Connector, included under the Proposed Alternative, would shift transit facilities from SR 522 and Main Street to NE 185th Street and the NE 185th Street/98th Avenue NE Connector. This would result in additional noise from buses on these local streets under the Proposed Alternative.

The forecast PM peak-hour bus volumes, under the Proposed Alternative, along NE 185th Street and 98th Avenue NE in the study area are listed in Table 3.6-5.

Dwellings adjacent to proposed new bus stops could be impacted by noise from accelerating buses leaving the bus stops. Based on the noise measurements at a bus stop in downtown Seattle, the instantaneous noise level at adjacent dwellings could be as loud as 76 dBA to 82 dBA while a bus is decelerating or accelerating for a few seconds. The noise level could be as loud as 70 dBA while a bus is idling at a bus stop for 1 or 2 minutes. The noise measurements were taken 15 feet from a bus stop.

Based on studies that compare noise from conventional diesel buses and diesel-electric hybrid buses (Ross and Staiano 2007), hybrid buses are not significantly quieter than the conventional buses in the idle and acceleration conditions. Under low-speed (30 mph) travel conditions, hybrid buses are 3 dBA quieter than conventional buses. At a speed of 40 mph and above, maximum noise levels for all bus technologies begin to converge as noise from tire/pavement intersection begins to dominate. The studies show that hybrid buses have been found to produce slightly, but not significantly, lower noise emissions than conventional buses.

Currently, there are single-family homes along NE 185th Street and 98th Avenue NE. In the future, land use on these streets could be a mix of multi-family residential housing and retail, office, and commercial buildings. Buses decelerating, accelerating, and idling at bus stops along NE 185th Street and 98th Avenue NE would increase ambient noise and that could affect adjacent homes. However, since

the exact bus-stop locations have not been determined, the significance of the noise impact on nearby land use cannot be identified at this time.

Noise from New Commercial Operations

Land use in the study area would consist of a mix of residential housing and retail, office, and commercial buildings. It is likely new commercial development would occur near either current or future residential housing. Unless properly controlled, mechanical equipment (e.g., rooftop air conditioning units) and trucks at loading docks of office and retail buildings could cause ambient noise levels at nearby residential housing units to exceed the City noise ordinance limits. However, the City would require all prospective future developers to use low-noise mechanical equipment adequate to ensure compliance with the City's current daytime and nighttime noise ordinance limits. Depending on the nature of the proposed development, the City may require the developer to conduct a noise impact study to forecast future noise levels and to specify appropriate noise control measures. Compliance with the noise ordinance would ensure this potential impact would not be significant.

3.6.3. Mitigation Measures

Incorporated Plan Features

No plan features have been proposed to reduce study area noise levels.

Applicable Regulations and Commitments

City Noise Regulations

Certain noise-control measures will be required to comply with current regulations. These required measures would be the use of low-noise mechanical equipment at office and retail facilities adequate to comply with the City noise ordinance limits. If nighttime construction is requested by developers, then a noise control study will need to be submitted for City approval, demonstrating compliance with the City's nighttime noise ordinance limits.

As required by the City's building code, new dwellings in the study area will be required to install double-pane glass windows.

Washington State Department of Transportation Noise Criteria

As shown in Table 3.6-6, the forecast traffic noise increase at the existing homes along the NE 185th Street/98th Avenue NE Connector does not exceed WSDOT's "substantial increase" criterion of 10 dBA Leq. Therefore, existing homes on 98th Avenue NE would not be impacted by the increased traffic noise. At this time, it is uncertain whether the potential NE 185th Street/98th Avenue NE Connector will use

state or federal funding. Before WSDOT can issue any funds, a traffic noise analysis will be required to identify noise impacts and to assess whether state or federal funds can be used to abate identified impacts.

Other Potential Mitigation Measures

Construction Noise Abatement

If nighttime construction operations would be required, then noise abatement would be considered on a case-by-case basis to ensure that the noise levels at the nearest residences would be within the City's nighttime noise limits. According to the City code, temporary daytime construction activities are exempt. Regardless, based on site-specific considerations at the time of construction permit review, the City may at its discretion require all construction contractors to implement noise control plans for construction activities in the study area for daytime activities.

To reduce the potential for temporary, adverse noise impacts associated with construction, where the City has determined a noise control plan is required, 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 enclosures or walls to surround noisy stationary equipment, installing mufflers on engines, 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 receptors, the following mitigation measures will be incorporated into construction plans and contractor specifications:

- Locating stationary equipment away from receiving properties will decrease noise from that equipment.
- Erecting portable noise barriers around loud stationary equipment located near sensitive receivers will reduce noise.
- Limiting construction activities to between 7:00 a.m. and 10:00 p.m. will avoid sensitive nighttime hours.
- Turning off idling construction equipment will eliminate unnecessary noise.
- Requiring contractors to rigorously maintain all equipment will 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 will reduce noise effects.

Bus Stop Noise Impacts

Buses decelerating, accelerating, and idling at bus stops will increase ambient noise and could impact existing and future homes immediately adjacent to these bus stops. Since the exact bus-stop locations have not been determined along NE 185th Street and 98th Avenue NE, the City could mitigate the impacts by avoiding bus stops being

located near residential land uses. If bus stops have to be installed in front existing homes, the City could mitigate the impacts by installing double-pane windows combined with new air conditioners at these homes.

3.6.4. Significant Unavoidable Adverse Impacts

The increased bus volume on NE 185th Street and 98th Avenue NE could result in significant unavoidable adverse noise impacts on existing and future homes adjacent to bus stops on NE 185th Street and 98th Avenue NE, if there is no feasible noise abatement measure to reduce the noise levels.

3.7. Cultural Resources

This section assesses the effects of additional development associated with the alternatives on archaeological and historic resources.

3.7.1. Affected Environment

The cultural resources analysis area or Area of Potential Effects (APE) is defined as the geographic area or areas within which an undertaking may directly or indirectly cause change of character or use of archaeological and/or historic resources. The definition of the APE is influenced by the scale and nature of an undertaking. For purposes of this analysis, the APE is considered identical to the study area defined in Chapter 2 (Figure 2-1).

Environmental Setting

The study area is located within the *Tsuga heterophylla* Zone of the Puget Trough physiographic province, a region once characterized by a wet, mild, maritime climate (Franklin and Dyrness 1973:70). Vegetation in the study area, prior to development, included Douglas-fir (*Pseudotsuga menziesii*), Western hemlock (*Tsuga heterophylla*), Western redcedar (*Thuja plicata*), red alder (*alnus rubra*), swordfern (*Polystichum munitum*), and salal (*Gaultheria shallon*). This dense groundcover supported a wide variety of terrestrial fauna including deer (*Odocoileus sp.*), elk (*Cervus sp.*), beaver (*Castor sp.*), bear (*Ursus sp.*), and many small mammals. Currently, the study area supports only a limited amount of native vegetation such as Douglas-fir, swordfern, and Oregon grape (*Berberis nervosa*). A wide variety of grasses, blackberry (*Rubus discolor*), Scot's broom (*Cytisus scoparius*), and ornamentals are present.

The topography of the Puget Sound region developed from scouring and modifications caused by Cordilleran glaciers passing through the region in the late Pleistocene. Glacial deposits are found in various locations within the gently rolling upland terraces that comprise the study area. Soils in and around the study area largely consist of Everett gravelly sandy loam and Alderwood gravelly loam. The Everett and Alderwood series are moderate- to well-drained sediments commonly found on hilly uplands with the Everett series often found at elevations below 500 feet above mean sea level. These soils supported dense forests during prehistoric and early historic times. Norma fine sandy loam, Indianola loamy fine sand, Kitsap silt loam, Puget silty clay loam, and Seattle muck are also present in small quantities. (Poulson et al. 1952).

The southern portion of the study area is located within the Sammamish River Valley. In addition, North Creek and Horse Creek transverse the eastern and western

portions of the study area, respectively. The Sammamish River and all its accessible tributaries are utilized by coho, chinook, and sockeye salmon (Williams et al. 1974). Salmon utilization has decreased over time due to development, industrialization, and the construction of the Lake Washington Ship Canal (1911–1917) and lowering of Lake Washington, described further below. This southern portion of the study area is located in part within the 100-year floodplain of the Sammamish River and contains a mosaic of palustrine forested, palustrine scrub-shrub, and palustrine emergent wetlands.

Cultural Setting

Prehistoric Setting

Ames and Maschner (1999) created a general cultural sequence for the Pacific Northwest (Table 3.7-1), noting a shift from small groups of generalized hunter-fisher-gatherers to large, complex social groups reliant on aquatic resources. Evidence of human occupation of the Puget Sound area can be found to coincide with the stabilization of sea levels, approximately 5,000 years ago; however, prior evidence may lie buried beneath the waters. Excavations at the West Point site in Seattle have produced inundated remains dating from around 4,200 to 700 years before present (Larson and Lewarch 1995). Continuous occupation from the stabilization of the sea levels to the Proto-Historic and Historic periods is common for many sites in the Puget Sound region (Nelson 1990).

Table 3.7-1. Pacific Northwest General Cultural Sequence

Dates	Period	Settlement	Subsistence	Technology
~ 11,000 BP	Paleoindian	Highly mobile, small groups	Generalized marine, shoreline and terrestrial resources	Stone, bone, antler, perishable materials Clovis points
10,500–4,400 BC	Archaic	Highly mobile, small groups	Generalized marine, shoreline and terrestrial resources	Stone, bone, antler, perishable materials Olcott points
4,400–1,800 BC	Early Pacific	Increased sedentism in seasonal villages	Increased use of shoreline resources, expanded use of marine resources. Camas and shellfish first utilized	Increase in ground stone, bone, antler, perishable materials Cascade points
1,800 BC–AD 220/500	Middle Pacific	Winter villages of plank houses and seasonal camps	Increased focus on marine and riverine resources. Food storage technologies developed	Decrease in stone tools, diversification of tools of bone, antler, perishable materials, canoes
AD 200/500–AD1775	Late Pacific	Large permanent villages and special use camps	Specialized marine, riverine, and terrestrial resources Extensive food storage	Very little stone

Within the study area, a review of the glacial history, and vegetation, drainage, and climatic changes over time allows inferences to be made about when and how hunter-fisher-gatherers may have first inhabited and utilized resources in the area. As the climate stabilized and forests developed at the end of the last ice age, approximately 6,000 years ago, animal species such as deer and elk emerged and became established. Salmon and other fish species utilized the lakes and streams in the vicinity of the study area at approximately the same time. Hunter-fisher-gatherers most likely hunted deer, elk, bear, and beaver, among others, in the forests, prairies, and riparian areas around the study area for the last 6,000 years. Salmon, trout, and other fish species would have been accessible in the waters of Lake Washington, the Sammamish River and its tributaries, and the many small streams and lakes in the area. Plant resources such as camas, wapato, berries, and roots would also have been available at different times of the year.

Evidence of human occupation of the Puget Sound can be found to coincide with the stabilization of sea levels, approximately 5,000 years ago; however, prior evidence may lie buried beneath the waters. Excavations at the West Point site in Seattle have produced inundated remains dating from around 4,200 to 700 years before present (Larson and Lewarch 1995). Continuous occupation from the stabilization of the sea levels to the Proto-historic and Historic periods is common for many sites in the Puget Sound region (Nelson 1990).

Ethnographic Setting

The study area is within the traditional territory of the Sammamish people, a Duwamish subgroup that lived at the mouth of the Sammamish River and along the eastern shore of Lake Washington (Curtis 1907:Vol IX, 174; Ruby and Brown 1992; Swanton 1978). The language is considered to be a Southern Lushootseed dialect from the Coast Salish stock (Suttles and Lane 1990). The Sammamish people were hunter-fisher-gatherers who relied on the diverse floral and faunal resources available to them in the many lakes, streams, and prairies around Lake Washington and the Sammamish River Valley.

The study area, which includes portions of the Sammamish River and two of its tributaries, was rich in food, technological, and medicinal resources. Hunter-fisher-gatherers inhabiting the study area may have collected and processed edible roots and berries from the marshes, prairies, and forests that once surrounded the study area. Sammamish people may have used locations within the study area for catching and processing fish that were present in the Sammamish River, North Creek, and Horse Creek. Freshwater shellfish would also have been available. Deer and elk may have been hunted in the forests, open clearings, and marsh edges around these waterways or nearby Lake Washington. Archaeological deposits in the study area would reflect these activities and would consist of shell midden deposits, fire hearths, roasting pits, seasonal campsites, berry drying features, and lithic scatters.

Historic Setting

In 1792, George Vancouver and his crew were the first Europeans to explore the Puget Sound area. However, the Native Americans they encountered possessed metal from trade and had already suffered from at least one small pox epidemic. Continued direct and indirect contact with Europeans led to an increase in epidemics and regional instability, resulting in a population decline (Suttles and Lane 1990). Fort Nisqually was established by the Hudson's Bay Company in 1833 as a trading post. Increased interest in Euro-American settlement of the area came with the Donation Land Claim Act in 1850. Washington Territory Governor Isaac A. Stevens and tribal representatives from area tribes including Duwamish, Suquamish, Snoqualmie, Snohomish, Lummi, Skagit, and Swinomish signed the Point Elliott Treaty in 1855. Negotiations for the Treaty of Point Elliot, along with other Washington Territory treaties enacted by Stevens, were conducted in Chinook Jargon, which led to misunderstandings and miscommunications among all parties. The Point Elliott Treaty provided the Tulalip Reservation for the Snohomish, Snoqualmie, Stillaguamish, and Skykomish. Groups without reservation rights, including the Duwamish, remained living in or near their traditional territories in the Puget Sound area.

Euro-American settlement and exploration along the north shore of Lake Washington began during the second half of the nineteenth century primarily in the communities around Bothell and Woodinville. The lands surrounding Bothell at that time were a dense forest owned by investors in the Washington timber industry (Stickney and McDonald 1977). The earliest settlers in the Bothell area were loggers who had been lured to the north end of Lake Washington by the vastly timbered hillsides. During the 1870s, Bothell contained a logging camp and steamboat stop on the Sammamish River, which became known as Brackett's Landing after an early lumberman (Schumacher 2006). E.W. Allen was the first merchant to establish himself in Bothell in 1884. In 1885, Brackett sold 80 acres to David and Mary Ann Bothell. On April 25, 1889, David Bothell filed a plat with the territorial government for the town of Bothell. This followed two earlier failed attempts to establish townships in the immediate vicinity, including town plats called Winsor and Huron. The Bothells' plat established the City of Bothell's existing gridded street pattern, which was typical of township developments at the time. The Bothells sold the first building lot in the plat to Gerhard Erickson, who was to become the town's first postmaster and is credited with naming the town Bothell. The Bothell family continued to be important in the area, with members serving as the first mayor and councilman after incorporation. Members of the Bothell family are buried in the historic Pioneer Cemetery, located within the study area.

The City of Bothell was incorporated in 1909. Lumber, especially shingles, was an early important industry in Bothell, supported by the many local and national railroads established in the region. Seattle entrepreneurs Daniel Hunt Gilman and

Thomas Burke built their Seattle, Lake Shore, and Eastern Railroad (SLS&E) through Bothell in 1888. The SLS&E was incorporated into the Northern Pacific Railroad in 1892. The Northern Pacific Railroad Depot, listed on the National Register of Historic Places (NRHP), is located in the study area.

Local river traffic was also important to the economic livelihood of Bothell in its early development. Prior to hydrologic modifications that began in the early 1900s, the river was known as Squak Slough and was navigable over its entire length by shallow-draft steamers and was used to float logs from Lake Sammamish to Lake Washington, supporting Bothell's lumber industry. Drainage and navigation improvements completed in the 1910s subsequently changed the river's form and function. One of the significant factors of these modifications resulted from the construction of the Lake Washington Ship Canal and Lock system (Hiram M. Chittenden Locks) in 1916. The lock system's construction caused a reduction in the mean level of Lake Washington by nine feet, eliminating the river's use as a shipping route and damaging the lumber industry in Bothell.

Farming replaced lumber as the main industry until the 1980s when Bothell grew in importance as a center of employment outside of Seattle.

Besides the railroad, early transportation networks in the Bothell area consisted of overland trails and roughly constructed wagon roads. During the early 1900s, a wagon road connected Bothell to Seattle. The road extended from Eastlake (Lake Union area) to north Lake Washington and was often impassable by horse and wagon (Northlake News 1998). By 1909, the road, called Victory Way or Squire Boulevard, had been surfaced from Lake Union to Lake Forest Park and development began in earnest into the once remote areas of Lake Washington's north shore. Between 1913 and 1914, a brick road was laid from Lake Forest Park to Bothell following the old wagon trail. This road became a major thoroughfare out of Seattle until 1927, when the Everett highway was completed. Businesses and restaurants sprung up all along the north shore roadway and quickly became known as "Roadhouse Strip" to many motorists heading north from Seattle (Droge 2003). Many people would drive from Bothell for Sunday dinner to get an inexpensive chicken dinner from such places as Mommy's Shack, the Wishbone Inn, and Bob's Place. These establishments were popular with travelers and locals alike (Klein 1992). The growth and development of the Bothell area was from the outset dependent on the automobile and a road/highway transportation system.

After World War II, the automobile and improved highways allowed people who worked in Seattle, Bellevue, or Everett to live in Bothell and in other suburbs. Housing developments sprung up around Bothell beginning with Stringtown on the road to Woodinville. In 1950, about 1,000 people lived in Bothell. Over the next 50 years, the city would extend its boundaries and the population would jump to more than 25,000. The completion of Interstate (I) 5 and I-405 accelerated the shift from

farming center to suburb. As the Puget Sound economy grew in the 1980s, more jobs evolved in Bothell, making it an employment base again. By 1992, Bothell reached out of King County and had become the third largest employment center in Snohomish County. The gradual expansion and growing use of State Route (SR) 522 and I-405 and the ever-increasing role of the automobile continues to define the character of portions of the community.

Regulatory Context

This environmental impact statement (EIS) is being conducted under the State Environmental Policy Act (SEPA), which requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo environmental review to ensure environmental considerations such as impacts on cultural resources are given due weight in decision-making. State implementing regulations, found in WAC 197-11 and WAC 468-12, require that significant properties, specifically those listed or eligible for listing in the NRHP and the Washington Heritage Register, be given consideration when state undertakings affect historic and cultural values.

Under SEPA, the Washington State Department of Archaeology and Historic Preservation (DAHP) is the specified agency with the technical expertise to consider the effects of a proposed action on cultural resources and to provide formal recommendations to local governments and other state agencies for appropriate treatments or actions. DAHP does not regulate the treatment of properties that are found to be significant; a local governing authority may choose to uphold the DAHP recommendation and may require mitigation of adverse effects to significant properties.

For the purposes of this analysis, the degree to which the alternatives adversely affect districts, sites, buildings, structures, and objects listed or eligible for listing in the NRHP, is the primary criterion for determining significant impacts under SEPA. Secondary criteria include whether an alternative has the potential to affect districts, sites, buildings, structures, and objects listed in or eligible for listing in the Washington Heritage Register or the Bothell Register of Historic Landmarks.

City of Bothell—Certified Local Government

As a Certified Local Government (CLG), historic preservation is an integral part of the City's land use planning policy. The City's CLG status was granted by the National Park Service in 1988. The consideration of cultural resources is also presented in the Historic Preservation Element of the City's current Comprehensive Plan, and the historic resources regulations adopted for the Downtown Subarea.

In accordance with CLG requirements, the City adopted Title 22 Landmark Preservation of the municipal code, established a Landmark Preservation Board, and performed a comprehensive historic resources survey in 1988. These actions created

the framework in which historic resources are identified and treated by the local jurisdiction. The 1988 survey inventoried sites and structures 50 years old or older for the purpose of identifying any with potential historic significance to the community. That survey was updated in 1992 to include annexed portions of the city and unincorporated areas added to the planning area. In 2001, the survey was updated again and additional sites entered in the inventory.

As of November 2008, 15 properties in Bothell have been placed on the Washington Heritage Register; ten properties have been listed on the NRHP; and nine properties have been placed on the local register. The total number of properties on the combined national, state, and local registers is 19. Of these 19, eight are located in the study area.

National Register of Historic Places

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (NRHP) was established by the National Historic Preservation Act of 1966 as “an authoritative guide to be used by federal, state, and local governments; private groups; and citizens to identify the nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment.” The NRHP recognizes properties that are significant at the national, state, and local levels. According to NRHP guidelines, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in prehistory or history.

Ordinarily, birthplaces, cemeteries, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years are not considered eligible for the NRHP, unless they satisfy certain conditions.

The evaluation of integrity according to the NRHP is grounded in an understanding of a property's physical features and how these features relate to its historic significance. It is through the retention of original character-defining features that the significance of a resource is conveyed. The NRHP recognizes seven aspects or qualities that, in various combinations, define the integrity of a property, including:

1. **Location.** Location is the place where the historic property was constructed or the place where the historic event occurred.
2. **Design.** Design is the combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting.** Setting is the physical environment of a historic property.
4. **Materials.** Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship.** Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. **Feeling.** Feeling is a property's expression of the aesthetic or historic sense of a particular period of time.
7. **Association.** Association is the direct link between an important historic event or person and a historic property.

Washington Heritage Register

The Washington Heritage Register is an official listing of historically significant sites and properties found throughout the state. The list is maintained by DAHP and includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in local or state history, architecture, archaeology, engineering or culture. To qualify for placement on the Washington Heritage Register, the resource must meet the following criteria.

- A building, site, structure or object must be at least 50 years old. If newer, the resource should have documented exceptional significance.
- The resource should have a high to medium level of integrity (i.e., it should retain important character defining features from its historic period of construction).
- The resource should have documented historical significance at the local, state, or federal level.

Sites listed on the NRHP are automatically added to the Washington Heritage Register and hence a separate nomination form does not need to be completed.

Bothell Register of Historic Landmarks

The Bothell Register of Historic Landmarks is the local community's formal mechanism for recognizing those properties that are significant to the heritage of the City of Bothell. Established by municipal ordinance Title 22 Landmark Preservation, the Bothell Register is administered by the City's Landmark Preservation Board, which reviews proposed alterations to properties formally listed on the local register and provides assistance to property owners in maintaining the historic integrity of their properties.

Any building, district, object, site, or structure that is more than 50 years old may be designated for inclusion in the Bothell Register. Properties must be significantly associated with the history, architecture, archaeology, engineering, or cultural heritage of the community, and must also possess sufficient physical integrity.

3.7.2. Impacts

Methods and Results of the Impacts Analysis

Efforts to identify cultural resources in the study area consisted of conducting a review of records at DAHP and the City of Bothell to identify properties previously listed in, or determined eligible for listing in, the NRHP, the Washington Heritage Register, and the Bothell Register of Historic Landmarks. For the purposes of this section, the cultural resources considered in the study area may be categorized into three major types described below.

- **Archaeological Resources.** Resources that represent important evidence of past human behavior, including portable artifacts such as arrowheads or tin cans; nonportable features such as cooking hearths, foundations, and privies; or residues such as food remains and charcoal. Archaeological remains can be virtually any age, from yesterday's trash to prehistoric deposits thousands of years old.
- **Ethnographic Resources.** Sites, areas, and materials important to Native Americans for religious, spiritual, or traditional uses. These resources can encompass the sacred character of physical locations (e.g., mountain peaks, springs, and burial sites) or particular native plants, animals, or minerals that are gathered for use in traditional ritual activities. Also included are villages, burials, rock art, rock features, and traditional hunting, gathering, and fishing sites. In some cases, ethnographic resources may overlap prehistoric or historic archaeological resources or they may be embedded within each other.
- **Historic Resources.** Resources of the historic built environment that can include houses, barns, stores, post offices, bridges, and community structures that are more than 50 years old.

Record Search and Literature Review

A record search was undertaken at DAHP in Olympia to identify previously documented archaeological, ethnographic, and historic resources within 1 mile of the study area and to help establish a context for resource significance. Documentation maintained by the City of Bothell was also reviewed. In all, the following inventories and sources were consulted:

- DAHP Electronic Database;
- NRHP;
- Washington Information System for Architectural and Archaeological Records Data (WISAARD); and
- Bothell Historic Inventory.

Previously Recorded Sites

One archaeological site has been recorded within the study area. Site 45KI12 is a midden with fire-affected rock (FAR), a basalt flake, and a cobble tool. The site is located on the bank of the Sammamish River; the site report notes that it has been damaged by development and dredging (Thomas 1977).

Two archaeological sites have previously been recorded within a 1 mile radius of the study area. Site 45KI72 contains FAR, a cobble chopper, flakes, biface thinning flakes, a biface, and a Cascade point. A buried hearth with charcoal was also noted. The Olcott Period artifacts associated with a buried hearth and charcoal makes this site unusual and potentially eligible as a cultural resource, according to Chatters (1982). Site 45KI757 is located along the I-405 right-of-way and consists of one core and one flake. Kanaby (2007) suggests the site may be of the Olcott Period.

Previously Conducted Surveys

Two cultural resources surveys were previously conducted within the study area (Stutsman 1995; Cutler and Gillespie 2007). Both surveys identified historic properties or artifacts; however, neither survey considered the identified material to be eligible for listing on the NRHP.

Twelve cultural resources surveys were previously conducted within a 1-mile radius of the study area. Table 3.7-2 contains NRHP eligibility evaluations.

Table 3.7-2. Previously Conducted Cultural Resources Surveys within 1 Mile of the Study Area

NADB	Author(s)	Date	Title	Archaeological Resources Identified	NRHP Evaluation Status
1339769	Goetz and Warner	1997	Results of a Cultural Resources Assessment for the Tolt Pipeline No. 2, Phase IV Project, North King County, Washington	Bothell-Lake Forest Brick Hwy Gamble House	Eligible Not Eligible
1340403	Luttrell	2001	Cultural Resources Investigations for Washington State Department of Transportation's SR 522 UWB/CCC South Access Project, King County, Washington	Modern debris	Not Eligible
1340650	Hartmann	2001	Radix Ortega/ AT&T Bothell Utility Pole Survey	None	
1346781	Goetz and Tingwall	2004	Bothell Connector Project Draft Environmental Impact Statement	45SN369 (Ross-Wegner Homestead)	Not Eligible
1344245	Cooper	2004	Cultural resources Assessment of the Proposed State Route 522 Corridor Improvements Phase II, King County, Washington	Historic Properties	Not Eligible
1344441	Historical Research Associates (HRA)	2005	Kirkland Nickel Project: Historic, Cultural, and Archaeological Resources Discipline Report and Supplemental Analysis	George Shaw House	Eligible
1348253	Gillis, Lewarch, and Larson	2006	Final Brightwater Conveyance Final Design King and Snohomish Counties, Washington Archaeological Resources Monitoring and Review of Geotechnical Borings and Test Pit Monitoring	None	
1348255	Gillis and Larson	2006	Brightwater Conveyance Final Design Portals Field Reconnaissance King and Snohomish Counties, Washington		
1347254	Crisson	2006	SR 522 University of Washington Bothell/ Cascadia Community College South Access Project, King County Washington, Agreement GCA-4414, TOD AU	Historic debris	Not Eligible
1348507	Schumacher	2006	Archaeological Survey for North Creek Trail, King and Snohomish Counties	None	
1351169	Kaehler and Culter	2008	Archaeological and Historic Buildings and Structures Assessment for the Proposed Bothell Safeway Project, City of Bothell, Snohomish County, WA	Historic debris	Not Eligible

NADB = National Archeological Database

Source: National Archeological Database 2008

Bothell Historic Resources Inventory

The City maintains an inventory of properties that have been previously identified as listed in or potentially eligible for listing on the NRHP, the Washington Heritage Register, or the Bothell Register of Historic Landmarks. This inventory is largely based on the 1988 citywide historic resources survey, described above under “City of Bothell—Certified Local Government.” which inventoried sites and structures 50 years old or older for the purpose of identifying any of potential historic significance to the community.

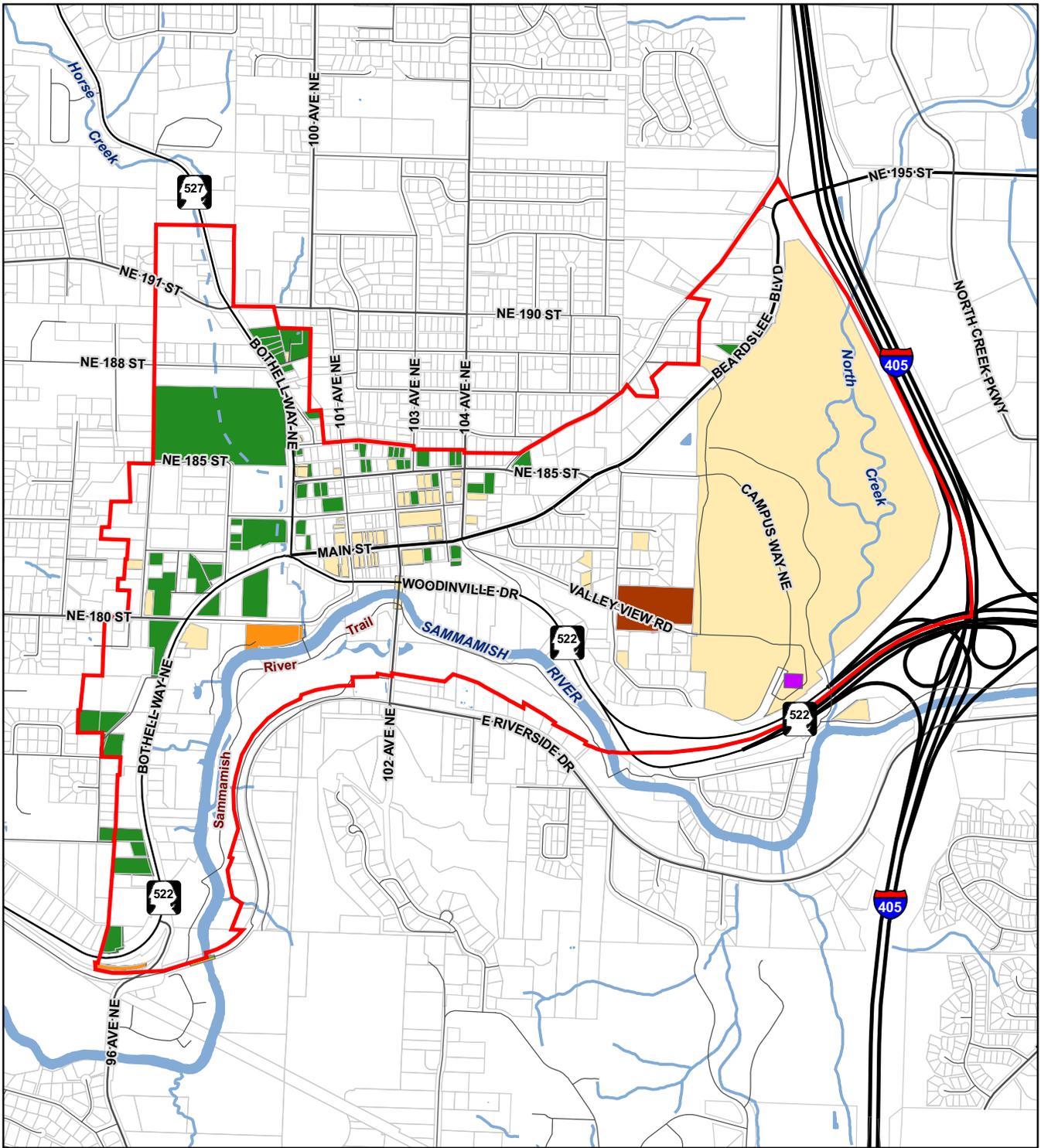
There are 116 properties listed in the Bothell Historic Resources Inventory that are located within the study area (Figure 3.7-1). Of these, the following eight properties have been formally listed on the NRHP, the Washington Heritage Register, or the Bothell Register of Historic Landmarks:

- **Bothell Pioneer Cemetery (1889)**—the northeast and southeast corners of intersection of 108th Avenue NE and NE 180th Street. Originally platted in 1889, the cemetery is the resting place of many local pioneers, including David C. Bothell, Mary Ann Bothell, Gerhard Ericksen, and William Hannan. The cemetery is listed on the NRHP, the Washington Heritage Register, and the Bothell Register of Historic Landmarks.
- **Bothell’s First Schoolhouse (1885)**—at The Park at Bothell Landing. The one-room schoolhouse was originally located on Bothell’s Main Street. It was moved to the Park and restored in 1989. The schoolhouse is listed in the Washington Heritage Register.
- **Bothell–Lake Forest Park Highway (1913)**—at intersection of 96th Avenue NE and SR 522 at the Wayne Curve. This portion of the original brick road that extended from Lake Forest Park to Bothell was the first paved road in the area. The road is listed in the Washington Heritage Register and the Bothell Register of Historic Landmarks.
- **Beckstrom Log Cabin (1884)**—at The Park at Bothell Landing. This log cabin was built by Andrew Beckstrom, a Swedish house painter, and his wife Augusta who were early residents of Bothell, arriving in 1883. The cabin was later relocated to the Park. It is listed in the Washington Heritage Register and the Bothell Register of Historic Landmarks.
- **William A. Hannan House (1893)**—at The Park at Bothell Landing. Originally located on Main Street between 102nd and 103rd streets, the Hannon house was the home of William A. Hannon, former Bothell mayor, councilman, and postmaster. The house was relocated to The Park and now serves as the Bothell Historical Museum. It is listed in the Washington Heritage Register and the Bothell Register of Historic Landmarks.
- **Dr. Reuben Chase House (1885)**—at 17819 118th Avenue NE. Located on the University of Washington/Cascadia Community College campus, the house was originally occupied by Reuben Chase, Bothell’s first doctor. It is considered a good example of a gabled-ell form typical of the pioneer period. The house is listed in the NRHP and the Washington Heritage Register.

- **Dr. Elmer E. Lytle House (1898)**—at The Park at Bothell Landing. The home, which originally stood at the northwest corner of 102nd Avenue NE and Main Street, is the residence of Bothell's second doctor. It was moved to the park and restored in the early 1970s. The house is listed in the Bothell Register of Historic Landmarks.
- **Wayne Curve Bridge (1917)**—at Bothell Way and 96th Avenue NE. An early example of concrete bridge construction, this bridge was built as part of the old Lake Washington Boulevard system. The remnants of the Bridge are listed in the Bothell Register of Historic Landmarks.

All of the other properties listed in the Bothell Historic Resources Inventory have been identified as possessing a degree of historic significance. However, not all of the inventory forms specify whether a property is eligible for historic register listing at the local, state, or national levels. Reevaluation by a qualified architectural historian of the individual properties listed in the inventory would be necessary to determine whether properties maintain historic significance and integrity sufficient to be considered historic resources. For the purposes of this analysis, any property listed in the Bothell Historic Resources Inventory is treated as a potentially eligible historic resource.

A complete list of properties in the study area listed in the Bothell Historic Resources Inventory is provided in Appendix H.



Source: City of Bothell (2008)

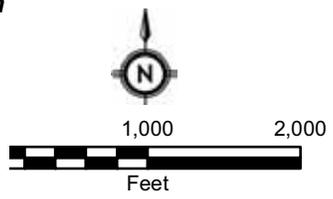
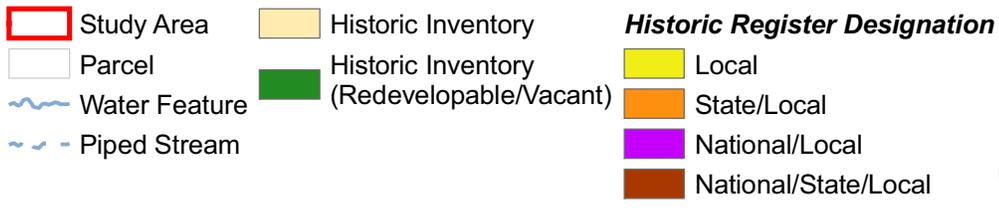


Figure 3.7-1. Historic Inventory and Designations
 Downtown Bothell Planned Action EIS
 December 2008

Significance Thresholds

This analysis considers the environmental impacts of two alternatives: the Proposed Alternative—adoption of the *Downtown Subarea Plan and Regulations* (Freedman Tung and Bottomley 2008) and the Planned Action Ordinance—and the No Action Alternative—continuation of the City’s current Comprehensive Plan and subarea plans applicable to study area without amendment. Development assumptions at this stage are in terms of scenarios for set levels of potential development, as measured in expected population increases, zoning changes, and housing units added.

Typical project impacts that could disrupt or adversely affect cultural resources may include:

- demolition, removal, or substantial alteration without consideration of historic and archaeological sites and/or features;
- incompatible massing, size, scale or architectural style of new development on adjacent properties;
- obstruction or extensive shading of significant views to and from a resource by new development;
- incompatible use of an existing building or structure;
- disruption of integrity of setting; and
- long-term loss of access to the property.

The level of significance for an impact is dependent on the existing integrity and nature of contributing elements to a property’s historic or cultural significance and the sensitivity of the current or historic use of the resource.

Impacts Common to All Alternatives

All studied alternatives accommodate different levels of growth and development in coming years. The likelihood that any of this development would affect cultural resources is dependent on the proximity of the proposed development to any identified cultural resources. Any future development projects located on or in the proximity of known cultural resources in the study area could have impacts on the cultural resource. Any future development project in the study area that would cause a substantial adverse change in the significance of a cultural resource would represent a significant impact related to cultural resources. The potential for significant impacts on cultural resources is the same for land use development (growth) and specific capital improvement projects.

Land Use Development

Impacts on cultural resources from land use development could occur to the extent that future development projects in the study area result in significant impacts on known cultural resources. Figure 3.7-1 illustrates the location of known cultural

resources that are on properties that have been designated as “Buildable Lands,” sites identified by the City as the most likely locations for new development in the study area. Table 3.7-3 contains a list of the known cultural resources that may be demolished or materially altered in an adverse manner based on these projections.

Table 3.7-3. Cultural Resources on “Buildable Lands”

Site # or Address	Site or Property Name	Build Date	APN
18504 BOTHELL WAY NE		1954	0970000055
17321 BOTHELL WAY NE		1958	0726059080
10216 NE 183RD ST	R. O. Gibbs Residence	1920	0967000415
18305 101ST AVE NE		1939	0967000290
18417 103RD AVE NE	L. E. Wissinger Residence	1920	0967000395
18412 104TH AVE NE	1948 House	1948	0826059178
10017 NE 185TH ST		1956	0967000265
10023 NE 185TH ST	Renchy Residence	1920	0967000270
10116 NE 185TH ST	Odd Fellows Hall	1910	9568800050
10120 NE 185TH ST	1920s House	1920	9568800045
10212 NE 185TH ST	M. H. Baker Residence	1910	9568800010
10216 NE 185TH ST	L. G. Stickney Residence	1914	9568800005
10304 NE 185TH ST	Arthur Dakers Residence	1900	9567800030
10332 NE 185TH ST	1938 House	1938	9567800010
10336 NE 185TH ST	1939 House	1939	9567800005
10111 NE 186TH ST	1940s House	1946	0970000075
10117 NE 186TH ST	Bell D. Smith House	1915	9568800055
10139 NE 186TH ST	Fred E. Campbell Residence	1916	9568800075
10201 NE 186TH ST	1939 House	1939	9568800085
10205 NE 186TH ST	W. H. Baker Residence	1915	9568800090
9900 NE 188TH PL	1900s House	1900	1939800046
9910 NE 188TH PL	1910 House (Bartlett)	1910	1939800047
17506 95TH AVE NE	Frederick & Selma Melin Preeg Residence	1925	0726059184
18204 98TH AVE NE	1947 House	1947	2374200025
18212 98TH AVE NE		1955	2374200016
18226 98TH AVE NE	Dorthea Erickson Barn	1913	2374200005

Site # or Address	Site or Property Name	Build Date	APN
18821 BEARDSLEE BLVD		1947	0526059095
17207 BOTHELL WAY NE		1916	0726059083
17321 BOTHELL WAY NE		1958	0726059230
18004 BOTHELL WAY NE	Marine National Company Building	1914	9457200081
18030 BOTHELL WAY NE		1947	9457200050
18033 BOTHELL WAY NE	Hamilton G. Dawson Residence	1924	0726059371
18107 BOTHELL WAY NE		1937	0726059120
18218 BOTHELL WAY NE		1955	0726059109
18221 BOTHELL WAY NE		1962	02374200030
18322 BOTHELL WAY NE		1954	0726059191
18524 BOTHELL WAY NE	Archie Elliott Home	1937	0970000005
18603 BOTHELL WAY NE	Anderson School	1931	0626059052
18728 BOTHELL WAY NE	H. J. Mohn Home	1924	0626059075
18806 BOTHELL WAY NE	1924 House (Scholner)	1924	1939800005
18812 BOTHELL WAY NE	Hollingsworth Residence	1935	1939800006
18818 BOTHELL WAY NE		1932	1939800007
18824 BOTHELL WAY NE	L. Gates Residence	1924	1939800010
18832 BOTHELL WAY NE	Crawford House	1928	1939800020
9506 NE BOTHELL WAY		1935	6157900075
9607 DAWSON ST		1940	1924800005
17707 HALL RD	Oscar Carr/William Hall Residence	1900	0726059211
10010 MAIN ST		1949	0826059040
10303 MAIN ST	Charles O. Wilson Residence	1920	0967000500
10419 PINE ST		1934	0826059018
18624 REDER WAY	E. H. Hartsook Residence	1927	0970000125
10515 ROSS RD		2005	0526059074

Capital Improvement Projects

Several capital improvement projects are currently being considered by the City within the study area and are at various stages of planning and implementation. The following projects may be conducted under both of the proposed alternatives. Each

has the potential impact one or more cultural resources located within the vicinity of the individual study area.

Bothell Crossroads (SR 522)

A cultural resources technical report was prepared for the SR 522 Bothell Crossroads project by consultant AMEC (Cooper pers. comm.). The consultant evaluated all properties in the project's Area of Potential Effects constructed in or before 1959. The property at 17909 Bothell Way (1948; APN: 0726059091), Brooks Biddle Chevrolet, was identified as eligible for listing in the Bothell Register of Historic Landmarks under Criterion A for its association with the twentieth century development of Bothell and the historic transportation industry. No other properties in the project's Area of Potential Effects were identified as cultural resources by the study. The effect of the proposed project in terms of cultural resources is under review in a separate NEPA process.

SR 527 Projects

The No Action Alternative includes a five-lane arterial road along SR 527, while the Proposed Alternative includes a full boulevard with five travel lanes, two access lanes, and landscaping treatment, which would require property acquisition on the west side of the present roadway. A cultural resources technical report was prepared for the SR 527 Multiway Boulevard project by consultant AMEC (Cooper pers. comm.). The consultant evaluated all properties in the project's Area of Potential Effects constructed in or before 1959. The property at 18603 Bothell Way NE (1931; APN: 0626059052), W. A. Anderson School, was identified as being previously listed in the Washington Heritage Register and is considered a cultural resource. No other properties in the project's Area of Potential Effects were identified as cultural resources by the study. The effect of the proposed project in terms of cultural resources is under review in a separate NEPA process.

Main Street Extension

The properties presented in Table 3.7-4 are listed in the Bothell Historic Resources Inventory and are in the vicinity of the proposed Main Street Extension project. This project could have adverse impacts on one or more of these cultural resources.

Table 3.7-4. Cultural Resources along the Main Street Extension Project Corridor

Address	Site or Property Name	Build Date	APN
18221 Bothell Way NE	Safeway	1962	2374200030
18204 98th Ave NE	1947 House	1947	2374200025
18212 98th Ave NE		1955	2374200016

SR 522 Wayne Curve and East of Wayne Curve Improvement

Aside from the Bothell Crossroads project, other state route improvements are proposed such as curb and median improvements, street illumination, landscaping, and a westbound transit lane. The proposed SR 522 Wayne Curve Improvement and East of Wayne Curve project could have adverse impacts on several properties (Table 3.7-5), located along the project corridor, that are listed in the Bothell Historic Resources Inventory.

Table 3.7-5. Cultural Resources along the SR 522 Wayne Curve and East of Wayne Curve Project Corridor

Site # or Address	Site or Property Name	Build Date	APN
At intersection of Juanita Drive and SR 522 at the Wayne Curve	Bothell–Lake Forest Park Highway	1913	n/a
9506 NE Bothell Way		1935	6157900075
17027 Bothell Way NE		1916	0726059083
17321 Bothell Way NE		1958	0726059230
17321 Bothell Way NE		n.d.	0726059080
17909 Bothell Way NE		1966	0726059091
17910 Bothell Way NE	Avon Movie Theatre	1947	0726059096

Beardslee Boulevard Widening East of NE 185th Street

The proposed project calls for the planned widening of Beardslee Boulevard to a five-lane capacity with bike lanes between NE 185th Street and I-405. The improvements would be implemented as development occurs and is not a City provided capital project. The properties presented in Table 3.7-6 are listed in the Bothell Historic Resources Inventory and are in the vicinity of the proposed Beardslee Boulevard Widening project. This project could have adverse impacts on one or more of these cultural resources.

Table 3.7-6. Cultural Resources along the Beardslee Boulevard Widening Project Corridor

Site # or Address	Site or Property Name	Build Date	APN
18821 Beardslee Blvd		1947	0526059095
		n.d.	0526059081
18225 NE Campus Pkwy	UW – Bothell Campus	Various	0526059057

Non-Motorized Improvements: 104th Avenue NE and Valley View Road

The proposed project considers the completion of bike lanes from NE 185th Street to the UW/CCC campus via 104th Avenue NE and Valley View Road. Improvements

would be implemented as development occurs and are not a City provided capital project. The properties presented in Table 3.7-7 are listed in the Bothell Historic Resources Inventory and are in the vicinity of the proposed Non-Motorized Improvements project. This project could have adverse impacts on one or more of these cultural resources.

Table 3.7-7. Cultural Resources along the Non-Motorized Improvements Project Corridor

Site # or Address	Site or Property Name	Build Date	APN
10336 NE 185th St		1939	9567800005
18421 104th Ave NE		1939	0967000435
18415 104th Ave NE		1949	0967000436
18412 104th Ave NE		1948	0826059178
18404 104th Ave NE		1918	0826059165
18214 104th Ave NE		1942	0826059214
10303 Main St		1920	0967000500
10714 Valley View Rd		1924	0826059244
		n.d.	0826059024
Northeast and southeast corners of intersection of 108th Ave NE and NE 180th St	Bothell Pioneer Cemetery	1889	0826059133
18225 NE Campus Pkwy	UW – Bothell Campus	Various	0526059057

Purchase of Northshore School District Property for Public Amenities/Facilities

Several cultural resources, located on the Northshore School District property, are listed in the Bothell Historic Resources Inventory as historically significant. Any project that would involve development of these properties and/or modifications could have adverse impacts on these cultural resources. The inventoried resources include buildings on the existing properties shown on Table 3.7-8.

Table 3.7-8. Cultural Resources on Northshore School District Property

Address	Property Name	Build Date	APN
18603 Bothell Way NE	W. A. Anderson School	1931	0626059052

City Hall/Dawson Replacement

Four properties located in the vicinity of one of the three sites being considered for the proposed City Hall/Dawson Replacement project are listed in the Bothell Historic Resources Inventory (Table 3.7-9). This proposed project could have adverse impacts on one or more of these cultural resources.

Table 3.7-9. Cultural Resources in the Vicinity of City Hall/Dawson Alternative Sites

Address	Site or Property Name	Build Date	APN
18030 Bothell Way NE	n/a	1947	9457200050
18603 Bothell Way NE	W.A. Anderson School	1931	0626059052
18305 101st Ave NE	n/a	1939	0967000290
9929 NE 180th St	Park at Bothell Landing	Various	9457200093

Pop Keeney Stadium

The stadium and surrounding structures have not been recorded as cultural resources and are currently not listed on the Bothell Historic Resources Inventory. Therefore, any improvements made to the facility should not have an adverse impact on cultural resources.

Public Space Planning

Proposed public space planning improvements would occur at the Park at Bothell Landing or on selected parcels associated with the City Hall/Dawson Replacement project. Table 3.7-9 contains a list of cultural resources that could be adversely impacted by these improvements.

No Action Alternative

The No Action Alternative would retain the current Comprehensive Plan and development regulations and would implement nearly all of the City's proposed capital improvements. The study area would undergo less growth than under the Proposed Alternative; however, because this growth could occur on any property in the study area, potential impacts on cultural resources are the same under both alternatives.

Land use development and capital projects under the No Action Alternative could occur on or near parcels in the study area that presently contain identified cultural resources. These actions could result in a substantial adverse change in the significance of a cultural resource, which would constitute a potentially significant impact on cultural resources. Because a Planned Action Ordinance is not proposed under the No Action Alternative, detailed review of potential impacts on cultural resources would likely be required on a project-specific basis. The "Impacts Common to Both Alternatives" identifies the likely impacts on cultural resources associated with the No Action Alternative.

Proposed Alternative

The Proposed Alternative would amend the City's Comprehensive Plan and regulations through the adoption of the *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance. The Proposed Alternative supports greater

growth in the study area than the No Action Alternative. This growth could locate on the “buildable lands”, on “opportunity sites” (discussed in Chapter 2, *Description of Alternatives*), or elsewhere in the study area. Because the growth could occur on any property in the study area, impacts would be similar to those identified for the No Action Alternative. However, with greater growth levels comes greater redevelopment to accommodate the growth, and therefore a higher likelihood of impacts on cultural resources.

The Proposed Alternative considers some capital improvement projects not considered under the No Action Alternative: the Multiway Boulevard enhancement of the SR527 project, the NE 185th Transit Oriented Street and Connector project; Main Street Enhancements; the NE 185th Street Downtown Transit Facilities and Park-and-Ride; the Kaysner Park and Ride/TOD Replacement, and Public Parking. The potential for effects on recorded cultural resources is identified below:

- **SR 527 Multiway Boulevard Treatments.** The Proposed Alternative enhances SR 527 by creating a multiway boulevard with side-access lanes, tree-lined medians and wide sidewalks. This would bring the roadway closer to the Anderson Building, but the wide pedestrian realm of the sidewalk, parking, access lane, and median would provide a significant buffer. The potential to impact cultural resources is addressed under “Impacts Common to All Alternatives” in Table 3.7-3.
- **Main Street Enhancements.** The Proposed Alternative proposes enhancing the existing Main Street by refreshing the streetscape and considering reinstating the straight alignment with parallel parking on each side. This would have temporary adverse construction impacts, but would re-establish the traditional street configuration. The proposed Main Street Enhancement project could have adverse impacts on several cultural resources, listed in the Bothell Historic Resources Inventory, that are located along the project corridor (Table 3.7-10). Potential impacts may also extend to other elements that comprise the existing streetscape. However, the overall intent of the project is to enhance the existing businesses, possibly restore the original street configuration, and provide a more uniform palette of street furnishings that would complement the historic character of the street.
- **NE 185th Street Connector, NE 185th Transit-Oriented Street and NE 185th Street Downtown Transit Facilities and Park-and-Ride.** The proposed project considers the connection of NE 185th Street to 98th Avenue NE, widening of NE 185th Street from SR 527 to Beardslee Boulevard with wider sidewalks and enhanced transit passenger amenities at key stop locations, and the construction of a new Park and Ride facility on NE 185th Street. These improvements have the potential to have an adverse impact on one or more of the cultural resources listed in Table 3.7-11.
- **Kaysner Park and Ride/Transit-Oriented Development Replacement.** No documented cultural resources have been recorded in the vicinity of the proposed improvement.
- **Public Parking.** As the potential sites include the City Hall, NSD, or Pop Keeney Stadium properties, the analysis under “Impacts Common to All Alternatives” addresses the potential impacts on cultural resources for this improvement.

Table 3.7-10. Cultural Resources in the Vicinity of the Main Street Enhancement Project

Address	Site or Property Name	Build Date	APN
10010 Main St		1949	0826059040
10027 Main St		1946	0826059128
10037 Main St	H. A. Hannan Store	1908	0967000535
10042 Main St		1939	0826059111
10101 Main St		1955	0967000005
10105 Main St	Gerhard Ericksen Building	1926	0967000251
10107 Main St		1924	0967000006
10110 Main St		1928	0967000250
10114 Main St	Bothell State Bank	1908	0967000246
10115 Main St		1927	0967000020
10116 Main St	Keeney & Mohn Hardware Bldg.	1911	0967000245
10117 Main St	C. O. Wilson Building	1908	0967000021
10120 Main St	Mohn Furniture and Hardware	1911	0967000240
10121 Main St	Bothell Trading Company	1927	0967000025
10124 Main St	Harry Given Building	1910/1938	0967000235
10130 Main St	WA Federal Savings & Loan	1936	0967000236
10201 Main St	Co-operative Mercantile Co.	1908	0967000070
10221 Main St		n.d.	0967000085
10303 Main St	Charles O. Wilson Residence	1920	0967000500
10228 NE 182nd St	A. Dean Worthington Residence	1923	0967000165
10234 NE 182nd St	Klein Family Residence	1939	0967000160

The likelihood that any new development or capital project conducted within the framework of the Proposed Alternative would affect cultural resources is dependent upon the proximity of the proposed development to any identified cultural resources. Any capital projects or other future development located on or in proximity to known cultural resources in the study area could have a significant impact on cultural resources. Any future development project in the study area that would cause a substantial adverse change in the significance of a cultural resource would represent a significant impact on cultural resources.

While the growth and capital facility impacts are potentially greater than under the No Action Alternative, the Proposed Alternative provides for additional protection for historic resources. The Proposed Alternative also proposes regulations concerning the consideration and treatment of known historic resources in the study area. The purpose of these “Historic Resources Regulations” is to preserve and enhance the historic character and architectural heritage of Downtown Bothell and the overall character of the community.

The Proposed Alternative includes a Planned Action Ordinance that would also exempt from future SEPA threshold determinations and EISs those projects that are consistent with the projects and parameters analyzed in this Draft EIS. Although SEPA would not apply, the mitigation measures identified in this Draft EIS would be applied to project permits that qualify as Planned Action projects. Thus the City would have the means to require additional cultural resource analysis should development or capital improvements affect potentially significant properties.

Table 3.7-11. Cultural Resources in the Vicinity of the NE 185th Street Improvements

Address	Site or Property Name	Build Date	APN
18504 Bothell Way NE		1954	0726059180
10140 NE 185th St		n.d.	0970000055
18322 Bothell Way NE		1954	0726059191
10017 NE 185th St		1956	0967000265
10023 NE 185th St	Renchy Residence	1920	0967000270
18500 101st Ave NE		1954	0970000035
10116 NE 185th St	Odd Fellows Hall	1910	9568800050
10120 NE 185th St	1920s House	c1920	9568800045
10202 NE 185th St	Hagen Residence	1924	9568800015
10212 NE 185th St	M. H. Baker Residence	1912	9568800010
10216 NE 185th St	L. G. Stickney Residence	1914	9568800005
10304 NE 185th St	Arthur Dakers Residence	1900	9567800030
10309 NE 185th St		1912	0967000385
10313 NE 185th St	Rachel Keener Residence	1931	0967000390
18417 103rd Ave NE	L. E. Wissinger Residence	1920	0967000395
10332 NE 185th St	1938 House	1938	9567800010
10336 NE 185th St	1939 House	1939	9567800005
18421 104th Ave NE	1939 House	1939	0967000435
10419 Pine St		1934	0826059018
10515 Ross Rd		2005	0526059074

Planning Commission Recommendations Alternative

The Planning Commission Recommendations alternative is a hybrid of the No Action and Proposed Alternatives. Discussion of this alternative is covered by the analysis of the preceding alternatives.

3.7.3. Mitigation Measures

Incorporated Plan Features

The Proposed Alternative incorporates historic resources regulations. The proposed regulations apply to the Downtown Special Review Area (DRSA), which is bounded by SR 527, SR 522, NE 185th Street and 104th Avenue NE, and select individual

historic properties in the study area. Design review by the Landmark Preservation Board is required. The review process begins when an owner proposes any exterior work on a building that is within the DRSA boundaries, that has been nominated for landmark status, or that is a listed historic structure. The primary intent of the standards is to provide direction for the protection of the historic character of the buildings through a combination of mandatory requirements and advisory guidelines.

Applicable Regulations and Commitments

All of the known cultural resources in the study area are listed in or are considered potentially eligible for listing in the NRHP, the Washington Heritage Register, or the Bothell Register of Historic Landmarks. Because of these determinations and others, proposed development projects in the study area could be governed by applicable federal, state, and local laws requiring further review on an individual project basis.

Federal Laws

The Archaeological Resource Protection Act of 1979 protects archaeological resources and sites that are on public and tribal lands and assists in information sharing among entities seeking to preserve these resources.

The National Historic Preservation Act of 1966, as amended, establishes national standards for designating historic and culturally significant properties and establishes the authority of the State Historic Preservation Officer. Section 106 USC 470(a)(d) of this law establishes a program that requires federal agencies to consider effects to historic properties caused by federally sponsored undertakings.

The Archaeological and Historic Preservation Act of 1974 governs archaeological and other historic and cultural resources found in federal construction activities, including the construction of dams.

The Native American Graves and Repatriation Act governs the protection, preservation, and repatriation of Native American remains and cultural artifacts found in Native American burial sites.

State Laws

The Governor's Executive Order 05-05 requires state agencies with Capital Improvement Projects to integrate DAHP, the Governor's Office of Indian Affairs, and concerned tribes into their capital project planning process. This Executive Order affects any capital construction projects and any land acquisitions for purposes of capital construction.

RCW 27.44 Indian Graves and Records provides protection for Native American graves and burial grounds, encourages voluntary reporting of said sites when they are discovered, and mandates a penalty for disturbance or desecration of such sites.

RCW 27.53 Archaeological Sites and Resources governs the protection and preservation of archaeological sites and resources and establishes DAHP as the administering agency for these regulations.

RCW 68.60 Abandoned and Historic Cemeteries and Historic Graves provides for the protection and preservation of abandoned and historic cemeteries and historic graves.

City of Bothell Regulations

The Bothell Register of Historic Landmarks is established by the local municipal code (Title 22 Landmark Preservation) to recognize and regulate changes to those properties that are significant to the heritage of the City of Bothell. The Bothell Landmark Preservation Board is responsible for reviewing proposals to construct, change, alter, modify, remodel, move, demolish or otherwise significantly affect properties listed in the Bothell Register, and the demolition of properties listed in the Bothell Historic Resources Inventory. The board or its staff also review applications for approvals, permits, environmental assessments or impact statements, and other similar documents pertaining to identified historic resources or adjacent properties.

Proposed actions that involve properties listed in the Bothell Register of Historic Landmarks or the Bothell Historic Resources Inventory are subject to the requirements of BMC Title 22 Chapter 28. This chapter outlines the requirements and procedures for obtaining requisite approvals to carry out actions that would result in the construction of any new building or structure, or reconstruction, alteration, restoration, remodel, repair, move or demolition of any property listed in the Bothell Register, or within an historic district listed on the Bothell Register. It also provides provisions for proposed actions that would result in the demolition of properties listed in the Bothell Historic Resources Inventory.

Other Potential Mitigation Measures

The following mitigation measures are recommended for all future development projects in the study area that are located on or in proximity to properties containing known archaeological and historic resources. These apply to properties in the study area meeting the characteristics described in the mitigation measures whether or not the projects are within the DRSA or outside of it:

1. To the extent feasible, the preservation, rehabilitation, restoration, reconstruction or adaptive reuse of historic resources must meet the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties.
2. Proposed new construction, exterior alterations, and demolition that could impact properties listed in the NRHP, the Washington Heritage Register, or the Bothell Register of Historic Landmarks in the study area must comply

with the Historic Resources Regulations provided in the proposed *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance.

3. In the event that a future development project within the study area is proposed on a site containing a property listed in the Bothell Historic Resources Inventory that is not listed in the NRHP, Washington Heritage Register, or the Bothell Register of Historic Landmarks, the project would be required to undergo administrative review consistent with the provisions of BMC 22.28 to determine whether the property is considered an historic resource. If the property is determined to be an historic resource, then the proposed project must comply with the Historic Resources Regulations provided in the proposed *Downtown Subarea Plan and Regulations* and corresponding Planned Action Ordinance.
4. In addition to the archaeological resources already known to exist in the study area, it is possible that intact buried deposits remain in areas not yet tested, particularly those areas in the vicinity of the Sammamish River and North and Horse creeks. Archaeological testing must be completed for proposed projects that involve significant excavation or any changes made to the vegetation and landforms near existing waterways in the study area. Archaeological project monitoring is suggested for subsurface excavation and construction in these high probability areas.
5. In the event that a future development project in the study area is proposed on or immediately surrounding a site containing an archaeological resource, the potential impacts on the archaeological resource must be considered and, if needed, a study conducted by a qualified archaeologist to determine whether the proposed development project would materially impact the archaeological resource. If the project would disturb an archaeological resource, the City will impose any and all measures to avoid or substantially lessen the impact. If avoidance of the archaeological resource is not possible, an appropriate research design must be developed and implemented with full data recovery of the archaeological resource prior to the development project. The avoidance of archaeological resources through selection of project alternatives and changes in design of project features in the specific area of the affected resource(s) would eliminate the need for measuring or mitigating impacts.

Non-site-specific mitigation could involve finding other opportunities in the community for mitigation measures that are not specific to the affected site(s). Some of the options for non-site-specific mitigation include developing an educational program, interpretive displays, design guidelines that focus on compatible materials, and professional publications.

3.7.4. Significant Unavoidable Adverse Impacts

The impacts on cultural resources caused by new development associated with either of the two proposed alternatives could be significant and unavoidable, depending on the nature of the proposed development project. Mitigation measures set forth in Section 3.7.3 above would address potential impacts on cultural resources, reducing them to less-than-significant levels.

3.8. Public Services

Public services analyzed in this chapter include municipal offices, police protection, fire and emergency medical services, parks and recreation, and schools. Several of these public services are assessed in relation to the entire City or district, as appropriate. Public facilities in the vicinity of the study area are illustrated on Figure 3.8-1.

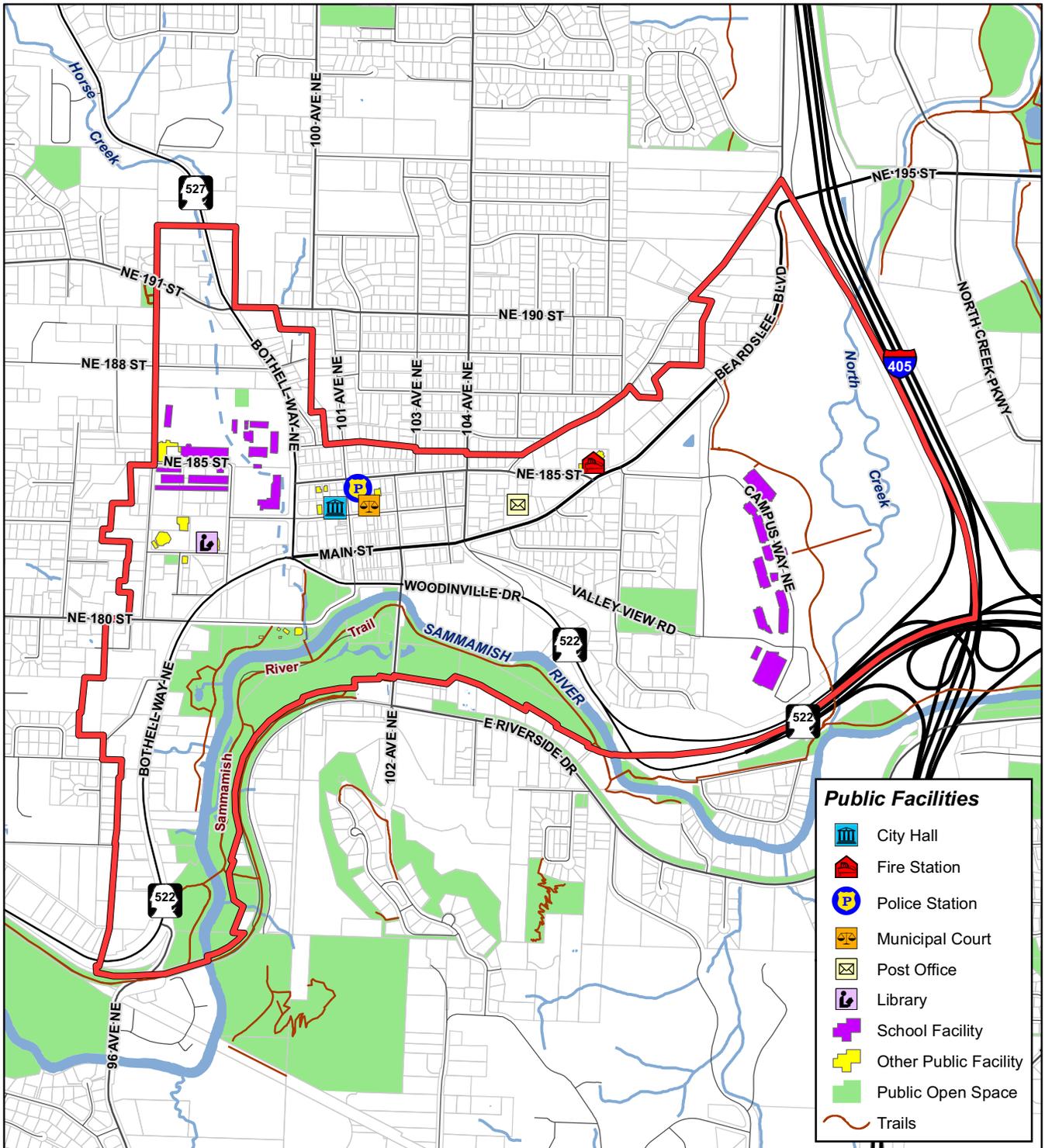
3.8.1. Affected Environment

City Hall

The current Bothell City Hall is located in the study area at 18305 101st Avenue NE. The 11,682 square-foot building houses the Executive, City Clerk, Finance, Administrative Services, and Legal functions of City Hall. The Community Development Department, Public Works Department, and Fire Prevention Bureau are currently housed in the Dawson Building (9,066 square feet), located at 9654 NE 182nd Street, in the western portion of the study area. The City recently commissioned Rice Fergus Miller Architecture & Planning to prepare a siting study to analyze options for a new City Hall. As described in Chapter 2, the City Hall Replacement would consolidate City staff into a single building at one of three locations: its current location; the W.A. Anderson Building on SR 527, currently owned by the Northshore School District (NSD); or the Beta Bothell site, adjacent to the Park at Bothell Landing.

Police Protection

Police protection in the study area is provided by the Bothell Police Department. The police department currently employs approximately 80 total staff (commissioned officers and non-commissioned support personnel), divided among five divisions (City of Bothell 2008f).



Source: City of Bothell (2008); King County (2008)

-  Study Area
-  Parcel
-  Water Feature
-  Piped Stream

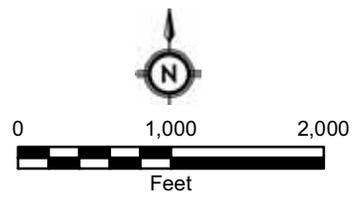


Figure 3.8-1. Public Services and Facilities
 Downtown Bothell Planned Action EIS
 December 2008

Patrol Operations

The Patrol Operations Division is responsible for ensuring the safety of Bothell's citizens on a daily basis. Officers regularly patrol four set beats throughout the city, and the division also provides the following specialized units:

- **Narcotics K-9 Unit.** Focusing on the interdiction of controlled substances, this unit consists of one officer and one trained narcotics detection dog.
- **Bicycle Patrol Unit.** Bicycle patrol officers are assigned to Downtown Bothell, as well as parks and schools, or any other area where access by automobile might prove difficult.
- **Response Team.** The purpose of this team is to provide security and to rapidly respond to situations involving public unrest, such as riots or protests. The members of this unit receive specialized training in crowd-control techniques and the use of protective equipment.
- **Crisis Negotiation Team.** This unit, consisting of two sergeants and four officers, handles communication and negotiation during hostage situations or other critical incidents.

Investigations

The Investigations Division provides secondary investigation services of a variety of crimes, including homicide, sexual assault, robberies, and fraud. The division is divided into the following sections:

- **Investigations Section.** This unit is staffed by:
 - one sergeant;
 - three general case detectives who investigate suspicious deaths, sexual assaults, and thefts;
 - one juvenile detective who specializes in crimes involving children;
 - one fraud detective who specializes in fraud and identity theft; and
 - one narcotics detective who is assigned as a member of a regional drug task force.

The Investigations Section also oversees the public notification and monitoring associated with registered sex offenders.

- **Juvenile Services Section.** Officers in this unit act as liaisons to area schools, providing counseling services, law enforcement education, and role models to students.
- **Crime Prevention Unit.** This unit is intended to support citizens in their efforts to increase personal safety. Services offered include organization of neighborhood block watches, implementation of Operation I.D. for children and property, bicycle safety education, security surveys of homes and businesses, crime prevention seminars, and personal safety training.

Special Operations

The Special Operations Division consists of the following sections:

- **Neighborhood Traffic.** This unit's primary responsibility is the investigation of traffic accidents and researching and recommending engineering improvements to the City.
- **Training Section.** This section is responsible for ensuring Bothell police officers continue to maintain certifications and meet local, state, and federal standards.
- **Police Support Section.** This section is responsible for the movement of prisoners, maintenance of the department's detention facility, and management of the evidence storage facility.
- **Special Response Team.** This tactical unit specializes in resolution of critical incidents, often involving hostage rescue, extraction of barricaded suspects, or other high-risk activities. Members are trained in the use of specialized weaponry and tactics to resolve especially dangerous situations.

Support Services Division

The Support Services Division is responsible for processing department records and offering fingerprinting services. The Communications Section operates the Communications Center, which dispatches for both the Bothell Police Department and the City of Lake Forest Park.

Administrative Services

The Administrative Services Division consists of the chief of police, the deputy chief of police, and the administrative captain, who are jointly responsible for coordination between divisions and the overall operation of the police department.

The police department operates the Bothell Public Safety Building, which houses administration services, holding cells, dispatch, and other operational services, as well as the Bothell Municipal Court, which acts as an administrative court and provides space for record storage.

Fire Protection

Citywide

Fire Protection and Emergency Medical Service in the study area is provided by the Bothell Fire Department. The fire department currently employs approximately 60 staff, including 32 firefighters, nine fire lieutenants, five battalion chiefs, one fire Marshal, one deputy fire chief, and one fire chief. The department also employs a hazardous materials specialist and various support staff. While all firefighters are trained as emergency medical technicians (EMTs), advanced life support paramedic

service is provided through a contract with the City of Shoreline (City of Bothell 2008e).

The fire department operates three firehouses in Bothell, and, in cooperation with Snohomish County Fire Protection District #10, maintains a fleet of emergency response vehicles that includes five pumper engines, one ladder truck, and four aid cars (Table 3.8-1).

Table 3.8-1. City of Bothell Emergency Response Fleet

Model	Make	Type	Ownership	Quantity
1985	Seagraves	Fire Engine Pumper	City of Bothell	1
1988	Seagraves	Fire Engine Pumper	City of Bothell	1
1992	Seagraves	Fire Engine Pumper	City of Bothell	1
1994	Seagraves	Fire Engine Pumper	Snohomish County Fire District #10	1
2001	Spartan/H&W	Fire Engine Pumper	City of Bothell	1
1996	Ford/Braun	Aid Car	Snohomish County Fire District #10	1
1998	Ford/Braun	4x4 Aid Car	Snohomish County Fire District #10	1
2001	Braun Navstar	Aid Car	City of Bothell	2
2004	Sutphen	Aerial Platform Ladder	City of Bothell	1

Source: City of Bothell 2006.

The *Bothell Fire Department 2006 Annual Report* states that, in 2006, the department received a total of 4,961 calls for service and provided 566 mutual aid responses. Approximately 71% of calls were for emergency medical care, 4% were for fire, and 2% were for hazardous materials. The remaining 23% of calls consisted of false calls, severe weather calls, citizen complaints, service calls, and “good intent” calls (e.g., mistaking steam for smoke). The adopted operational level of service standard for fire and emergency medical services is a 5-minute response time to 50% of emergency calls (City of Bothell 2006).

Study Area

Of the three firehouses operated by the Bothell Fire Department, only one is located within the boundaries of the study area. The Downtown Firehouse, which acts as Department Headquarters, is located at 10726 Beardslee Boulevard. The station houses one battalion chief, one lieutenant, seven firefighters, two City of Shoreline paramedics, one ladder truck, two fire engines, one aid unit, one Shoreline Medic Unit, one command unit, and one utility pickup truck. Including mutual aid responses, this fire station responded to 3,062 calls in 2006, including mutual aid (City of Bothell 2006).

Parks and Recreation

The Parks and Recreation Division of the City's Public Works Department oversees the City's nearly 190 acres of park property and provides recreation opportunities and programs for Bothell residents. The Maintenance & Operations Section is responsible for the maintenance of park facilities, as well as 0.7 mile of linear trails and 3.75 acres of municipal grounds. The Recreation Section organizes community programs to provide classes, youth camps, adult sports leagues, and community events. The Public Works Department currently employs 71 staff, fulfilling a variety of roles, including maintenance workers, project engineers, and office staff.

The Parks and Recreation Element of the City's Comprehensive Plan classifies parks into the following categories.

- **Mini Parks.** The smallest park classification, these parks are usually in isolated areas or to meet specialized recreational needs. Generally passive in nature, they typically range in size from 0.5 to 1.5 acres.
- **Neighborhood Parks.** These are the foundation of the park system, providing a mixture of active and passive recreational opportunities for residents in the immediate vicinity. Sizes typically range from 5 to 7 acres, and they are adequate to serve populations of up to 5,000.
- **Community Parks.** These facilities serve multiple neighborhoods and are often used to preserve open space or unique landscapes. While designed to accommodate both active and passive recreation, community parks often offer activities not available in smaller parks, such as swimming pools, beaches, or nature study areas. Usually larger than 15 acres, community parks can reach sizes of up to 100 acres.
- **Special Use Parks.** This classification encompasses a wide variety of facilities, and these parks are generally focused toward single-purpose uses. Special use parks may be either publicly or privately operated and typically serve an area encompassed by a drive time of up to 1.5 hours.

In addition to the above park types, the Parks and Recreation Element recognizes open space, defining it as generally undeveloped and undisturbed land, intended to offer visual relief from development, protect sensitive environmental resources, or protect wildlife habitat (City of Bothell 2004a).

The study area contains more than 80 acres of land dedicated for use as parks or open space. Most of this land is under the administrative control of the City, but King County and the State of Washington each owns open space land in the study area. A breakdown of park and open space land in the study area is provided in Table 3.8-2.

Table 3.8-2. Park and Open Space Inventory

Park Name	Ownership	Park Type	Acreage
Kaysner Park	City of Bothell	Open Space	0.60
Park at Bothell Landing	City of Bothell	Community Park	4.52
Pioneer Cemetery	City of Bothell	Open Space	4.37
Red Brick Road Park	City of Bothell	Mini Park	0.40
Sammamish River Park	City of Bothell	Open Space	35.50
Skateboard Park	City of Bothell	Community Park	0.40
Triangle Park	City of Bothell	Mini Park	0.03
Volunteer Park	City of Bothell	Mini Park	0.21
Unnamed1	City of Bothell	Open Space	2.10
Unnamed2	City of Bothell	Community Park	10.42
Unnamed3	King County	Open Space	18.18
Unnamed4	State of Washington	Open Space	3.74
Total			80.45

Source: City of Bothell 2008.

¹Approximately 1 acre of this is located in the Valley View neighborhood. The remainder is located in the southwest corner of the study area, along the Sammamish River, and connecting with the Park at Bothell Landing.

²Located immediately west of the Park at Bothell Landing.

³Located in the far southwest corner of the study area, along the Sammamish River.

⁴Located in the far southwest corner of the study area, along the Sammamish River.

Three of the most prominent city parks are described in greater detail below.

The Park at Bothell Landing. This park is the cornerstone of the City's park system and serves as a major community focal point. The park is located along the Sammamish River and connects to the regional Sammamish River Trail. The park is home to several historic structures, including the Historical Museum and the Lytle House, as well as a Veterans Memorial and an amphitheater for community events. Playgrounds, restrooms, and picnic and barbeque areas are also provided (eCityGov Alliance 2008).

Sammamish River Park. This park consists of open space along the southern bank of the Sammamish River. The area is primarily devoted to housing the Sammamish River Trail, which provides recreation opportunities for walkers, joggers, and cyclists.

Pioneer Cemetery. Pioneer Cemetery is located in the Valley View neighborhood. Covering approximately 4.4 acres, the cemetery was founded in 1889 and contains the graves of many early Bothell residents. The site is listed on local, state, and

national historic registers. More information about Pioneer Cemetery can be found in Section 3.7, “Cultural Resources.”

Schools

Northshore School District

NSD encompasses the cities of Bothell, Kenmore, and Woodinville, as well as portions of unincorporated King and Snohomish counties. The tenth largest district in the state, it has a total enrollment of nearly 20,000 and operates 20 elementary schools, six junior high schools, and three high schools (Northshore School District 2008a).

The study area lies entirely within the service area of Canyon Park Junior High School, which feeds Bothell High School. The portion of the study area that lies east of SR 527 is served by Maywood Hills Elementary School; the portion that lies to the west of SR 527 is served by Westhill Elementary School. Details on these schools can be found in Table 3.8-3. None of NSD’s schools lie within the boundaries of the study area (Northshore School District 2008b).

Table 3.8-3. Schools Serving the Study Area

School Name	Grades served	2006 Enrollment	Design Capacity*	Year Built
Bothell High School	10–12	1,679	1,619	1953
Canyon Park Junior High	6–9	833	1,244	1964
Maywood Hills Elementary	K–6	495	502	1961
Westhill Elementary	K–6	485	502	1960

Source: Office of Superintendent of Public Instruction—Washington State Report Card (2007).

*Excludes the use of portable buildings.

As seen in Table 3.8-3, some of NSD’s schools are beginning to age. Modernization improvements were completed at Canyon Park Junior High in 2007, and updates to Bothell High School are expected to be complete in late 2008. Maywood Hills Elementary and Westhill Elementary received modernization upgrades in 2002 and 1995, respectively.

At present, NSD maintains approximately 15% of its building capacity in portable structures. These structures are employed to offer faculty increased flexibility and cost effectiveness in housing special programs, as well as increased classroom capacity. According to the 2008 NSD Capital Facilities Plan, Bothell High currently

uses 15 portable buildings, Canyon Park Junior High uses four, Westhill Elementary uses five, and Maywood hills uses four.

NSD has recently seen a decline in the number of students enrolled, and this reduction is anticipated to continue through 2009, followed by renewed growth. Current NSD projections indicate that enrollment is expected to increase by an average of 0.27% over the next 6 years (Northshore School District 2008a).

In addition to schools, NSD operates a number of administration and support facilities. The 26-acre downtown complex, located within the study area, includes the W.A. Anderson Building, transportation and maintenance shops, a storage warehouse, and Pop Keeney Stadium. NSD intends to retain Pop Keeney Stadium, but has announced intentions to surplus approximately 18 acres of the property. As described in Chapter 2, the City has entered into a Memorandum of Understanding with NSD related to a purchase of the site, and the area is under review as a potential location of the new City Hall. Purchase of the property by the City is anticipated to be complete in the near future.

University of Washington Bothell/Cascadia Community College

The University of Washington Bothell / Cascadia Community College (UWB/CCC) campus complex is located at the far eastern end of the study area along North Creek. While the property includes 128 acres, 58 acres are dedicated as a wetland restoration area. The campus currently consists of two UWB buildings, one CCC building, a shared library, two parking garages, and several small out-buildings. According to the City's Comprehensive Plan, the planned unit development that governs the campus contains a provision to cap combined enrollment at the schools at 3,000 full-time students until an additional access point to SR 522 is constructed at the south end of the campus, at which time the maximum number of students would be allowed to rise to 10,000. This South Entrance is currently under construction, as is CCC's Global Learning in the Arts building, in preparation for the increase in allowed enrollment.

Regulatory Context

Goals and Policies

The provision of public services in the City of Bothell is governed by the goals and policies of the Community Services Element and Capital Facilities Element of the City's Comprehensive Plan (City of Bothell 2004a). Relevant goals and policies include the following.

CF-G2. To ensure that public facilities necessary to support new development are adequate to serve the development at the time the development is available for

occupancy and use, based on locally adopted level of service standards and guidelines and in accordance with state law.

CF-P1—City Offices level of service guideline. For the purposes of calculating costs for the capital facilities finance plan, a level of service guideline of 1,280 square feet of office space per 1,000 population should be utilized. However, prior to authorization of construction of new offices, the level of service guideline should be reassessed to determine whether it is still appropriate, or whether a different square footage per 1,000 population or a different methodology would more accurately reflect need.

CF-P3—Fire and Emergency Medical Services.

- **Capital facilities level of service guideline.** Maintain or achieve a capital facilities level of service for fire and emergency medical services of 9,282 persons per firehouse. However, prior to authorization of construction of new Fire and EMS capital facilities, the level of service guideline should be reassessed to determine whether it is still appropriate, or whether a different population per firehouse or a different methodology would more accurately reflect need.
- **Fire and Emergency Medical Services operational level of service guideline.** Maintain or achieve a minimum operational level of service of a 5-minute response time to 50% of all Fire and Emergency Aid calls. Incorporate this guideline in a 6-year financing plan for fire and emergency medical services. A Fire Master Plan should be developed to direct future fire and emergency medical service and capital facilities improvements.

CF-P4—Police

- **Capital facilities level of service guideline.** Maintain or achieve a capital facilities level of service for police service of 900 square feet of facility per 1,000 population.
- **Police operational level of service guideline.** Maintain or achieve average response times of 5 minutes to emergencies and 30 minutes to non-emergencies.

CF-P5—Parks level of service guideline. Achieve and maintain a foundation level of service of 4.5 acres of developed, operational and functional parkland per 1,000 population. A foundation level of service implies a base or threshold level that satisfies the basic recreational needs of the community.

Adopted Standards of Service

City Offices

The City's level of service standard for municipal office space is 1,280 square feet of office space per 1,000 population. Based on the Washington State Office of Financial Management (OFM) estimated City population of 32,400, current office space need is 41,472 square feet, which indicates that the City currently has a deficit of 20,724 square feet.

Police

The City's capital facilities level of service standard for police protection requires the provision of 900 square feet of police facility per 1,000 population. The City's Comprehensive plan indicated a 2004 facility space need of 27,810 square feet (for a 2004 city population of 30,930), as well as a surplus of 12,752 square feet. By this estimation, the current police station includes approximately 40,562 assignable square feet, which is adequate to serve a city population of 45,069. The OFM 2007 Bothell population estimate of 32,400 indicates that the City currently possesses surplus of 11,402 square feet.

Fire

The City's capital facilities level of service standard for fire protection and emergency medical service requires the provision of one firehouse for every 9,282 residents. The City currently operates three firehouses, which is sufficient to serve a population of 27,846. Based on OFM estimates, the 2007 need for firehouses is 3.49 (for a population of 32,400), resulting in a slight deficit.

Parks

The City's level of service standard for parks requires 4.5 acres of developed parkland for every 1,000 residents. According to this standard, the 2007 city population requires 145.8 acres of developed parkland. The City currently owns or holds development rights to more than 330 acres of parkland within its boundaries (both developed and undeveloped); however, most of this is classified as open space, which does not count toward satisfying the level of service requirement. According to City GIS data, the City currently owns 49 acres of functional parks, indicating a current parkland deficit of 96.8 acres.

Schools

For standards regarding public schools, the City adopts by reference the guidelines contained in the NSD Capital Facilities Plan. NSD has defined its level of service standard as an average class size, calculated by dividing NSD's full-time enrollment capacity by the number of available teaching stations. The calculated standard of service varies by grade level (Table 3.8-4).

Table 3.8-4. Schools Level of Service

Grade Level	Teaching Stations	FTE Capacity	Calculated Standard of Service
K-6	463	9,359	23.0
7-9	227	5,941	26.2
10-12	208	5,317	25.6
Total	898	20,617	

Source: Northshore School District 2008a.

FTE = full-time equivalent

3.8.2. Impacts

Impacts Common to All Alternatives

Under all alternatives, Bothell as a whole, and the study area in particular, would experience growth. The Planning Commission Recommendations are within the range of the two alternatives; as such, the common impacts addressed in this section would also apply to them.

Given the long planning horizon, exact projections of population and employment are difficult to make. Some data sources may not agree and access to other data source may be restricted for various reasons. For the purposes of this impact analysis, the population and employment growth numbers for the Bothell Vicinity, as identified in Table 2-4, cannot be used as a substitute for those of the City of Bothell. As noted in Table 2-4, the Bothell Vicinity is a defined set of U.S. Census tracts that encompass the City of Bothell. These tracts also include areas outside the City's boundaries. Since level of service standards for public services are frequently tied to the population of the city, it is important to distinguish between the two in order to maintain accuracy when estimating public service needs.

Growth figures for the City of Bothell were estimated using the 2000 U.S. Census and the 2007 OFM population estimates for the City of Bothell. When compared with vicinity population for those same 2 years, the City's population made up approximately 67% of the total. This percentage was projected forward to estimate how much of the population growth estimated for the vicinity under both alternatives would be absorbed by the city itself, as opposed to the outlying areas. For the purposes of this analysis, all population, housing, and employment increases stated to apply only to the City of Bothell were estimated in this fashion.

The population figures are not intended to include the Municipal Urban Growth Area (MUGA). When annexed, and as growth occurs, there would be additional demand for services due to the MUGA.

No Action Alternative

Under the No Action Alternative, population growth and construction of new housing in the study area would place additional demands on public services, such as police and fire protection, as well as increase needs for public recreation and educational facilities. The population of the study area is anticipated to increase by 2,819 persons between 2007 and 2035, and 1,282 new housing units are expected to be constructed during the same period. These numbers were derived from the values in Table 2-4; 2007–2035 growth is equal to 2000–2035 growth minus the difference in population (or housing units) between 2000 and 2007.

Police Protection

Under the No Action Alternative, population in the City is expected to increase by approximately 17,537 between 2007 and 2035 to a total population of 49,937. It is estimated that growth in the study area will be responsible for approximately 16% of this growth. According to the adopted level of service standard, this increase would result in a deficit of 4,381 square feet. The current police station was constructed in 2000 and is expected to satisfy level of service standards through its intended 2025 planning horizon, but it would be necessary for the City to consider police facility improvement projects before 2035.

While the City does not define operational level of service in terms of employed police officers and support staff, it can be reasonably assumed that the number of calls for police services would increase in conjunction with the City's increase in population. In order to maintain the ability to respond to emergency calls in a timely manner, it may be necessary for the Bothell Police Department to hire additional officers and support staff during the planning period.

Fire Protection

As noted in the discussion of impacts on police protection, the City's population is anticipated to increase to a total of 49,937, by 2035, and the study area is expected to be responsible for approximately 16% of this growth. According to the City's adopted level of service standard, an additional 2.38 fire stations would be required. Currently, existing firehouses in the City require a minimum of three to four staff members at all times to maintain operation. In addition to the construction of new fire stations, the City would be required to hire the requisite staff to keep them in constant operation.

The study area population is expected to more than double over the period 2007–2035. As the Downtown Firehouse and Department Headquarters is the only fire station within the boundaries of the study area, it will likely bear primary responsibility for responding to calls in the area.

Parks and Recreation

The projected 2035 City population of 49,937 would require a total of 225 acres of developed parkland citywide to meet the adopted level of service standard. As discussed under "Affected Environment," the City currently owns or holds development rights to more than 330 acres of parkland; however, according to City GIS data, more than 150 acres are currently classified as open space, which does not count toward meeting the level of service standard. City data indicate that currently 49 acres of City-owned parks are classified as functional parks (i.e., not classified as open space). The City of Bothell currently has a parkland deficit of 96.8 acres. Projected population growth under the No Action Alternative is anticipated to increase demand for parkland by an additional 79.2 acres by 2035. Population

growth within the study area is expected to account for 24 acres (30%) of this increase.

Schools

School enrollment trends are affected by a variety of factors, including population growth, housing availability, economic conditions, and prevailing birth rates. However, it is generally accepted that growth in population equates to a greater demand for educational services. As discussed above, under “Affected Environment,” NSD has been experiencing a slow-down in enrollment growth over the past several years, and its total district enrollment is currently in decline. While a rebound is anticipated, NSD projections indicate that total enrollment will not rise above current levels until the 2011–12 school year (Northshore School District 2008a).

Given the length of the planning period and the associated uncertainty regarding employment and housing, detailed projections of school enrollment are difficult to calculate. The NSD Capital Facilities Plan includes detailed short-term projections (2008–2014) as well as a less detailed discussion of trends for the period 2014–2025.

Under the No Action Alternative, population and housing growth in the study area and the City of Bothell are likely to place demands on educational facilities at the rate projected by NSD. Table 3.8-5 reproduces NSD’s adopted student generation rates.

Table 3.8-5. Northshore School District Student Generation Rates

	K-6	7-9	10-12	Total
Single-family	0.294	0.104	0.084	0.490
Multi-family— composite	0.058	0.021	0.017	0.096
Multi-family—2+ bedrooms	0.134	0.056	0.033	0.220

Source: Northshore School District 2008a.

Future residential development in the study area is expected to be almost entirely multifamily. Based on the NSD generation rates, the number of students in the study area is estimated to increase by the following amounts by 2035, depending on the style of multifamily development:

- 74–172 students in grades K–6;
- 27–72 students in grades 7–9;
- 22–42 students in grades 10–12;
- 123–286 students total.

Projections indicate that elementary enrollment will begin rising first, followed by junior and senior high, respectively, as larger cohorts of students begin moving

through the system. By 2025, NSD estimates that elementary enrollment will exceed capacity, while junior and senior high schools will remain below capacity. Detailed projections are not available for the period 2025–2035, but as these elementary students progress to higher grades, junior and senior high schools likely will have less surplus capacity or even begin to see capacity deficits over the following years.

Proposed Alternative

Under the Proposed Alternative, population growth and construction of new housing would place additional demands on public services, such as police and fire protection, and increase needs for public recreation and educational facilities. The population of the study area is anticipated to increase by 5,787 persons between 2007 and 2035, and 2,631 new housing units are expected to be constructed during the same period. These numbers were derived from the values in Table 2-4; 2007–2035 growth is equal to 2000–2035 growth minus the difference in population (or housing units) between 2000 and 2007.

Police Protection

Impacts on police protection under the Proposed Alternative would be similar to those under the No Action Alternative, though slightly greater due to a greater increase in population. Under the Proposed Alternative, City population is expected to increase to 50,385. According to the adopted level of service standard for police station facilities, this increase would result in a deficiency of 4,785 square feet by 2035.

While the City does not define operational level of service in terms of employed police officers and support staff, it can be reasonably assumed that the number of calls for police services would increase in conjunction with the increase in population. The Proposed Alternative would only result in a small citywide population increase (448 residents and 204 housing units) beyond the No Action Alternative, but the population of the study area is expected to grow much faster under the Proposed Alternative. During the period 2007–2035, the population of the study area is expected to grow by 5,787 under the Proposed Alternative, but only by 2,819 under the No Action Alternative. This additional population concentration under the Proposed Alternative has the potential to require a greater degree of police protection in the area, possibly necessitating the hiring of additional police officers beyond those required to meet the needs of the No Action Alternative.

Fire Protection

Impacts on fire protection and emergency medical services under the Proposed Alternative would be similar to those under the No Action Alternative, though slightly greater due to the greater increase in population. According to the adopted level of service standard, the City's 2035 population of 50,385 would require an

additional 2.43 fire stations over existing conditions. This represents a minimal increase over the No Action Alternative.

As discussed under Police Protection, however, the greater population concentration expected in the study area under the Proposed Alternative has the potential to increase demand for emergency services. Higher densities and greater building height limits may require additional staff and equipment to effectively respond to fires and medical emergencies in the study area.

Parks and Recreation

The projected 2035 City population of 50,385 would require 227 acres of developed parkland citywide to meet the adopted level of service standard. As discussed under the No Action Alternative, the City currently has a substantial deficiency in developed parks facilities that has a great potential to increase as the City's population grows. Citywide, the Proposed Alternative would result in demand for an additional 2 acres of developed parks facilities over the No Action Alternative; while this demand would contribute to the existing deficit, it is a minimal increase over the demand generated by the No Action Alternative.

Part of the intention of the Proposed Alternative is to create a walkable, vibrant urban downtown area that functions and feels like the “heart” of the city. An important element of this is the availability of parks and open space. The increased density of development and concentration of population in the study area have the potential to increase localized demand for these amenities as businesses and residents relocate to the downtown area, increasing usage of parks in the area and possibly generating demand for new facilities.

The potential relocation of City Hall to the “Beta Bothell” site could also potentially increase localized use of the Park at Bothell Landing. Placing the new City Hall at this location would increase the number of visitors to the site and create a connection from the park to the rest of downtown. The incorporation of park features into the construction of City Hall at this site could alleviate some of the potential increase in demand.

Schools

Impacts on schools under the Proposed Alternative are anticipated to be similar to those incurred under the No Action Alternative, though slightly higher demand for educational services is expected due to greater projected population and housing growth. New development in the study area is expected to be almost entirely multifamily. Based on the student generation rates shown in Table 3.8-5, the number of students in the study area is estimated to increase by the following amounts by 2035, depending on the style of multifamily development:

- 153–353 students in grades K–6;

- 55–147 students in grades 7–9;
- 45–87 students in grades 10–12;
- 253–587 students total.

The Proposed Alternative also has the potential to shift demand between schools due to the greater population density expected in the study area. For example, NSD is currently targeting Fernwood Elementary and Canyon Creek Elementary for growth-related construction projects. Under the Proposed Alternative, however, the more rapid growth of the study area could possibly shift demand from these and other schools to those directly serving downtown. Depending on how rapidly redevelopment occurs in the area, these schools may find themselves above capacity sooner than currently projected.

In addition, as described in Chapter 2, the City is considering the purchase of 18 acres of NSD property near Pop Keeney stadium for redevelopment, including the possible location of the new City Hall. Sale of this site to the City would prevent NSD from repurposing the site at a later date to accommodate increased demand on educational infrastructure.

3.8.3. Mitigation Measures

Incorporated Plan Features

Parks and Recreation

The Proposed Alternative includes regulations for the dedication of open space by developers building in the study area (12.64.100-107). Open space requirements vary by district, but the intent is to create a variety of public spaces capable of connecting the disparate public facilities in the study area.

The Planning Commission Recommendations, described in Chapter 2, require a 0.5- to 0.75-acre gathering space on the current City Hall block, in addition to the open space on the NSD site required under the Proposed Alternative.

Applicable Regulations and Commitments

Fire Protection

According to the City's Draft 2009–2015 Capital Facilities Plan (CFP), the City has contracted to have a fire facility needs study prepared (City of Bothell 2008b). This study, due to be completed later this year, will provide direction to the City's efforts to expand its fire protection capabilities, particularly the Queensborough Firehouse, which cannot accommodate additional staff or equipment.

In addition, all future development will be required to comply with the City's fire code (20.08 BMC), which specifies fire department access requirements, permitting procedures, and requirements for fire prevention and suppression technology.

Parks and Recreation

Capital Facilities Plan

A number of park-related projects are currently included in the CFP.

- **North Creek School House.** The City accepted the donation of the historic North Creek School House and the property on which it resides. The City plans to relocate the structure to Centennial Park and restore it for use as an interpretive center. The property is slated to be sold to fund the rehabilitation work.
- **The Park at North Creek.** The City plans to develop a community park on North Creek Parkway at the current location of an underground wastewater storage tank owned by King County. The City is currently in negotiations with King County for a Use Agreement, and construction is scheduled for 2009.
- **Regional Aquatic Center and Community Center.** The City is considering the construction of a regional aquatic and community center to replace the existing community pool currently located on NSD property. The exact design of this project is still in development.

In addition to the projects listed in the CFP, the City plans to undertake the preparation of master plans for all existing park and recreations facilities, as well as study opportunities to provide parks and open space within the revitalized downtown core.

Parks, Recreation & Open Space Action Plan

The City's *Parks, Recreation & Open Space Action Plan* (PROSAP) provides a set of goals that guide parks and recreation development in the city, as well as listing associated actions necessary to achieve those goals. The PROSAP also discusses current levels of service, parkland inventory, and funding strategies. The PROSAP was updated in March 2008 and adopted by resolution in September 2008 (City of Bothell 2008d).

The 2008 update to the PROSAP recommends that the City acquire 59.8 acres of land within current city limits for park use by 2035. It also recommends acquisition of another 59 acres within the MUGA boundary over the same time period. Assuming that the City was to acquire and dedicate all of this land to active park use, the parkland deficit would be significantly decreased by 2035.

Other Potential Mitigation Measures

Police Protection

The need for police protection under the Proposed Alternative could be reduced through requirements for security-sensitive design of buildings and landscaping environment. This could include measures such as installing moderate height and density shrubs, which could reduce certain types of crimes, such as auto and storefront break-ins.

Additionally, provisions of onsite security services could reduce the need for police protection, and revenues from increased retail activity and increased property values could help offset some of the additional expenditures for providing additional officers and responses to incidents.

Fire Protection

Increased tax revenues from greater retail activity and increases in property values could offset some of the additional costs to the Bothell Fire Department for the necessary new facilities, equipment, and staff.

Schools

As NSD grows, residential development will create additional pressure on particular schools, though overall projections predict short-term declines. To meet the needs arising from that growth, NSD has the option of moving relocatable classrooms, making boundary changes for school attendance, engaging in new construction, and modernizing its facilities. NSD is currently taking many of these steps.

NSD also has the option of collecting impact fees under Washington State's Growth Management Act, and voluntary mitigation fees paid pursuant to the State Environmental Policy Act as well as the option of securing state funding.

3.8.4. Significant Unavoidable Adverse Impacts

Under either alternative, the City of Bothell and the study area are anticipated to experience significant growth during the planning period. Given the length of the planning period and the amount of time required for redevelopment of the study area, the City and service providers have an opportunity to update plans and respond appropriately.

The Proposed Alternative has the potential for greater increases in the demand for police and fire protection, as well as greater localized demand for educational services and recreation opportunities. However, given the planning horizon and assuming the application of existing and proposed plans and regulations, no significant unavoidable impacts are anticipated.

3.9. Utilities

This section addresses the impacts of the alternatives on utilities available in the study area, including water, wastewater, and solid waste. As stated in the project's State Environmental Policy Act (SEPA) checklist (Appendix C), the following utilities have minimal potential for impacts and are not addressed in this chapter: power, natural gas, and telecommunications. Surface water impacts are discussed in Section 3.1, "Natural Environment."

3.9.1. Affected Environment

Water

Water Supply

Four water purveyors offer service in Bothell: the City of Bothell Public Works Department, Alderwood Water and Wastewater District, Northshore Utility District, and Woodinville Water District. Water service in the study area is provided by the City of Bothell via water purchase from the City of Seattle. The City's 2006 Capital Facilities Element Amendment states that the current purchase agreement with Seattle Public Utilities (SPU) allows Bothell to draw all the water it needs from the Tolt pipeline between September 1 and June 1 of a given year. During summer months, demand is limited to 30% above the 24-hour average for a period not to exceed 15 minutes. (City of Bothell 2004a) SPU announced in 1996 that its current wholesale customers would not be offered contract extensions. While the City of Bothell continues to pursue a renewed contract with SPU, the City's contract expires in 2011, and alternate water sources are under investigation (Gray & Osborne, Inc. 2008a).

Alternate water sources include the Snohomish River Regional Water Authority, which acquired a surface water right from the Weyerhaeuser Company in 1996 that permits the withdrawal of up to 36 million gallons per day from the Snohomish River.

Water Storage

The City of Bothell Water System contains three reservoirs for storage of potable water: Penn Park Reservoir (500,000 gallon capacity), Maywood Hills Reservoir (1 million gallon capacity), and Bloomberg Reservoir (5 million gallon capacity). In addition, the City has the option to purchase 1 million gallons per day from the Norway Hill Reservoir, owned by the Northshore Utility District.

Overall storage requirements for the City were analyzed by Gray & Osborne, Inc., (Gray & Osborne) and compared to the current system's capacity (Gray & Osborne 2008a). Overall required storage includes:

- storage that meets normal operation and maintains system pressure;
- storage that ensures peak diurnal demands are satisfied;
- emergency storage;
- fire suppression storage; and
- dead storage (water held unavailable to consumers per Washington Administrative Code (WAC) 246-290-230(5) and (6)).

Under existing conditions, the City has a total storage requirement of approximately 7.60 million gallons. Currently-available storage capacity is 7.5 million gallons, resulting in a storage deficit of 103,656 gallons. The analysis does note that nesting of fire suppression storage within standby storage (if allowed by local fire authorities) could eliminate the City's current storage deficit and create a 1.55 million gallon surplus. (Gray & Osborne, Inc. 2008a)

Water Distribution

The City of Bothell Water System contains over 69 lineal miles of conveyance pipe. The majority of this system (68%) consists of 4-to-16-inch ductile iron pipe. Other materials include asbestos cement, cast iron, polyvinyl chloride (PVC), galvanized iron, steel, and copper. In the study area, the City operates approximately 18 lineal miles of water distribution pipes.

The water system also contains four booster stations to ensure that adequate pressure is maintained. The adopted level of service standard for water distribution is to comply with the Washington State Department of Health requirement to maintain a system pressure of 30 pounds per square inch (psi) during peak-hour demand conditions. The City has also adopted a minimum fire flow standard of 1,500 gallons per minute (gpm) for a period of 2 hours.

Analysis of water demand and fire flow requirements as a result of future development was conducted by Gray & Osborne in December 2008 (Gray & Osborne, Inc. 2008a). This technical memorandum is attached as Appendix I. As part of the analysis, Gray & Osborne identified a water service area (WSA) that held the greatest potential to be affected by any projected population increases. The WSA encompasses an area of approximately 265 acres, including the historic Main Street corridor and the Northshore School District property on State Route (SR) 527. Figure 3.9-1 shows the boundaries of the WSA and the existing water infrastructure in the area.

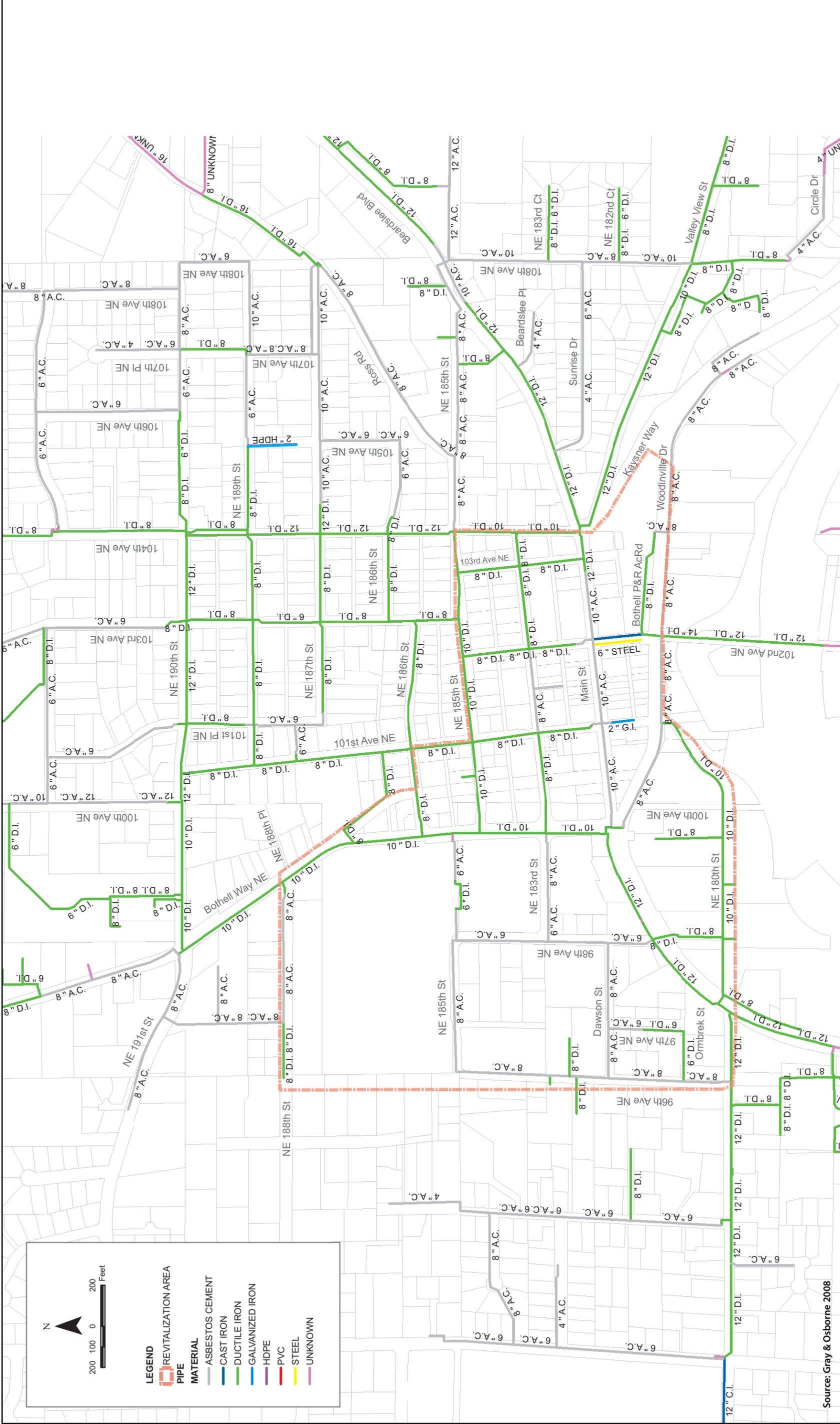


Figure 3.9-1. Existing Water System
Downtown Bothell Planned Action EIS
December 2008

Source: Gray & Osborne 2008



Fire Flow

The Capital Facilities Element of the City's *Imagine Bothell... Comprehensive Plan* indicates that seven fire flow deficiency locations were identified by the *2002 Water System Comprehensive Plan* update, though none are located in the study area (City of Bothell 2004a). The City of Bothell Public Works Department operates an annual water main replacement program to address deficiencies, and the *City of Bothell 2009–2015 Capital Facilities Plan (CFP)* (City of Bothell 2008a) includes \$1.5 million to fund water main replacement.

Wastewater

Wastewater collection service in the study area is provided by the City. The City maintains a collection system that includes 19 sewer basins, five lift stations, 2,515 feet of force main, and approximately 58 miles of gravity sewers. The City does not provide wastewater treatment services; all flows from the collections system are routed to a King County-owned interceptor line, which transports the effluent to treatment facilities owned and operated by the King County Department of Natural Resources. (Gray & Osborne, Inc. 2006)

The study area contains approximately 13.4 lineal miles of sanitary sewer lines, the majority of which are 8-inch gravity sewers for local service. The study area also contains the following sewer infrastructure, as listed in Table 3.9-1.

Table 3.9-1. Study Area Sanitary Sewer Infrastructure

Infrastructure	Quantity	Location
8-inch gravity sewer	9.1 miles	Street rights-of-way
10-inch gravity sewer	5,562 feet	SR 527; 98th Ave NE; Bothell Way NE; NE 183rd Street
12-inch gravity sewer	3,142 feet	SR 527; SR 522; Beardslee Blvd.
24-inch gravity sewer	2,627 feet	SR 522
Force main	1,036 feet	102nd Ave NE; Easement at southwest corner of study area
King County Interceptor	1.9 miles	NE 180th Street; Bothell Way NE; Easements

Source: City of Bothell pers. comm. (GIS data)

Analysis of projected wastewater flows as a result of future growth was conducted by Gray & Osborne in November 2008. (Gray & Osborne, Inc. 2008b) This technical memorandum is attached as Appendix J. As part of this analysis, Gray & Osborne identified a sewer service area (SSA) that holds the greatest potential to be affected by any projected population increases. The SSA encompasses an area of approximately 265 acres, including the historic Main Street corridor and the

Northshore School District property on SR 527. Figure 3.9-2 shows the boundaries of the SSA and the existing wastewater infrastructure in the area.

The *City of Bothell Wastewater System Comprehensive Plan* contains a summary of hydraulic modeling of the City's sewer system (Gray & Osborne, Inc. 2006). The 2006 modeling identified six collection system deficiencies, five of which are located in the study area (Table 3.9-2).

Table 3.9-2. Study Area Sanitary Sewer Deficiencies

Location	Diameter (inches)
NE 191st St. and SR 527	8
	10
	10
NE 188th St. and 98th Ave. NE	8
	8
NE 186th St. and 98th Ave. NE	10
	10
98th Ave. NE and NE 180th St.	12
	10
SR 522 and 102nd Ave. SE	12

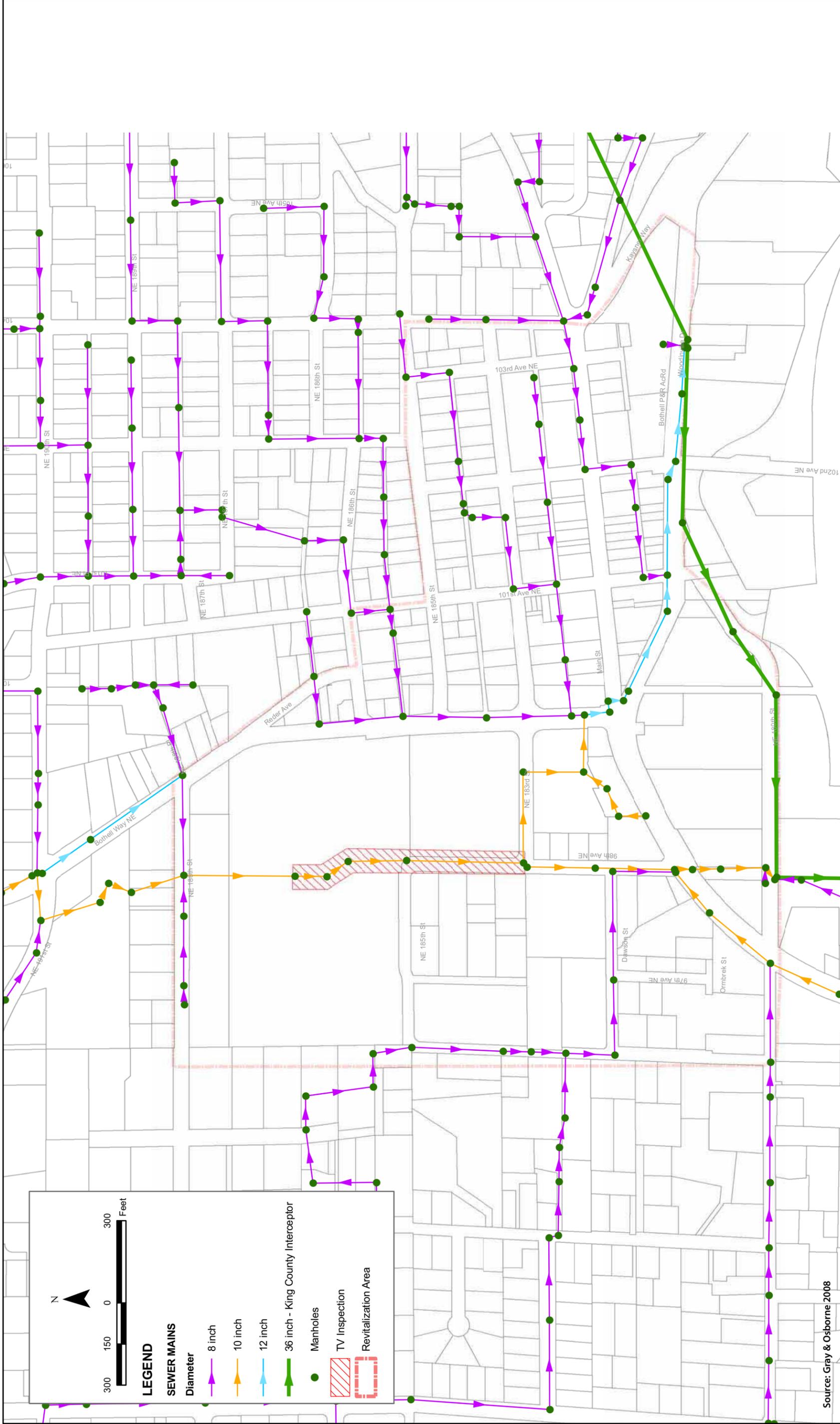
Source: Gray & Osborne, Inc. 2006.

Solid Waste, Recycling, and Organics

Solid waste, recycling, and organics (food scrap) collection service in the City is provided under contract by Waste Management, Inc. (Waste Management).

Residential customers receive curbside garbage collection from Waste Management for their recycling, yard waste, and organic material on a weekly basis. Electronic items (e.g. computers, televisions, monitors, etc.) are accepted at curbside if residents make advance arrangements with Waste Management up to 4 times per year.

Recycling materials are transported to Waste Management's Cascade Recycling Center in Woodinville for sorting and distribution to third-party recycling plants. Solid Waste materials are transported to King County Transfer Stations (Houghton, Factoria, or Shoreline) and then transported by King County to Cedar Hills Landfill. Organic (food scrap) materials are collected and transported to Cedar Grove Composting in Maple Valley or Everett for compost processing.



Source: Gray & Osborne 2008



Figure 3.9-2. Existing Sewer System
Downtown Bothell Planned Action EIS
December 2008

Commercial solid waste and recycling materials are collected weekly by Waste Management. Recycling materials are transported to Waste Management's Cascade Recycling Center in Woodinville for sorting and distribution to third-party recycling plants. Solid Waste materials are transported to King County Transfer Stations (Houghton and Factoria) and then transported by King County to Cedar Hills Landfill. Organic material service for Commercial customers is not offered by Waste Management but it is handled by Cedar Grove Composting. The City of Bothell does not have a contract with Cedar Grove Composting to provide this service. Business owners or management groups work directly with Cedar Grove Composting to start organic material collection at their facility.

Waste Management also operates six landfills in Washington and Oregon, the nearest of which is the Wenatchee Regional Landfill.

Waste Management also operates hazardous materials disposal facilities throughout western Washington, including King County and Snohomish County. These facilities are equipped to handle household hazardous waste, including cleaning products, electronics, batteries, mercury thermometers, automotive fluids, pesticides, fertilizers, paint thinner, and pool chemicals. (Waste Management, Inc. 2008)

City standards in BMC 12.14.155 regulate the sizing, location, and design of solid waste storage areas on properties.

3.9.2. Impacts

Impacts Common to All Alternatives

Under all alternatives, the City as a whole, and the study area in particular, would experience growth. The Planning Commission Recommendation is a hybrid of the No Action Alternative and the Proposed Alternative, and is thus covered by the analysis of these alternatives below.

Alternative 1: No Action Alternative

Water

Analysis of project water demand under the No Action Alternative was conducted by Gray & Osborne in December 2008. Under the No Action Alternative, residential population in the downtown WSA is anticipated to increase by approximately 32% (5,860 persons) by 2035. Employment population is anticipated to increase by approximately 33% (4,112 employees) over the same period. (Gray & Osborne, Inc. 2008a)

Water Demand

Future water demand was based on estimated demand rates of 77 gallons per resident per day (this estimate includes a 10 gallon per person per day allowance for distribution system leakage) and 45 gallons per commercial employee per day. Under the No Action Alternative, average daily demand (ADD) is projected to increase by 0.51 million gallons per day (mgd) between 2007 and 2035, an increase of 27%. Peak daily demand (PDD) is currently estimated at 4.17 mgd; applying a peaking factor of 2.17, year 2035 PDD under the No Action Alternative is estimated at 5.27 mgd, an increase of 26%.

Water Storage

Under the No Action Alternative, overall water storage requirements are anticipated to increase over the course of the planning period. While operational storage, dead storage, and fire suppression storage requirements are anticipated to remain unchanged in 2035, increases are projected for equalizing storage and standby storage. According to the storage analysis (Gray & Osborne 2008a), overall 2035 storage requirements under the No Action Alternative are projected to increase by 1.1 million gallons (MG), which would result in a storage requirement 14% higher than current conditions. Under the No Action Alternative, the City's storage deficit would increase from 0.104 to 1.18 MG.

As previously mentioned, nesting fire suppression storage in standby storage can eliminate the existing deficiency; under the No Action Alternative, nesting would result in a year 2035 surplus of 470,153 gallons. For a more detailed discussion of nesting of fire suppression storage, see Appendix I.

Fire Flow

Under the No Action Alternative, fire flow requirements for the study area would not increase, but as development occurs, increased demands on the water system have the potential to exacerbate existing documented fire flow deficiencies elsewhere in the system, resulting in significant impacts on fire flow.

Fire flow availability analysis indicates that the current system may experience pressure deficiencies in buildings 65 feet or taller. While the No Action Alternative does not propose any changes to current building height limits, portions of the study area are currently allowed to develop to 65 feet, and development under this alternative may experience inadequate fire flows if improvements to the system are not implemented. For a more detailed discussion of fire flows and the potential for pressure deficiencies, see the Fire Flow impact discussion for the Proposed Alternative.

Wastewater

Analysis of projected wastewater flows under the No Action Alternative was conducted by Gray & Osborne, Inc. in November 2008. Under the No Action

Alternative, residential population in the downtown SSA is anticipated to increase by approximately 32% (5,860 persons) by 2035. The employment population is anticipated to increase by approximately 33% (4,112 employees) over the same period. (Gray & Osborne 2008b)

Based on flow generation assumptions of 1.93 persons per multifamily dwelling unit and 60 gallons of flow per person per day, the projected residential population growth in the SSA is anticipated to generate an additional 0.35 mgd of average daily flow (ADF) by 2035, an increase of 32%. Increased employment is anticipated to increase ADF by 0.14 mgd (32%) over the same period. Combined, the projected residential and employment population growth is anticipated to generate an additional 0.49 mgd of ADF in the SSA.

Table 3.9-2 lists deficiencies in the sanitary sewer system in the study area (Gray & Osborne, Inc. 2006). Anticipated increases in ADF under the No Action Alternative would exacerbate these existing deficiencies and lead to increased surcharging at these locations.

Solid Waste, Recycling, and Organics

Increased population in the study area has the potential to increase demand for solid waste, recycling, and organics collection services over the course of the planning period. Using solid waste, recycling, and organics collection storage space sizing requirements in BMC 12.14.155, the No Action Alternative mix of dwellings and employment uses is estimated to require 7,891 square feet of new solid waste, recycling, and organics storage/collection space. Single-family garbage collection is also estimated to be necessary for seven additional residences. Future solid waste, recycling, and organics collection services will be provided in accordance with City standards and Waste Management practices. Areas where major mixed use is intended could apply best management practices, as well as follow City standards, to avoid noise, inadequate storage and inappropriate locations. In addition, providing recycling collection areas may reduce the size of the solid waste collection container. With requirements, no significant impacts are anticipated.

Alternative 2: Proposed Alternative

Water

Analysis of projected water demand under the Proposed Alternative was conducted by Gray & Osborne, Inc. in December 2008 (Gray & Osborne 2008a). Under this alternative, residential population in the downtown WSA is anticipated to increase by approximately 50% (8,976 persons) by 2035. Employment population is anticipated to increase by approximately 37% (4,589 employees) over the same period.

Water Demand

Future water demand was based on estimated demand rates of 77 gallons per resident per day (includes a 10 gallon per person per day allowance for distribution system leakage) and 45 gallons per commercial employee per day. Under the Proposed Alternative, ADD is projected to grow by 0.77 mgd between 2007 and 2035, an increase of 40%. Similarly, PDD is anticipated to increase by 1.67 mgd (40%).

Due to the concentration of new development in the study area under the Proposed Alternative, increases in water demand are anticipated to be felt primarily in Pressure Zone 284 of the City's water system, which contains the study area. This zone currently accounts for 61% of system demand. Under the Proposed Alternative, the zone would account for approximately 65 % of total citywide demand. (Gray & Osborne 2008a)

Water Storage

Under the Proposed Alternative, overall water storage requirements are heavily influenced by fire suppression capacity requirements.

Table 3.9-3 illustrates required storage volumes and system capacity under the Proposed Alternative.

Table 3.9-3. Storage Analysis—Proposed Alternative

Storage Requirement (gallons)	Existing Conditions (2007)	5,000 gpm Fire Flow (2035)
Operational Storage	650,000	650,000
Equalizing Storage	270,551	379,945
Standby Storage	3,797,290	5,332,689
Fire Suppression Storage	1,650,000	1,650,000
Dead Storage	1,235,816	1,235,816
Total Requirement	7,603,656	9,248,450
Available Capacity	7,500,000	7,500,000
Surplus/(Deficit)	(103,656)	(1,748,450)

Source: Gray & Osborne 2008a.
gpm = gallons per minute

As illustrated in Table 3.9-3, the Proposed Alternative has the potential to significantly impact the City's water system by exacerbating an existing water storage deficiency. As mentioned in the Affected Environment section, nesting fire suppression storage with standby storage can eliminate the existing deficiency; however, under the Proposed Alternative, nesting would still result in year 2035 deficiencies of 98,450 gallons. (Gray & Osborne 2008a)

Fire Flow

As described in the discussion of impacts on water storage, fire flow conditions in the WSA were modeled for two potential fire flow requirement scenarios. Analysis by Gray & Osborne indicated that, in each scenario, extensive replacement and addition of water pipes would be necessary to meet fire flow requirements. Improvement requirements for each scenario are described below.

Available Fire Flow: 5,000 Gallons per Minute with Velocity Constraints

The first available fire flow scenario analyzes the improvements required to meet 5,000 gpm in the WSA with a system-wide pipe velocity constraint of 10 feet per second. The scenario requires 18,275 lineal feet of new pipes.

- 7,545 lineal feet of new 8-inch pipe
- 10,730 lineal feet of new 12-inch pipe

Available Fire Flow: 5,000 Gallons per Minute without Velocity Constraints

The second available fire flow scenario analyzes the improvements required to meet 5,000 gpm in the WSA without velocity constraints. The scenario requires 17,265 lineal feet of new pipes.

- 13,665 lineal feet of new 8-inch pipe
- 3,600 lineal feet of new 12-inch pipe

Analysis also indicated that without adequate system improvements increasing maximum building heights to 65 feet or higher could have a negative effect on fire flow pressure (Gray & Osborne 2008a). Backflow prevention assemblies are recommended at each metered connection to protect the system.

A detailed discussion of hydraulic modeling results and fire flow improvements is contained in Appendix I.

Wastewater

Analysis of projected wastewater flows under the Proposed Alternative was conducted by Gray & Osborne, Inc. in November 2008 (Grays & Osborne 2008b). Under this alternative, residential population in the downtown SSA is anticipated to increase by approximately 50% (8,976 persons) by 2035. Employment population is anticipated to increase by approximately 37% (4,589 employees) over the same period. These numbers reflect minor revisions made to the employment projections in December 2008. (Delfel pers. comm.)

The projected residential population growth in the SSA is anticipated to generate an additional 0.54 mgd ADF by 2035, an increase of 49%. Increased employment is anticipated to increase ADF by 0.16 mgd (36%) over the same period. Combined, the projected residential and employment population growth is anticipated to generate an additional 0.70 mgd of ADF in the SSA.

Similar to the No Action Alternative, increased residential and employment population in the area has the potential to exacerbate existing deficiencies in the sanitary sewer system (Table 3.9-2) and create surcharging conditions in these and surrounding pipes. As the flows projected under the Proposed Alternative exceed those under the No Action Alternative, impacts on the wastewater system are likewise anticipated to be greater. A detailed discussion of wastewater system hydraulic analysis and recommended improvements is contained in Appendix J.

Solid Waste, Recycling, and Organics

Similar to the No Action alternative, increased population in the study area has the potential to increase demand for solid waste, recycling, and organics collection services over the course of the planning period. Using solid waste, recycling, and organics collection storage space sizing requirements in BMC 12.14.155 and a review and approval process by Waste Management, for enclosure space and access, the Proposed Alternative mix of dwellings and employment uses is estimated to require 16,062 square feet of new solid waste, recycling, and organics storage/collection space. Single-family garbage and recycling collection is also estimated to be necessary for six new residences. Future solid waste, recycling, and organics collection services will be provided in accordance with City standards. As part of the Proposed Alternative, the City has been coordinating utility plans downtown. To reduce the potential for noise and inadequate container sizes or location, the City is considering best management practices for solid waste, recycling, and organics collection in mixed use settings, which may lead to changes in the City's code and Waste Management practices as described in Section 3.9.3 "Mitigation Measures.". Areas where major mixed use is intended could apply best management practices, as well as follow City standards, to avoid noise, inadequate storage and inappropriate locations. In addition, providing recycling collection areas may reduce the size of the solid waste collection container. With requirements and mitigation, no significant impacts are anticipated.

3.9.3. Mitigation Measures

Incorporated Plan Features

Both the No Action Alternative and the Proposed Alternative incorporate the City's capital improvement projects identified in Chapter 2, Section 2.3.2. The Bothell Crossroads and SR 527 projects include provisions for utility upgrades in affected rights-of-way.

The proposed *Downtown Subarea Plan and Regulations*, Section 12.64.304, includes a proposed standard that solid waste, recycling, and food waste "shall be located away from streets and closed or screened from view by landscaping, fencing, or other architectural means (Freedman Tung and Bottomley 2008)." The proposed

regulations also include a performance standard that “solid waste facilities and recycling containers must always be within structural enclosures.”

Applicable Regulations and Commitments

Water

The CFP includes approximately \$1.8 million for the design and construction of expansions to or replacement of the Penn Park Reservoir (Project W7). Storage needs are still under evaluation and the design is scheduled to begin in 2011.

Wastewater

Chapter 8 of the 2006 *Wastewater System Comprehensive Plan* includes a capital improvements program designed to relieve wastewater system deficiencies (Gray & Osborne 2006). Projects GV-1, GV-4, GV-5, GV-6, GV-7, and GV-8 are located in the study area. Additionally, Project GV-11 (Annual Inflow/Infiltration Improvements) occurs systemwide, and may cover minor repairs in the study area that will serve to alleviate wastewater conveyance deficiencies.

Solid Waste

Bothell regulates solid waste collection container sizes, locations, and screening in the City’s municipal code:

- **Chapter 8.20 Garbage and Solid Waste.** This chapter addresses container specifications in Chapter 8.20.160. It requires that standard 32-gallon capacity containers to be placed within 10 feet of streets or alleys for pickup. Larger containers are permitted for hotels, eating places, multifamily developments, institutions, and in the business districts.
- **Chapter 12.14 Area, Dimensions, and Design.** This chapter addresses storage space dimensions and collection points for new development other than single family. Enclosure square footage standards are determined based on the square footage of proposed land uses. The number of collection points is determined by the size of the developments. Architectural design of enclosures is to be consistent with the principal structure design and with Waste Management, Inc. Sno-King District Manager approval. A 7-foot wall or fence is to enclose outdoor collection points. Gate widths and clearance heights are specified so that garbage trucks may access the collection facilities. Recycling areas are to have weather protection. The lids of garbage and recycling containers are to be maintained in a closed position. Proper signage to prevent blocking of the container must also be provided.

Other Potential Mitigation Measures

Water

Storage

Based on the hydraulic analysis by Gray & Osborne, the City is projected to face storage requirement deficiencies by 2035, regardless of whether the No Action Alternative or Proposed Alternative is selected (Gray & Osborne 2008a). As such, the City should consider nesting fire suppression storage in standby storage to reduce future storage deficits. For further discussion of mitigation, please see Appendix I.

Fire Flow

Improvements necessary to meet each of the analyzed fire flow requirement scenarios are described in Gray & Osborne's technical memorandum (Appendix I) (Gray & Osborne 2008a). It will be necessary for the City to implement the set of improvements identified as appropriate for the fire flow requirement. For further discussion of mitigation, please see Appendix I.

Wastewater

To accommodate additional wastewater flows resulting from the implementation of the Proposed Alternative, the following wastewater system improvements are recommended:

- replacement of the 10-inch sewer line along 98th Avenue NE with 12-inch main;
- expansion of the 8-inch line on SR 527 to 12-inch diameter pipe and extension of this system along SR 527 between NE 188th Street and NE 186th Street;
- removal of the existing connection at NE 191st Street, aligning the system with 98th Avenue NE; and
- installation of a new connection to the 36-inch King County interceptor for the SR 527 system just south of SR 522.

These proposed improvements are illustrated in Figure 3.9-3.

Solid Waste, Recycling, and Organics

As part of its downtown utility planning efforts, the City is considering the recommendations stated in a *Solid Waste Collection in Mixed Use Settings* (ICF Jones & Stokes 2008). The paper recommends modifications in City standards regarding enclosure size, location, gate width, pads, wall bumpers, turning radii, permit process, and education and incentives.



Source: Gray & Osborne 2008



Figure 3.9-3. Proposed Sewer System
Downtown Bothell Planned Action EIS
December 2008

3.9.4. Significant Unavoidable Adverse Impacts

Both primary alternatives are anticipated to increase demand for water, wastewater, and solid waste services. Increased residential and employment population in the study area has the potential to exacerbate existing water and wastewater system deficiencies. With application of mitigation measures, which include both regulatory and capital improvements, no significant unavoidable adverse impacts are anticipated.

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4.2. Personal Communications

Cooper, Jason. Senior Archaeologist. AMEC, Bothell, WA. November 24, 2008—email data from the cultural resources study AMEC is conducting for the SR 522 and SR 527 projects.

Delfel, Eric. Professional Engineer. Gray & Osborne, Seattle, WA. December 8, 2008—conversation regarding revisions to the population employment projections.

City of Bothell. July 30, 2008—project-specific GIS datasets via Daryn Brown.

Chapter 5. Distribution List

A notice of availability, or a compact disk, or a copy of the Draft EIS was sent to the following agencies, organizations, or individuals. A notice of availability was also published in the City's newspaper of record, and emailed to a Downtown stakeholder list.

5.1. Federal Agencies

U.S. Army Corps of Engineers

U.S. Department of Commerce

U.S. Department of Housing and Urban
Development

U.S. Environmental Protection Agency,
Region 10

U.S. Fish and Wildlife Service

5.2. Tribal, State and Regional Agencies

Department of Community, Trade and
Economic Development
Growth Management Services

Department of Corrections

Department of Ecology
Environmental Review Section and
SEPA/GMA Coordinator

Department of Fish and Wildlife

Department of Social and Health Services

Department of Transportation (Olympia
and Seattle)

Interagency Committee on Outdoor
Recreation

Mukleshoot Indian Tribe

Office of Archaeology and Historic
Preservation

Parks and Recreation Commission

Department of Health
Environmental Health Division

Department of Natural Resources
GMA/SMA Planning & State Harbors
Areas

Puget Sound Partnership

Puget Sound Regional Council

5.3. Cities and Neighboring Planning Departments

City of Brier
Planning Department

City of Kenmore
Planning Department

City of Kirkland
Planning Department

City of Lynnwood
Planning Department

City of Mill Creek
Planning Department

City of Woodinville
Planning Department

King County Department of Development
and Environmental Services

Snohomish County
Planning and Development Services

5.4. Public Services, Transportation, and Utilities

Alderwood Water & Sewer District

Bothell Fire & EMS

Bothell Regional Library

Community Transit

King County Department of
Transportation, Road Services Division,
Engineering Services Section,
Environmental Unit

King County Wastewater Treatment
Division

Northshore Fire Department

Northshore School District

Northshore Utility District

Puget Sound Energy

Snohomish County PUD No. 1

Snohomish County Public Works

Sound Transit, ST Express

Verizon Northwest, Inc.

Woodinville Water and Sewer District

5.5. Individuals and Companies

Ann Aagaard

Doris Liston

Heidi Jones

Pat Pierce

Carrell Jones-Tysver

The Public Advocate

5.6. City Officials, Commissions, and Departments

City Council

Landmark Preservation Board

City Department Directors

Shorelines Board

City Hall

Parks and Recreation Board

Dawson Building

Planning Commission